

DYNAMICS OF GROWTH OF SECONDARY CITIES IN DEVELOPING COUNTRIES*

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DURING the late 1970s many governments in developing countries sought ways to strengthen the economies and to promote the growth of secondary cities, many of which are historic settlements and traditional centers of trade, transportation, administration, and cultural activities. Development of this category of cities was viewed as a method to stimulate the economies of surrounding rural areas, to slow migration to the largest urban areas, and to spread the benefits of economic growth to lagging and depressed regions. The increased interest in secondary cities was due in part to dissatisfaction with the extreme polarization in settlement systems in many developing countries and in part to the recognition that successful rural development requires both urban-based markets for agricultural goods and access by rural residents to cities large enough to provide them with a variety of services and facilities such as manufactured goods, farm inputs, and off-farm employment. Strategies for the development of secondary cities are also a response to the failure of economic-growth policies during the 1950s and 1960s that sought to transplant modern, large-scale, export-oriented, capital-intensive industries in a few regional centers. The programs initiated in the 1970s sought to strengthen the network of secondary cities by building on the existent economic base and by reinforcing the dynamics of development in intermediate-sized urban centers.¹

The cities chosen for development usually ranged in size from approximately 100,000 in population to the second largest city in a country. The formulation of appropriate strategies for their development has been hampered by an inadequate understanding of their functions and of their emergence as large, diversified places in the settlement system. On the basis of patterns from thirty-one secondary cities in developing countries, I identify the factors that have influenced them historically, explore the dynamics of their growth, and suggest that the most effective method for future regional and countrywide development is to build on their indigenous socioeconomic functions.

DEVELOPMENTAL FACTORS

Most cities in developing countries only recently reached populations of 100,000 or more. In 1950 less than 5 percent of all urban places in the world had populations of that size. The number of cities in developing countries that year was fewer than half the total in the third world in 1980 (Table I). The highly concentrated pattern of urban growth now found in many developing

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¹ Dennis A. Rondinelli, *Secondary Cities in Developing Countries: Policies for Diffusing Urbanization* (Beverly Hills, Cal.: Sage Publications, 1983).

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TABLE I—SECONDARY CITIES IN DEVELOPING COUNTRIES 1950–1980

REGION	SECONDARY CITIES ^a					
	Number			Population ^b		% increase
	1950	1970	1980 ^c	1970	1980 ^c	
Africa	22	74	81	18,203	30,024	64.9
Middle East	19	56	66	14,068	24,617	74.9
Central America	13	36	37	10,153	16,847	65.9
South America	34	105	110	32,263	51,988	61.1
East & South Asia	213	335	350	150,397	204,079	35.7
Total	301	606	644	225,084	327,555	45.5

Source: Compiled from United Nations, *Patterns of Urban and Rural Population Growth*, text footnote 2, Table 48.

^a Defined as urban places with more than 100,000 population but smaller than the largest city in a country.

^b In thousands.

^c U.N. projections on the basis of 1970 data.

countries did not appear until the early twentieth century, mostly in countries colonized by Europeans.² The distribution of urban population in the developing countries, where most urban dwellers were concentrated in one or a few metropolitan centers, is usually attributed either to colonial economic policies or to attempts by postindependence regimes to promote rapid industrialization. Urbanization and industrialization seem to have been concomitant phenomena, each reinforcing the growth and the spread of the other, in Europe and North America. But in colonial areas only one or two cities, usually entrepôts for the export of raw materials and the import of manufactured goods, were allowed to grow to a large size. Small cities and towns were encouraged to expand only if they were convenient administrative centers through which colonial governments could extend political control over the hinterlands or if they could serve as transfer points in transportation systems designed to exploit raw materials and agricultural resources in interior regions.

Little attempt was made in most developing countries to create a system of secondary cities that would generate demand for domestically produced goods or would make urban services and facilities available to a large majority of the population. The networks of secondary cities that emerged with and helped to promote widespread industrialization in Western countries failed to appear in most developing countries, either because the spatial implications of investment policies were ignored, or because the policies were deliberately designed to contain industrial and commercial activities in one or a few major cities.³ The largest urban centers became the only reasonable locations for the heavy concentrations of investment in the infrastructure, the technology, and the physical facilities needed for rapid industrialization when it became the primary goal of development in many countries during the 1940s and 1950s. These

² United Nations, Department of International Economic and Social Affairs, *Patterns of Urban and Rural Population Growth* (New York: United Nations, 1980), pp. 5–7; and Kingsley Davis, *World Urbanization 1950–1970* (Berkeley: University of California, Institute of International Studies, 1969).

³ Dennis A. Rondinelli and Kenneth Ruddle, *Urbanization and Rural Development: Spatial Policy for Equitable Growth* (New York: Praeger Publishers, 1978).

2

metropolitan centers continued to grow to enormous size, but the expansion of secondary cities in Latin America, Asia, and the Middle East was largely a post-World War II phenomenon.

Although the majority of contemporary secondary cities reached a population of 100,000 or more only in the postwar period, some are ancient settlements that have played important roles in the economic, cultural, and political development of their countries for centuries. The forces that stimulated the expansion of secondary cities in the years prior to 1960 were similar for urban centers of both ancient and later origin. For the thirty-one secondary cities that are the basis of this study, the major factors shaping growth and development were favorable physical location and endowment of natural resources, selection as political or administrative centers, concentration of colonial or foreign investments, economic conditions favorable to regional commercial and service centers, influence of transportation technology, and effect of governmental investment in infrastructure and facilities.

Almost all contemporary secondary cities grew as service centers. Indeed their rationale for existence in most cases was the easy physical access offered to residents from surrounding areas to the urban commercial and personal services. Before 1960 large-scale manufacturing had not influenced the growth of most secondary cities in developing countries. To the extent that these cities had significant manufactural sectors, they consisted chiefly of small-to-medium-sized enterprises with low levels of capitalization and usually with fewer than ten workers. Many factors that influenced the growth of secondary cities before 1960 still shape their development and that of smaller towns and cities. I now analyze these factors in detail.

FAVORABLE PHYSICAL LOCATION AND NATURAL RESOURCES

Physical location and relationships among sites have had considerable effects on the growth of cities throughout the developing world. Case histories repeatedly identify favorable physical features and endowment of resources as distinguishing factors in the development of secondary cities. Physical location and natural endowment were instrumental in the founding of these settlements, in making them attractive as commercial and service centers, and in diversifying their economies later in their histories.

Location near the sea, for example, has stimulated urban growth in almost every region of the world. Most of the largest cities in the developing countries are seaports, and locations along navigable rivers have also spawned secondary cities. For instance, coastal location was vital to the founding and the expansion of Matamoros, Tampico, and Veracruz in Mexico, Barranquilla and Cartagena in Colombia, and Belém, Fortaleza, Recife, Salvador, and Santos in Brazil. The Korean secondary cities of Inch'on, P'ohang, Kunsan, Ulsan, and Pusan grew in large part because of their access to the sea. Observers noted that colonial ports have dominated the development of the urban hierarchy in Malaysia.⁴

⁴ Lim Heng Kow, *The Evolution of the Urban System in Malaya* (Kuala Lumpur: Penerbit Universiti Malaya, 1978), p. 206; James Osborn, *Area Development Policy and the Middle City under Repelita as Compared to the Malaysian Case: A Preliminary Analysis* (Santa Barbara: Center for the Study of Democratic Institutions, 1974); and Abukasan Atmodiriono and James Osborn, *Services and Development in Five Indonesian Middle Cities* (Bandung: Institute of Technology, Centre for Regional and Urban Studies, 1974).

3

Not only did coastal cities develop more rapidly than the interior centers but also the size of the former and the extent of their economic diversification were closely related to the volume of port activity. Surabaya and Padang in Indonesia, Penang in Malaysia, and Madras and Calicut in India emerged as significant secondary cities as a consequence of their location by the sea. In the Middle East a port accounted for the emergence of Tripoli as an important secondary city in Lebanon. African secondary cities grew first within a band of approximately 150 miles along the coasts. The importance of coastal location on the direction and the pace of growth in port cities is illustrated by Mombasa. For centuries urban development focused on its harbor, but in the late 1800s economic activities were transferred from Mombasa harbor to the smaller, nearby port of Kilindini on the western side of the island. The direction of growth in Mombasa shifted dramatically toward the west. Trade and commerce expanded on the outskirts of the city and quickly produced new sections that were clearly distinguished from the old town.⁵

Most secondary cities in developing countries are inland. Certain physical and environmental resources were important to their growth. A study of Tlemcen, Algeria, concluded that its location on a narrow plateau on the slopes of a mountain overlooking a broad plain provided "a particularly favorable position at the point of contact between two contrasting but complementary zones" and that "the continuity of urban life from Roman times to the present day owes much to the varied natural resources of the surrounding area."⁶ The hinterland of Tlemcen is a broad, well-watered plain, forested with oak and juniper and covered with soils conducive to commercial agriculture and livestock raising.

No more than a small village in the early 1800s, Ranchi, India, expanded to a population of 230,000 in 1950 and to more than 450,000 in 1980. The growth is largely attributed to the city's location on a plateau in the hilly region of Bihar on the Harmu River. The central location of Ranchi led to its designation as an administrative center in the early 1900s, and the city easily accommodated the commercial and industrial activities that were attracted there in later years.⁷ Similarly since the 1930s Chiang Mai, Thailand, has gained advantages from its location on a flat plateau near the source of the Ping River. The location of Chiang Mai gave the city a strategic defensive position during the recurring battles among Burmese, Laotians, and Thais from the 1500s to the 1700s. Moderate climate and fertile soils contributed to a flourishing agriculture in the surrounding area. The central location of Chiang Mai in that agricultural area of northwestern Thailand made the city a convenient site for regional administrative and trade functions from the 1800s to the present day.⁸

⁵ Harm J. de Blij, *Mombasa: An African City* (Evanston: Northwestern University Press, 1968), pp. 20-21 and 39-40.

⁶ Richard I. Lawless and Gerald H. Blake, *Tlemcen: Continuity and Change in an Algerian Islamic Town* (London: Bowker, 1976), pp. 11-12.

⁷ A. A. Srivastava, *Growth, Morphology and Ethnic Character in Ranchi-Dhurwa Urban Complex, in Urbanization in Developing Countries* (edited by S. M. Alam and V. V. Pokshishevsky; Hyderabad: Osmania University Press, 1976), pp. 513-543; and K. V. Sundarum, *Urban and Regional Planning in India* (New Delhi: Vikas Printing House, 1977).

⁸ Chakrit Noranitpadungkarn and A. Clarke Hagensick, *Modernizing Chiangmai: A Study of Community Elites in Urban Development* (Bangkok: National Institute of Development Administration, 1973), pp. 6-7.

4

T'ai-chung, one of the five largest secondary cities on Taiwan with a population of more than a half million, was a small agricultural village and periodic market center in the late 1800s with fewer than 1,500 residents. Located on a broad alluvial plain between two large rivers in a rich agricultural region with hot, wet summers and cool, dry winters, T'ai-chung became a center of trade and later an important defensive and administrative node. Site and locational characteristics were vital in the development of the city, which involved rapid rates of population growth and areal expansion.⁹

Exploitation of mineral resources was important in the creation of secondary cities in Africa and Latin America. Urban centers in the copper belt of Zambia grew around mining and refining operations, and the mining industries were instrumental in linking interior settlements by railroad or road to large cities so that opportunities for commerce and trade were generated in the mining towns. Kitwe, one of the mining centers, grew in population during the 1960s to rival Lusaka, the capital of Zambia.¹⁰ Medellín, the second largest city in Colombia, expanded as a service center for gold-mining activities in the Antioquia region during the sixteenth and seventeenth centuries. The climate and the soils of the region were conducive to coffee growing, and during the 1800s rapid expansion of the city was stimulated by the coffee trade, which in turn affected internal consumer markets, generated capital for investment in manufacturing, and provided the base for the industrialization that occurred later in Medellín and its metropolitan region.¹¹

DEFENSIVE POSITIONS AND MILITARY BASES

Physical characteristics gave some secondary cities an advantage as defensive positions and military bases. Tripoli, Lebanon, was an important coastal citadel during the crusades of the thirteenth and fourteenth centuries and a base of military operations for the Ottoman empire.¹² Chiang Mai achieved its status as an important secondary city in Thailand as early as the thirteenth century because the location provided a strategic defensive position that made the city a prize of conquest in battles between Thailand and its neighbors. Military camps and cantonments had a profound effect on rates and patterns of urban growth in India during the twentieth century. In some instances the camps merely delayed urban expansion along certain corridors; in other instances expansion was deflected or halted. To the extent that the land for military camps was convertible to other uses, it shaped the direction of urban expansion in small and intermediate-sized Indian cities.¹³

The selection of African cities and towns for defensive positions or military bases had a profound influence on their growth. For example, most secondary cities in Morocco began as fortifications. Their crenelated walls and towers

⁹ Clifton W. Pannell, T'ai-chung, T'ai-wan: Structure and Function, *University of Chicago, Department of Geography, Research Paper No. 144*, Chicago, 1973, p. 175.

¹⁰ William A. Hance, *Population Migration and Urbanization in Africa* (New York: Columbia University Press, 1970).

¹¹ David W. Dent, *Urban Development and Governmental Response: The Case of Medellín, in Metropolitan Latin America: The Challenge and the Response* (edited by W. A. Cornelius and R. V. Kemper; Beverly Hills, Cal.: Sage Publications, 1978), pp. 127-153, reference to p. 132.

¹² John Gulick, *Tripoli: A Modern Arab City* (Cambridge, Mass.: Harvard University Press, 1967).

¹³ Gerald Breese, *Urbanization in Newly Developing Countries* (Englewood Cliffs, N. J.: Prentice-Hall, 1966), p. 102.

5

are still visible and now divide the old parts of these cities from their modern accretions. For centuries the fortifications shaped the physical growth of the cities and affected the location of social and economic activities. In Nigeria most of the urban centers that grew to a significant size before 1900 did so because they offered protection from tribal warfare and were the bases for military conquest. Yoruba, Bini, and Fulani cities sheltered refugees from the countryside, protected them against the forages of colonial armies, and were staging areas for attacks on other groups.¹⁴ Ibadan was a Yoruba military camp in the early nineteenth century, but its residents turned it into an important trading center and thus ensured its continued growth after it ceased to serve a defensive function.¹⁵

Military activities provided short-term stimulation for the growth of certain cities where administrative or economic functions predominated. Temporary military encampments or headquarters during wars often generated rapid and permanent population expansion. Huancayo, a small secondary city in the Mantaro valley of Peru, was a Peruvian cantonment during the wars with Chile in the late nineteenth century. Both the population and the commercial-service functions of the city expanded as a consequence.¹⁶ The selection of Ranchi as the headquarters of the Eastern Command during World War II increased the permanent population by almost 70 percent, added to the already important administrative functions, and diversified the urban economy so that the city attracted modern manufactural activities during the 1950s and 1960s.¹⁷ The political upheavals in the Middle East during the late 1940s brought unexpected economic growth to Tripoli, Lebanon, when the headquarters of the Iraq Petroleum Company moved there from Haifa. Tripoli was considered more secure than Haifa. The 2,000 families brought by the transfer of the company caused a building boom and generated demands for a wide range of household and consumer goods and services. "This chain of events was the greatest single impetus to physical growth [in Tripoli] since World War II."¹⁸

ADMINISTRATIVE AND POLITICAL CENTERS

A set of factors similar to the ones that stimulated the growth of capitals also seems to have promoted the development of urban places selected as regional, provincial, or district centers or as other types of local administrative or political nodes. The places designated as administrative centers have benefited greatly from the investments in infrastructure and from the commerce and services attracted to sites with political status. During the 1950s and the 1960s, most Middle Eastern cities with populations between 100,000 and 500,000 were provincial capitals. Damanhur, Asyut, Al-Mansura, Giza, Zagazig, Tanta, and other secondary cities in Egypt were provincial capitals, other examples of which were Tripoli, Lebanon; Zarqa, Jordan; Homs, Hama, and Latakia, Syria; and Kirkuk, Mosul, Basra, and Hilla, Iraq. Most other provincial capitals had

¹⁴ H. I. Ajaegbu, *Urban and Rural Development in Nigeria* (London: Heinemann, 1976), p. 41.

¹⁵ Hance, footnote 10 above, pp. 342-349.

¹⁶ Bryan Roberts, *The Social History of a Provincial Town: Huancayo, 1890-1972*, in *Social and Economic Change in Modern Peru* (edited by R. Miller, C. T. Smith, and J. Fisher; Liverpool: University of Liverpool, Centre for Latin American Studies, 1976), pp. 136-197.

¹⁷ Srivastava, footnote 7 above.

¹⁸ Gulick, footnote 12 above, p. 35.

6

populations that ranged between 40,000 and 100,000, and there was a large gap in population size between these provincial cities and the average town or village in the next urban-size category.¹⁹ Similarly the most economically important and fastest-growing intermediate-sized cities in Turkey have been provincial capitals.²⁰

The investment that comes with the designation of a city as a regional or provincial administrative center seems to have been an important element of urban growth in most developing countries. The strongest impulse for the development of Paraná, Argentina, came after its designation as a provincial capital, for only then was serious attention given to physical improvements and the provision of basic services. Investment in the infrastructure by both local and central governments then increased markedly.²¹ Kumasi, the second largest city in Ghana, was founded in the late seventeenth century as the capital of the Ashanti confederacy. The city not only was an important political center but also emerged as a crossroad of commerce and trade. The role of Kumasi as an administrative capital was reinforced when the British designated the city as the headquarters of the Northern Territories. Kumasi was connected by railroad and road to Accra, the capital of Ghana, and the population of the city rose from fewer than 25,000 in 1921 to more than 380,000 in 1970.²²

In Asia traditional cities were always administrative centers through which warlords and sovereigns maintained political control over and extracted revenues from the hinterlands. Most of these cities were neither founded nor functioned as commercial or manufactural centers.²³ Only after the penetration of European traders did Western-style urbanization arise in Asia, first at port cities and then at inland centers connected to them. Even informal political functions stimulated growth in secondary cities. For example, the selection of Chiang Mai as the location of the royal family's summer palace assured preference for that northern Thai city in the allocation of investment for modern services, infrastructure, and transportation facilities. The prestige and the status accorded to Chiang Mai as a place where the king entertained important officials and visitors made the city a countrywide and later an international tourist attraction.²⁴

Political ideology seems to have little effect on the preference that governments give to regional and provincial capitals for developmental investment. The Mao regime in China was noted for its deliberate attempts to equalize development, but provincial capitals fared better than nonadministrative cities in economic growth and accumulation of services and facilities. Provincial capitals consolidated and often increased their primacy in provincial settlement

¹⁹ Janet Abu-Lughod, Problems and Policy Implications of Middle Eastern Urbanization, in *Studies on Development Problems in Selected Countries of the Middle East* (New York: United Nations, 1973), pp. 42-62.

²⁰ Walter F. Weiker, Decentralizing Government in Modernizing Nations: Growth Center Potential of Turkish Provincial Cities, *International Studies Series, Vol. 1* (Beverly Hills, Cal.: Sage Publications, 1972), p. 65.

²¹ Rubén E. Reina, Paraná: Social Boundaries in an Argentine City (Austin: University of Texas Press, 1973), pp. 27-28.

²² Hance, footnote 10 above, pp. 332-336.

²³ Rhoads Murphey, Urbanization in Asia, in *The City in Newly Developing Countries* (edited by Gerald Breese; Englewood Cliffs, N. J.: Prentice-Hall, 1969), pp. 58-75, reference to p. 61.

²⁴ Noranitpadungkarn and Hagensick, footnote 8 above.

1

hierarchies during that period. Between 1953 and 1972, provincial capitals grew rapidly throughout China, but especially so in the northeast and southwest.²⁵ Because of the high level of investment in the provincial capitals, they gained advantages of better infrastructure, services, and transportation nodality that made them efficient locations for heavy and light industrial investment in subsequent years.

COLONIZATION AND FOREIGN INVESTMENT

A related factor in the founding or early growth of secondary cities was the activities of foreign investors and traders and the policies of colonial regimes. Although the unbalanced development of urban systems in developing countries and the overconcentration of industry and modern infrastructure in capitals are often attributed to colonial economic policies, colonial activities often stimulated the growth of secondary cities. In some cases they were encouraged to grow as colonial administrative posts or as transfer and processing centers for the exploitation of mineral and agricultural resources in the interior of the country.

Some Southeast Asian countries had no indigenous urbanization before European colonization. In Malaysia the major urban centers are less than 200 years old and did not begin to expand rapidly until the early part of the twentieth century. The colonial economic system had a strong and pervasive influence on the development of towns and villages in Malaysia. Cities emerged in the areas where crops were grown for export or where exportable natural resources were exploited. Agricultural centers and mining towns were connected by railroad and road to port cities and expanded as processing and transfer points. The colonial administrative centers that attracted commerce and trade diversified their economy, but those that were unable to diversify declined after independence.²⁶

After the Japanese selected T'ai-chung as an administrative center for civil affairs in the late nineteenth century, the city expanded rapidly to middle size. Because of its centralized location, T'ai-chung became an important part of the Japanese administrative-defensive network on Taiwan in the early part of the twentieth century. The Japanese made large investments in the construction of roads, bridges, and water and drainage systems. A transportation network linked T'ai-chung with other urban places. The Japanese imposed a grid street pattern that ordered the physical growth of the city for many years. The population of the city doubled between 1895 and 1920.²⁷

The Spanish, Japanese, and American colonial governments of the Philippines profoundly affected the economies of secondary cities in the islands. The foundation for the current economy of the city of Davao, for example, began during the Japanese occupation of the Philippines during World War II. Until that time, Davao had a subsistence agricultural economy with little manufacturing or commerce. The Japanese instituted a plantation agricultural system, built roads, refurbished port facilities, and fostered the export of abaca, copra,

²⁵ Sen-dou Chang, *The Changing System of Chinese Cities*, *Annals of the Association of American Geographers*, Vol. 66, 1976, pp. 398-415, reference to p. 404.

²⁶ Kow, footnote 4 above, pp. xviii.

²⁷ Pannell, footnote 9 above, pp. 40-45.

8

and timber. These activities stimulated the subsequent population growth and economic diversification of the city.²⁸

Spanish and Portuguese colonists in Latin America had an important role in founding and promoting the growth of contemporary secondary cities. But the Portuguese rulers had strong control over the development of urban centers in Brazil. They were the products of official decisions often with the sites preselected by the government in Lisbon.²⁹ In most of Latin America, colonial regimes were more interested in the establishment of towns and cities for specific economic or administrative purposes than in the creation of a network of intermediate centers. As a result urban places tended to be linked with the colonial capital and relatively isolated from one another.³⁰

Foreign influences played an important role in the early growth of secondary cities in Africa and the Middle East. Tripoli, Lebanon, grew in importance as a secondary city with the successive waves of foreign traders seeking silks, citrus fruits, olives, vegetable oils, and tobacco in the seventeenth and eighteenth centuries.³¹ In and around the secondary city of Tlemcen, French occupation of Algeria led to "profound social, economic and geopolitical changes—the arrival of a privileged European minority, the dramatic increase in the size of the urban population, the appearance of new functions, the disappearance of some traditional functions, and the strengthening or transformation of others."³² The French erected fortifications at Tlemcen, which served as a garrison for much of the early nineteenth century. The walls and the barracks shaped the boundaries and the directions of the city's growth.

The development of Malindi, Kenya, depended almost entirely on successive groups of foreign settlers and traders. The Arabs established agricultural plantations and used slave labor in the Malindi area during the late nineteenth century. Next came Asian merchants who made the city a regional center for wholesale and retail trade. By the 1930s, large numbers of European settlers had opened hotels and shops that catered to tourists. Until after World War II tourism was the major productive sector of the economy in Malindi. A similar succession of Arab, Asian, British, and other European colonists and traders shaped the growth of Mombasa, the largest secondary city in Kenya.³³ Foreign influence on the growth of secondary cities was not always beneficial in developing countries; some cities became parasitic rather than developmental.

TRANSPORTATION TECHNOLOGY

The introduction of new transportation technology after the middle of the nineteenth century played a crucial role in the founding, the growth, and the decline of secondary cities in the developing countries. Their expansion in the

²⁸ Robert A. Hackenberg and Beverly H. Hackenberg, *Secondary Development and Anticipatory Urbanization in Davao, Mindanao*, *Pacific Viewpoint*, Vol. 12, 1971, pp. 1–20.

²⁹ Richard M. Morse, *Some Characteristics of Latin American Urban History*, *American Historical Review*, Vol. 67, 1962, pp. 317–328, reference to p. 322.

³⁰ Richard M. Morse, *Recent Research on Latin American Urbanization: A Selective Survey with Commentary*, in *The City in Newly Developing Countries*, footnote 23 above, pp. 474–506.

³¹ Gulick, footnote 12 above, pp. 17–24.

³² Lawless and Blake, footnote 6 above, p. 83.

³³ E. B. Martin, *The History of Malindi* (Nairobi: East African Literature Bureau, 1973), and de Blij, footnote 5 above.

9

Middle East and northern Africa was inextricably tied to the extension of road and railroad networks. Tripoli, Lebanon, experienced a new surge of population growth and attracted new economic activities in the early years of the twentieth century when roads were constructed to Beirut and a railroad was opened to Aleppo in 1911. For many years the physical expansion of the city was along the main transportation corridors.³⁴

Transportation networks played an equally crucial role in the growth, the spatial distribution, and the functional development of Nigerian secondary cities. The roads and railroads built at the turn of the century to exploit the resources of the interior often bypassed traditional centers of trade such as Ife, Ilesha, Benin City, Katsina, and Sokoto, while previously small villages emerged as important nodal points in the colonial spatial and economic system. Enugu, Jos, Kaduna, and Port Harcourt, all located along the new railroad lines, grew in population and underwent economic diversification. Only the traditional centers such as Ibadan, Kano, Oshogho, and Zaria that were integrated in the major railroad and road systems shifted to viable twentieth-century economies.

These secondary cities took on dual structures with attributes from both traditional trade and modern European commerce and service.³⁵ For example, the completion of the railroad to Ilorin in 1908 increased the flow of manufactured goods to the city from Lagos and of agricultural products from both the immediate hinterlands and the north. As in many other middle-sized cities in developing countries, commercial, trade, and administrative functions tended to concentrate in areas around the railroad stations, where land values often rose rapidly. New urban places eventually sprang up at breaks in the transportation network.³⁶ One study of West African urbanization noted that "fortune rode the trains. [Towns] that received terminals grew, but those that did not stagnated or declined, as did many river ports."³⁷

Case histories of secondary cities in Latin America reveal similar influences of transportation on urban growth and decline. Different modes of transportation had different influences on the growth of secondary cities during the various periods of their development. Extension of a railroad to Huancayo, Peru, in 1908 strengthened the role of the city as a center of trade and communications. Expansion of the highway network in the 1940s and early 1950s to include Huancayo contributed to a resurgence and a diversification of commercial activities, especially the introduction of textile mills that, at least temporarily, employed large numbers of immigrants from the countryside who came to supplement their farm incomes.³⁸

The increased access provided by highway systems in Latin America was particularly important to small interior cities. The growth and the development of Oaxaca, Mexico, reportedly stemmed from its access to the Pan-American

³⁴ Gulick, footnote 12 above, pp. 32-33.

³⁵ Akin L. Mabogunje, *The Urban Situation in Nigeria*, in *Patterns of Urbanization: Comparative Country Studies* (edited by S. Goldstein and D. F. Sly; Liège, Belgium: International Union for Statistical Study of Population, 1977), pp. 569-641.

³⁶ V. E. A. Akorede, *The Impact of Socio-Cultural Changes on the Pattern of Urban Land Use: The Case of Ilorin*, *African Urban Studies*, No. 5, Fall, 1979, pp. 71-84.

³⁷ Josef Gugler and William G. Flanagan, *Urbanization and Social Change in West Africa* (London: Cambridge University Press, 1978), pp. 27-28.

³⁸ Roberts, footnote 16 above, p. 150.

10

highway which was extended to the city by 1940. The highway not only linked the then relatively small urban center to the metropolitan area of Mexico City but also strengthened the position of Oaxaca as a regional market. Since the construction of the highway, the population of the city grew by approximately 4 percent a year to more than 150,000 residents in 1980.

Transportation was equally significant in stimulating the growth of secondary cities in Asia. Indian cities in this category are most commonly found along main roads and railroad routes, especially in the area northward of Delhi and in the west toward Punjab. The commercial and trading activities of these cities have been densely concentrated around railroad and bus stations.³⁹ Transportation innovation played an important role in the growth of Chiang Mai, Thailand, during the early part of the twentieth century. A railroad link constructed between Chiang Mai and Bangkok and a highway completed in the mid-1930s were crucial in maintaining and strengthening the functions of the city as an administrative center for the northern region of the country and in allowing the city to emerge later as a center of commerce, trade, and tourism. The construction of interurban roads and highways was essential to forge linkages between Chiang Mai and other northern Thai towns and cities. Seven roads radiating from the city center and the Chiang Mai-Lampang highway increased the volume of trade and the number of tourists to Chiang Mai. By the 1960s Chiang Mai was the vital service center for the northern region of Thailand.⁴⁰

The construction of roads to Davao from other Philippine cities in the 1940s provided the access on which much of the economic development of Davao depended. At the end of the Japanese occupation, a road was opened between Davao and Cotabato. Later a road was extended from Davao to small towns in the former province of Agusan. The road not only fostered interurban trade but also opened interior crop and timber lands to entrepreneurs and farmers from Davao. Access to markets gave impetus to agricultural development wherever timberland was cleared. The population of the city of Davao more than doubled from 40,000 between 1948 and 1960; the province in which the city is located had a population increase of more than 145 percent during that period.⁴¹

COMMERCE, TRADE, AND SERVICES

The most important factor in the growth of almost all present-day secondary cities was their capacity to function as centers of commerce, trade, and services. The growth of many of these cities began initially because of their central locations in productive agricultural lands, because of their selection as administrative centers or defensive positions, or because of their linkages with other cities by road, railroad, or water transportation. But their continued growth and diversification depended on their ability to foster commerce and trade.

Many secondary cities in Latin America grew from agricultural trade in which they were initially regional markets and transfer points for the farm products going from rural hinterlands to large urban centers. Late nineteenth-

³⁹ Leighton W. Hazelhurst, *The Middle-Range City in India*, *Asian Survey*, Vol. 8, 1968, pp. 539-552.

⁴⁰ Noranitpadungkarn and Hagensick, footnote 8 above, pp. 15-16; and Frederick Temple and others, *The Development of Regional Cities in Thailand* (Washington, D. C.: World Bank, 1980).

⁴¹ Hackenberg and Hackenberg, footnote 28 above, p. 6.

11

century expansion of Huancayo, Peru, was one response to the rising demand for agricultural commodities from the Mantaro valley in Lima and other coastal cities. Much land around them had been converted to plantation farming of export crops, so the urban markets became increasingly dependent on agricultural produce from the interior. The commercialization of agriculture in the Mantaro valley not only made Huancayo an important agricultural market but also stimulated diversification and established the city as a commercial and trading center for its region. Growth of the city in the late nineteenth century was directly related to the expansion of commerce and services. In 1880 commercial establishments included restaurants, lodgings, shops in the permanent market, and general and specialty shops, and manufactures such as ice making, liquor distilling, shoemaking, and flour milling. By the 1920s Huancayo had acquired banking and financial services and was the regional judicial and communications center as well as the place through which labor was recruited for large haciendas and nearby mines. The population of the city expanded in the early part of the twentieth century when entrepreneurs established large-scale contracting services to supply mining companies with goods and equipment. Transportation services for agricultural and mineral shipments were quickly established in Huancayo, and facilities to maintain vehicles and equipment arose almost as quickly.⁴²

The preindustrial commercial and service centers of Africa supported substantial numbers of people; that ability undoubtedly accounted for the rapid increase of urban population. Commerce in Ibadan at the turn of the century involved large numbers of small-scale establishments that yielded limited, but widely distributed, increments of new income. The wide distribution of the income from the small-scale commercial and manufactural activities allowed the city to expand on the demand for inexpensive, locally produced consumer goods. Even imported foods and materials were processed by local enterprises to keep down costs. Local butchers processed livestock brought from other regions; local craftsmen made furniture from imported wood; local tailors made clothing from imported textiles, and local metalsmiths fashioned imported metals. Small-scale wholesalers and retailers traded a variety of agricultural commodities, livestock, and crafted goods. The wholesaling and retailing activities in turn supported an extensive and multitiered system of consignors, brokers, distributors, and other middlemen who handle consignments in such a way that even petty traders and hawkers could participate in commerce. That system was not unique to Ibadan, but it brought about there "a larger increase in population than has been the case in many other African cities."⁴³

Middle-sized cities in Algeria grew as agricultural markets and then evolved as commercial and service centers when farmers increased their production of cash crops. During the French colonial period when both domestic and foreign demand for local production was high, large market towns became regional centers for banking, transportation, storage, wholesale and retail trade, and, depending on the number of foreign residents, shops for luxury goods and

⁴² Roberts, footnote 16 above, pp. 147-150.

⁴³ Louis H. Muench, *Town Planning and the Social System*, in *African Urban Development* (edited by M. Koll; Düsseldorf: Bertelsmann Universitätsverlag, 1972), pp. 26-94, reference to p. 53.

12

imports. After a period of settlement by colonists, agriculture was transformed almost entirely to cash-crop production, while the market towns became trade and service centers. The process in Tlemcen was associated with the commercialization of agriculture in the city's hinterland.⁴⁴ As in Ibadan, manufacture had almost always been small-scale, more a commercial than an industrial activity. Shops producing carpets, carved hunting guns, copperwork, iron and clay pots, woolen and leather goods, and jewelry flourished in Tlemcen in the late nineteenth and early twentieth centuries.

Social services were not less important than commerce and trade in stimulating the growth of secondary cities. The concentration of primary and secondary schools by the early 1900s made Tlemcen the educational center for its region and complemented commercial activities. For example, the *Ecole de Pais des Indigènes*, founded in 1890, had an important influence on carpet making and design throughout much of the French period.⁴⁵ Some cities were especially influenced by the social services established by foreign missionaries. European and North American religious groups set up schools, churches, hospitals, orphanages, and other social services that were used both to proselytize and to introduce new ideas and values that could change the economies and the societies of the urban places. Christian missionary schools in Tripoli, Lebanon, had an important influence on the social structure of the largely Arab city in the late nineteenth century.⁴⁶ The schools, the hospitals, and the colleges built by missionaries in Ranchi in the late nineteenth and early twentieth centuries contributed greatly to the emerging role of the city as an administrative center. One observer argued that the mission schools affected the economy of the city in numerous ways. Because of their standards of discipline, education, and service and their devotion to work, the schools became centers for the diffusion of modern influences into tribal culture. Whatever the desirability of such influences on the poor of Ranchi, these services "increased their employment opportunities, social status and functional capabilities" and contributed to making Ranchi attractive for subsequent governmental expenditures and private investments.⁴⁷

The concentration of governmental investment in services, facilities, and infrastructure at certain periods seems to have been a major influence in the growth of secondary cities. Those functions and facilities were important in consolidating economic advantages, in enhancing the value of previous investments, and in encouraging new private investments. Often those features created conditions that allowed the diversification of secondary cities into entirely new economic activities. A factor analysis of Philippine cities showed an extremely strong correlation between population size and the concentration of industrial, service, and commercial establishments. During the period from 1939 to 1960 large cities of the Philippines had more manufactural and service establishments per capita and higher levels of educational attainment than did small, less-urbanized places, at least in part because governments in large mu-

⁴⁴ Lawless and Blake, footnote 6 above, pp. 149-150.

⁴⁵ Lawless and Blake, footnote 6 above, p. 113.

⁴⁶ Gulick, footnote 12 above, pp. 48-54.

⁴⁷ Srivastava, footnote 7 above, pp. 517-518.

13

municipalities generally raised and spent more revenue for public purposes.⁴⁸ The comparative advantages in social services and facilities have often been crucial in attracting population and investment that allowed the expansion of secondary cities.

DYNAMICS OF GROWTH

Factors that were decisive in the founding and the early growth of secondary cities in developing countries can be identified and described, but it is clear from historical studies of their development that the initial influences are only a partial explanation for the continued urban expansion and diversification. Some forces that generated early growth were random. Although some cities were planned and their physical growth was carefully designed, the large majority of secondary cities arose from spontaneous actions by individuals responding to favorable conditions. As some initial forces weakened, the cities that could not transform and adjust declined or disappeared. Perhaps the most dramatic example is Potosí, now a relatively impoverished Bolivian city of fewer than 100,000 residents; in the mid-seventeenth century it was the largest city in the western hemisphere and one of the richest mining centers in South America. The population of Potosí was then approximately 160,000, and its wealth was renowned throughout Latin America and Europe. The city had one of the most productive mints in Latin America and supplied coins and medallions for many Spanish colonies and even for Spain. The churches and public buildings were magnificent.⁴⁹ But the economy and wealth of the city depended almost entirely on mining and the slave labor of Indians. When the mines were no longer productive, the population of the city declined almost as quickly as it grew. By 1825 the city had fewer than 10,000 residents. Now it is a minor administrative and commercial center with few signs of its former wealth except in its old, deteriorating buildings. Its residents and the Indians living in its rural hinterlands are among the most impoverished in South America.

Factors that were important in the growth of some cities were detrimental to that of others. In Latin America, for example, many secondary cities in the interior that grew as centers for services and resource extraction in the eighteenth and nineteenth centuries (as Potosí did in an earlier century) either stagnated or declined after modern transportation facilities put them in competition with coastal ports and national capitals in the late nineteenth and early twentieth centuries.⁵⁰

Synergism was crucial to the growth and the development of secondary cities. Almost all studies of them show that a combination of influences stim-

⁴⁸ Arch Dotson and Henry Teune, On the Consequences of Urbanization: Contributions to Administrative Capacity and Development, in *Metropolitan Growth: Public Policy for South and Southeast Asia* (edited by L. Jakobson and V. Prakash; New York: John Wiley and Sons, 1974), pp. 13-44, reference to p. 34.

⁴⁹ Lewis Hanke, *The Imperial City of Potosí: An Unwritten Chapter in the History of Spanish America* (The Hague: Marinus Nijhoff, 1956).

⁵⁰ Walter B. Stöhr, Some Hypotheses on the Role of Secondary Growth Centers as Agents for Spatial Transmission of Development in Newly Developing Countries: The Case of Latin America, in *Proceedings of the Commission on Regional Aspects of Development of the International Geographical Union* (edited by F. Helleiner and W. Stöhr; n.p.: International Geographical Union, 1974), pp. 75-111.

14

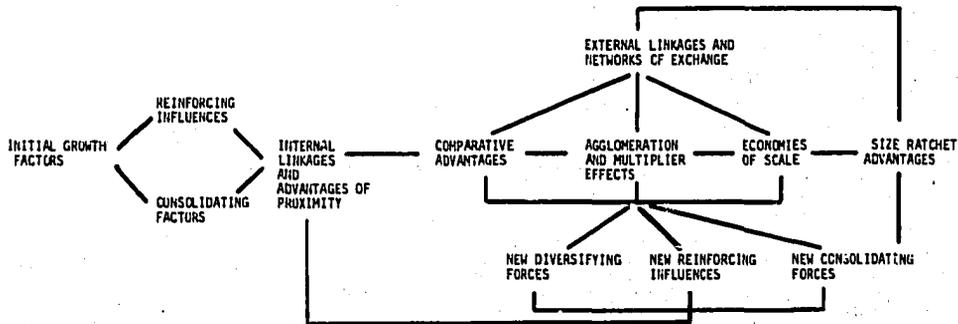


FIG. 1—Dynamics of growth and diversification in secondary cities.

ulated their growth and that none of the factors that were important in their development could alone have generated growth and diversification. Studies of cities in Southeast Asia and Latin America show that the ones founded as mining centers or ports did not continue to grow unless they met certain conditions: they had to be able to diversify, to become linked physically and through trade and social interaction with smaller and larger urban places, to perform central functions, to consolidate their economic and social gains, to create comparative advantages, and to respond quickly to external and internal social, political, and economic changes.

A complex combination of forces differentiated the cities that grew and diversified from those that stagnated or declined. Fourteen factors seem to have been crucial for continued growth in the thirty-one secondary cities surveyed here. They are initial growth factors, reinforcing influences, consolidating forces, internal and external linkage effects, advantages of proximity, creation of comparative advantages, agglomeration and multiplier effects, new diversifying forces, economies of scale, new reinforcing factors, new consolidating forces, broadened linkages and networks of exchange, and size-ratchet advantages to protect against drastic decline (Fig. 1).

Initial growth factors often mutually reinforced each other during early stages of development and allowed the settlements to consolidate their specialized activities and to achieve an economy of scale. Linkages among activities in the cities and with other towns allowed them to attain advantages of proximity and comparative advantages in the performance of some functions, most often marketing, administration, or services, which attracted migrants from rural areas and created additional opportunities for investment in productive and service activities. New diversifying forces were needed later to allow the cities to absorb increased numbers of people. Changes in transportation routes, application of new technology, influx of foreign capital or investment of locally produced surplus capital in complementary economic activities, accumulation of new administrative functions, or surges of governmental investment in infrastructure and services created conditions that allowed diversification of economic and social activities so that the cities could survive. Increased size of population and economies of scale and proximity allowed the cities to perform new functions. The new diversifying forces again required reinforcement through social, economic, physical, and political transformation, and the consolidation

of those gains through institutional arrangements. As the economies became more diversified, the cities could broaden their linkages and interactions with other urban places and could expand the networks of exchange and trade. Increased agglomeration produced new multiplier effects.

Some forces that initially influenced development became weak or lost importance, while other forces stabilized and continued to promote growth and diversification. As cities grow to populations between 250,000 and 500,000, they achieve what Wilbur R. Thompson labeled size-ratchet advantages.⁵¹ Large population size and economic diversification gave them the time to respond to changing economic and social conditions and to offset the effects of decline in any one sector. The continued growth and diversification of these cities depended on the repetition of this cycle of innovation, reinforcement, consolidation, expansion, creation of new comparative advantages, higher levels of agglomeration, greater economies of scale, and reconsolidation of gains at new levels of development.

Merely increasing in population to 100,000 or more does not ensure that a secondary city would become the catalyst for development of its region. The spread of benefits to hinterlands has often been constrained. Indeed some cities grew in such a way that they exploited and drained resources from their rural peripheries to feed their own growth. Some intermediate cities simply grew as enclaves where high standards of living were achieved by a small group of residents, but the vast majority remained poor.

To the extent that the policies of international assistance organizations and governments of developing countries aim to promote developmental rather than exploitative urbanization, it is important to encourage the forces that lead to mutually beneficial linkages between cities and their rural hinterlands. This analysis of factors that contributed to the growth of secondary cities in developing countries suggests that the central governments can play an important role in building a network of secondary urban centers by allocating investments with that goal in mind. Governmental allocations should support and diversify the trade, commercial, small-scale industrial, and agricultural processing and supply activities of secondary cities so that they may forge strong, beneficial linkages with their rural hinterlands.

⁵¹ Wilbur R. Thompson, *A Preface to Urban Economics* (Baltimore: Johns Hopkins Press, 1965), pp. 21-24.