

CITY SIZE DISTRIBUTION OF SOUTHEAST ASIA

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WHEN THE TOWNS AND CITIES OF SOUTHEAST ASIAN countries are arranged by rank and size of population, they form a distribution which is characterized by the largest city being generally many times the size of the second largest city. Above a certain designated size, the distribution shows this large city with many small towns and a deficiency of towns of intermediate sizes. Such a pattern is observed to be regular, for when the frequency of occurrence of city-sizes in a particular country is compared with that of another, the two frequencies show similar features. On further examination, it is found that there is an exception to this general rule and there does seem to be a need, therefore, to study this variation as well as to review the pattern of city-size distributions with respect to other Southeast Asian countries. Such an investigation is the aim of this paper which, for purposes of analysis, will focus on individual countries such as Malaysia (including Singapore), Thailand, Burma, Philippines and Indonesia while the countries of North and South Vietnam, Laos and Cambodia are combined to form a single case.

The method of study is to arrange the cities of these countries above the threshold criterion of 10,000 people,¹ into seven size-classes and examine the frequency distribution so found. The frequency of occurrences is then arithmetically transformed into cumulative percentages and, when plotted on a special kind of graph paper called the log-normal probability paper, should assume identifiable graph patterns (Figures 1 and 2). According to previous theoretical investigations upon which this study is heavily dependent,² the city-size distribution that fits into a straight line or approximates a straight line is a log-normal city-size distribution; the distribution that does not take the form of a straight line but approximates the shape of an inverted capital "L", is the primate city-size distribution. Without using the log-normal probability paper, however, these patterns may also be detected from the manner the percentage cumulation is proceeded over the chosen size-classes for, where the cumulation is gradual, the city-size distribution may approximate log-normalcy; where the cumulation is less gradual and steep, the primacy pattern prevails. Other patterns are variations which tend either to approach normalcy or to depart from primacy.

¹ In spite of its limitations, this figure was adopted in order to provide international comparison between countries of Southeast Asia. The term "town" in this paper is interchangeable with "city" and although the population size of the towns and cities under discussion are approximate only, the basic patterns of city-size distributions are generally accurate.

² See, for instance, Brian J. L. Berry, *City-Size Distribution and Economic Development*, *Economic Development and Cultural Change*, IX (July 1961), 573-587.

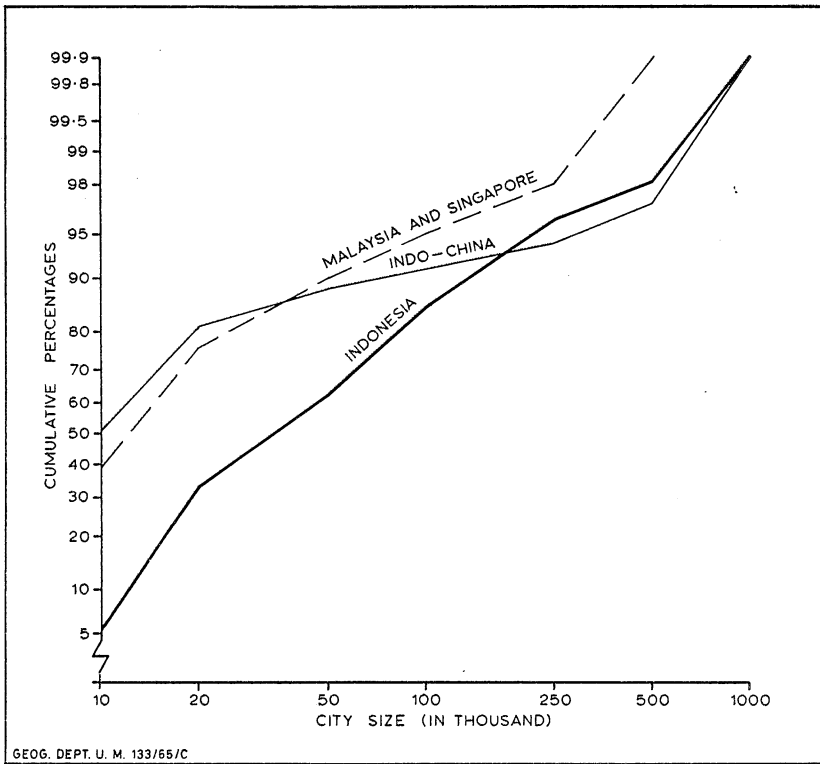


FIGURE 1: CITY SIZE DISTRIBUTIONS IN MALAYSIA/SINGAPORE, INDO-CHINA AND INDONESIA

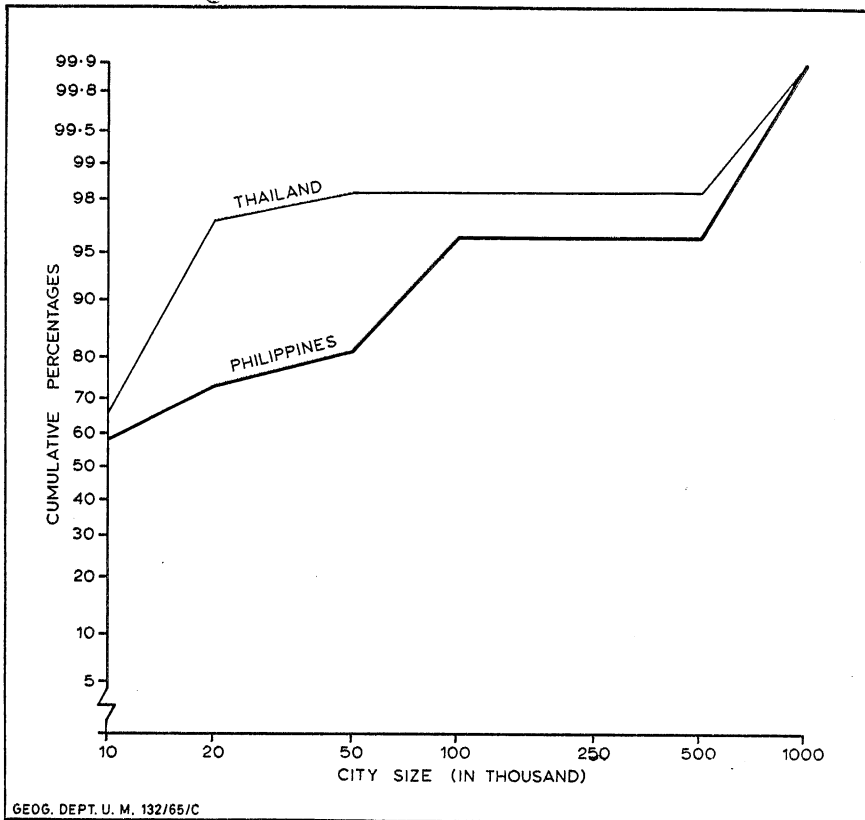


FIGURE 2: CITY SIZE DISTRIBUTIONS IN THAILAND AND PHILIPPINES

Malaysia: Log-Normal City-Size Distribution

A table illustrating the distribution of towns and cities in Malaysia and Singapore was prepared and the figures relating to the number of towns and cities in the country were transformed arithmetically into cumulative percentages (Table 1).

Table 1: Distribution of Cities in Malaysia and Singapore (1957).

| Size of Population (i) | No. of Cities (ii) | Cumulative Percentage (iii) | Cities |
|---------------------------|-----------------------|--------------------------------|---|
| 10,000-20,000 | 16 | 39.0 | Bentong, Dungun, Jinjang, Kulim, Batu Gajah, Kuala Kangsar, Kuala Pilah, Guntong, Pasir Pinji, Segamat, Petaling Jaya, Raub, Sungei Siput, Temerloh, Serdang Baharu, Tawau. |
| 20,000-50,000 | 15 | 75.6 | Taiping, Butterworth, Batu Pahat, Muar, Kota Bharu, T. Anson, Kluang, Kuala Trengganu, Bukit Mertajam, Kampar, Kuantan, Sungei Patani, Ayer Item, Jesselton, Sandakan. |
| 50,000-100,000 | 6 | 90.2 | Klang, Johore Bahru, Malacca, Alor Star, Seremban, Kuching. |
| 100,000-250,000 | 2 | 95.1 | Georgetown, Ipoh. |
| 250,000-500,000 | 1 | 97.6 | Kuala Lumpur |
| 500,000-1,000,000 | 1 | 99.9 | Singapore City. |
| Total | 41 | | |

When arranged into this frequency, the distribution pattern of Malaysian cities appears to conform to a system which is characterized by many small towns, a lesser number of medium size cities and slightly fewer large cities. The cumulative percentages in column (iii) when plotted on a log-normal probability paper closely approximates a straight line, indicating that the distribution of cities in Malaysia and Singapore in 1957 was approximately log-normal. This pattern is a clear departure from the oft-quoted generalization about primate cities dominating the urbanization pattern of Southeast Asian countries.³ While it does not attain perfect linearity, it shows a frequency

³ This is implied in D. W. Fryer's paper entitled, "The Million City in Southeast Asia," *Geographical Review*, XLIII, No. 4 (October 1953), 474-494; see also the paper by N. S. Ginsburg, "The Great City in Southeast Asia," *American Journal of Sociology*, XL (March 1955), 455-462.

distribution which does not appear to be markedly dissimilar from the expected distribution of city sizes.⁴ A comparison of columns (ii) and (iii) in Table 2 illustrates the similarity of the two distributions and emphasizes the prevailing log-normal city-size distribution in Malaysia and Singapore.

Table 2. Distribution of Cities
(observed and theoretical)

| Size of Population | Actual No. of Cities in 1957 (ii) | Theoretical No. of Cities in 1957 (iii) |
|--------------------|---|---|
| 10,000-20,000 | 16 | 22 |
| 20,000-50,000 | 15 | 7 |
| 50,000-100,000 | 6 | 4 |
| 100,000-250,000 | 2 | 2 |
| 250,000-500,000 | 1 | 1 |
| 500,000-1,000,000 | 1 | 1 |
| | 41 | 37 |

The log-normal distribution when related to urban development represents a total pattern that has been obtained for the country as a whole and, by approximating a straight line, it appears to indicate a high rate of urbanization whose processes are governed by infinitely many random factors. Included in the matrix are factors that are identifiable with the development of large-size cities, those with medium-size towns and yet, others with small towns and large villages. This is not to suggest that they are clear-cut in each case for, in fact, almost all factors of urbanization permeate through these groups affecting cities and towns of all sizes. However, the big cities have particularly benefited from being entrepot ports for local materials and imported manufactured goods from established European and American markets. For instance, the entrepot trade of Singapore which stands at the top of the hierarchy (Table 1), has flourished because of the favorable location of its harbor as well as its excellent port facilities; the long tradition of trade; shipping and banking; the skill of its traders and operators, together with the existence of innumerable auxiliary services which have grown with trade, and a progressive institutional setting coupled with a strong propensity on the part of the immigrant population to improve their material standard of living.

⁴ The expected distribution of city sizes for Malaysia and other countries referred to in this paper was constructed from the equation:

$$\frac{f(i)}{f(i-1)} = \frac{i-1}{1+i}$$

where $f(i)$ is the number of cities of population i ;
 $f(1)$ is the number of cities with populations
of 10,000-20,000;
 $f(2)$ is the number of cities with between
20,000 and 50,000 population;
 $f(3)$ is the number of cities with between
50,000 and 100,000 population, etc.

For further clarification of this formula, see B. J. L. Brian, *Alternate Explanations of Urban Rank-Size Relationships*, *Annals of the Association of American Geographers*, XLVIII (March 1958), 83-91.

The widespread introduction of the money economy followed by the discovery of tin-ore; the production of natural rubber; massive immigration of Chinese, Indians and Indonesians, following the consolidation of British interests in Malaysia before the Second World War; a concomitant development of railway, road and air network as well as telecommunication, emphasized the status of Ipoh and many other towns as central urban places of a high order. Kuala Lumpur is a unique example in this respect because ever since 1859 (when it was selected as a mining, trading and administrative center), it has grown rapidly, especially after the independence of Malaya in 1957, to become not only an educational and religious center but also a center for modern medicine.⁵ As the political Capital of the newly-created sovereign State of Malaysia, it provides functions similar to those of Washington D.C. in the United States of America, with Singapore functioning as the New York City of the Malaysian region. In the case of those cities with a population between 50,000 to 100,000 people, Klang became the fifth largest city as a result of its amalgamation with Port Swettenham (the outport of Kuala Lumpur). The rapid rise of 93.4 per cent for the city of Johore Bharu between 1947 and 1957 reflected, in part, its importance as a satellite of Singapore City.

The growth and number of towns of the smaller sizes such as Jinjang, Pasir Pinji, Guntong, Segamat, Sungei Siput and Serdang, among others, have been subject to a different set of centripetal forces. Prominent in recent times was the Emergency or the anti-terrorist war between 1948 to 1960 when about half-a-million rural people were physically removed into compact villages which grew into settlements with urban characteristics. Of the 440 villages created by this process, three settlements had a population of more than 10,000 people each.⁶ For instance, Jinjang, non-existent before this scheme began, had an estimated population of 13,000 people in 1954. Since then, it expanded to contain about 30,000 people in 1964, making it almost the same size as Petaling Jaya, Malaysia's first new town. Other rural people, who escaped resettlement, sought the security of many existing towns and cities, swelling their population considerably. The transfer of the capital of Sabah (North Borneo) from Sandakan to Jesselton, however, caused an increase of population of the latter at a rate faster than that of the former.

In addition to resettlement, the number and size of small towns also increased as a result of a force that assumed significance only after the Second World War. Rural-urban migration caused a rapid diminution of the ratio of the rural people as compared with the urban population with the result that small towns generally experience accelerated growth. Though both large and intermediate size towns continued to grow, they have grown slower than the smaller-towns.⁷ The problem of townward migration was sufficiently serious to impel the government to embark upon a massive rural reconstruction program in order to give the rural community its due importance, provide

⁵ Hamzah-Sendut, "The Structure of Kuala Lumpur," *Town Planning Review*, XXXV (July 1965), 125-138.

⁶ Hamzah-Sendut, "Resettlement Villages in Malaya," *Geography*, XLVII (January 1962), 41-46.

⁷ Hamzah-Sendut, "Patterns of Urbanization in Malaya," *Journal of Tropical Geography*, XVI (October 1962), 114-130.

sound economic foundations or rural livelihood and improve rural-living conditions comparable to urban living conditions.

Townward migration also affects towns and cities of intermediate sizes as, for example, the town of Kota Baharu where a sample survey indicated an increase of 10,000 people through this process during the decade from 1947 to 1957 thus swelling its current population to about 45,000 people. On the other hand, the population of Kuching in Sarawak has been stimulated by a large immigration of Chinese from Singapore and Hong Kong as a result of increased demands for labor and the expansion of food marketing possibilities. Other towns in this group rose into prominence because of their port activities that service local shipping such as Telok Anson, Batu Pahat, Muar and Butterworth. Kuantan showed a population rise of 186 per cent during the decade after 1947 because it replaced another town as a political capital of an administrative area; because of such government action, this town assumed a regional importance and a high rank in the distribution of cities in the country.

However, as these towns were developed, some other towns declined in importance. This was particularly the case with the city of Malacca which was once a regional capital for trade, exporting tin, gold and spices to foreign markets, and importing textiles and other goods from India and China, until it was overshadowed and reduced in importance (both as a capital town and a port) by Penang and later, by Singapore. The population of Seremban was depressed because it was partitioned, for administrative purposes, resulting in the division of the town into two urban units: Seremban town itself and Rasah. On the other hand, other towns such as Alor Star and Kuala Trengganu have not attracted large population increases due to their unfavorable location in areas which have limited commercial attributes. Besides, rice production and fishing which form the mainstay of the economic structure of their hinterland are labor intensive and cannot, therefore, support a large number of urban residents. Moreover, there was little tradition impelling the indigenous Malays who inhabit these areas to live in towns and cities.

Thus, the interplay of these factors (already elaborated) and other causes of urbanization (with none particularly dominant) acting in diverse ways, has resulted in the log-normal pattern of city-size distribution in the country. While inducing the expansion of the large cities, these factors have also accelerated the growth and number of middle and small-size cities.

Log-normalcy Variations

North and South Vietnam, Laos and Cambodia, combined together, have a city-size distribution which, though indicating primacy, has undertones of approaching log-normalcy similar to that of Malaysia and Singapore (Table 3). Not only is this distribution characterized by the increasing emergence of smaller towns, of which there were 26 in 1960. The number of such towns will be more pronounced, following South Vietnam's measures to resettle rural dwellers into 7,200 agrovilles⁸ but it is also dominated by the "million"

⁸ Joseph J. Zasloff, "Rural Settlement in South Vietnam: the Agrovillage Program," *Pacific Affairs*, XXV (Winter 1962/1963), 327-340; see also Milton E. Osborne, "Strategic Hamlets in South Vietnam," No. 55 (April 1965) Department of Asian Studies, Cornell University, 20-41.

city of Saigon-Cholon which is three times the size of Hanoi in North Vietnam and five times that of Phnom Penh in Cambodia. As the graph indicates, there is a clear deficiency of towns and cities of intermediate sizes which reflects the unsettled conditions of the whole area. Here, urbanization has been initiated by a host of variable forces upon which the population distribution between urban and rural areas is determined.

Table 3: Combined city-size distribution of North and South Vietnam, Laos and Cambodia, 1960.

| City-size | No. of cities | Cumulative Percentage | Cities |
|-------------------|---------------|-----------------------|--|
| 10,000-20,000 | 16 | 50.0 | Auang Nai, Lao Cai, Nam Dinh, Dong Hoi, Vung Tau, Rach Gia, Kampot, Pursat, Bien Hoa, Can Tho, Binh Dinh, Savannakhet, Pakse, Kon Tum, Xien Khouang, Hoa Binh. |
| 20,000-50,000 | 10 | 81.2 | Vientiane, Dalat, Than Hoa, Hoi An Song Lai, Vinh, Luang Prabang, Battambang, Strung Treng, Nha Trang. |
| 50,000-100,000 | 2 | 87.5 | Hoe, Torane. |
| 100,000-250,000 | 1 | 90.6 | Haiphong |
| 250,000-500,000 | 1 | 93.7 | Phnom Penh |
| 500,000-1,000,000 | 1 | 96.8 | Hanoi |
| Over 1,000,000 | 1 | 99.9 | Saigon-Cholon |

32

Dislocation of population, following political unrest, has added to the population of existing large towns, besides stimulating the creation of suburban areas within close proximity of the older established and large urban centers like Saigon-Cholon, Phnom Penh and Hanoi. Because of their location, these small "enclaves" have restricted growth and invariably exerted little competition on the large cities. Saigon's rise to primacy has been largely due to its coalescence with Cholon, its strategic location in relation to the Mekong Delta, and also the enlargement of its economic base through its multi-functional role in commerce, administration and industry. Although it enjoys its current position of primacy, other capital cities in the peninsula (like Hanoi) which are generally prevalent in a politically disturbed area, rival or even exceed it in numerical dominance.

Townward migration, on the other hand, is in part a consequence of population growth in the rural areas. Hence, the operation of centrifugal forces has been dictated by low agricultural productivity, advanced fragmentation of land, high physiologic density, as well as the lack of security arising from frequent warfare and ceaseless brigandage. Another contributory factor is the general absence of a tradition of statehood which characterizes Laos. This, together with the prevalence of diverse ethnic groups, provides a disunifying force working against population consolidation in the rural areas.

With exception of a few towns located in the uplands, the majority of the small towns border the coast and have a seaboard frontage. The former represents an outgrowth of nucleated settlements established by the French to serve their needs for local produce and cheap manual labor. The inhibitive topographic features of the uplands do not, however, contribute a commensurate economic basis for population growth so that these towns tend to remain small in size. On the other hand, coastal towns such as Dong Hoi, Hoi An, Quang Nai, Binh Dinh, Song Cau, Nha Trang, Vung Tau and Rach Gia, have characteristic locations where adverse factors are largely minimized and, therefore, conducive to development and growth. They do not, however, rival the large towns whose promotion to state capitals in their respective areas gave them additional advantage. Moreover, many of these regional capitals have investments in industry; with the expansion of their economic base, they should continue to dominate in population numbers.

At the top of the hierarchy is Saigon-Cholon which gained development impetus from its strategic location as a gateway for the region. Founded in 1859, it had its early basis as a riverine city and tidal port on the right bank of the Saigon river, 50 miles from the open sea. The opening of canals made it an important rice port; with further growth uninterrupted by wars and limited by international boundaries, Saigon-Cholon should have a multinational orientation to serve a large economic hinterland extending into Laos and Cambodia.

Two towns, however, may provide competition for dominance in the region. Hanoi—with its industrial framework based on distilling and brewing, the manufacture of tobacco, pottery and earthenware, metal work, jewellery and silk industries—should impel greater urbanization to such an extent that it may challenge the supremacy of Saigon-Cholon. Another competitor is the capital and chief town of Cambodia. Centrally located at the foci of the nation's road system, Phnom Penh's position is enhanced by its accessibility to ocean-going vessels along the Mekong. As the focus and national center, it shows characteristics of a primate city dominating other cities, towns and large villages in Cambodia.

Another city size distribution that is approaching log-normalcy is that provided by Indonesia (Table 4).

Table 4: City Size Distribution in Indonesia, 1961⁹

| Population Size | Actual No. of cities | Theoretical No. of cities | Cumulative Percentage |
|-------------------|-------------------------|------------------------------|--------------------------|
| 10,000-20,000 | 3 | 30 | 5.2 |
| 20,000-50,000 | 16 | 10 | 32.4 |
| 50,000-100,000 | 17 | 5 | 61.4 |
| 100,000-250,000 | 13 | 3 | 85.4 |
| 250,000-500,000 | 6 | 2 | 95.6 |
| 500,000-1,000,000 | 2 | 1 | 97.8 |
| Over 1,000,000 | 2 | 1 | 100.0 |
| | 59 | 52 | |

It is to be noted also that Indonesia's city-size distribution is characterized by relatively fewer cities of small population as compared with those of above 50,000 people. This is because "the smaller the town, the slower in general their rate of growth." In contrast, the big cities are fast growing cities, many of which showed population increases of over 4.6 per cent per annum since 1931. Ten of these cities had over 100,000 population; six cities between 50,000 to 100,000 population and eleven cities were with a population varying from 20,000 to 50,000 people. Only three cities, with a population between 10,000 to 20,000 people, showed increases above 4.6 per cent per annum.

There are two cities with over a million inhabitants in Indonesia; possibly Bandung, with a population of 972,566 people in 1961, may be the third "millionaire" city in view of its importance as a major transportation, communication and higher educational center. Unlike Bangkok and Manila, Djakarta (2,973,052 persons) has never been a primate city dominating the nation's major economic, political, administrative, higher educational and technical functions. Surabaya, the second largest city (1,007,945 persons), is a major port and had had a substantial amount of import-export commerce and industry while being the nation's most important naval station. In addition, Bogor is not only renowned for its tropical plant research institutions but also the Presidential palace. Cities such as Medan, Palembang in Sumatra, Pontianak and Banjarmasin in Kalimantan, Manado and Makassar in Sulawesi, act as multi-purpose regional centers. Djakarta, therefore, is less than three times as large as the next largest city and not much larger than the regional centers. Thus, Indonesia as a whole, exhibits the log-normal distribution of city-size characteristic of Malaysia, in particular, and of some developed countries. This pattern contrasts with that of Thailand, the Philippines and Burma where the primacy of Rangoon is unmistakable.

⁹ Figures for this table were obtained from Tan Goantiang, "Growth of Cities in Indonesia 1930-1961" *Tijdschrift*, LVI (Mei-June 1965), 103-108; see Pauline D. Milone, "Contemporary Urbanization in Indonesia," *Asian Survey*, IV (August 1964), 1000-1012.

Primacy Distribution

A clear contrast to the prevailing pattern of city-size distribution in Malaysia and Singapore, Indonesia and Indo-China, is provided by Thailand¹⁰ whose distribution indicates a simple case of primacy characterized by the dominance of one large city, a clear deficiency of towns in the intermediate sizes, and a relatively many smaller towns (Table 5).

Table 5: Distribution of Towns in Thailand (1960)

| Population Size | Actual No. of Towns in 1960 | Theoretical No. of towns in 1960 | Cumulative percentage |
|-------------------|-----------------------------|----------------------------------|-----------------------|
| 10,000-20,000 | 40 | 31 | 65.5 |
| 20,000-50,000 | 19 | 11 | 96.6 |
| 50,000-100,000 | 1 | 6 | 98.2 |
| 100,000-250,000 | — | 4 | 98.2 |
| 250,000-1,000,000 | — | 2 | 98.2 |
| Over 1,000,000 | 1 | 3 | 99.9 |
| | — | — | |
| | 61 | 57 | |

This pattern—when plotted on the log-normal probability paper—will show an inverted L-shaped graph that denotes a heavy concentration of cities of small size and the dominance of a huge primate city. With a population of about 1.7 million people (including Thonburi), Bangkok is twenty-six times the size of Chiangmai, the second largest city in Thailand. Its “bigness” may further be emphasized by means of a primacy index¹¹ and comparing this index with that for Kuala Lumpur and Djakarta (Table 4). It is clear that even when the total population of the four largest cities in the country is viewed against that of Bangkok, the latter is still larger by 9.6 times as compared with Kuala Lumpur which is only 0.62 times the total population of Penang, Ipoh, Klang and Johor Baharu.

Table 6: Comparative Primary Indices

| City | 2-city Index | 3-city Index | 4-city Index | 5-city Index |
|---------------------|--------------|--------------|--------------|--------------|
| Bangkok (1960) | 26.15 | 15.88 | 12.07 | 9.6 |
| Jakarta (1961) | 2.95 | 1.50 | 1.11 | 1.04 |
| Singapore (1957) | 2.88 | 1.65 | 1.35 | 1.21 |
| Kuala Lumpur (1957) | 1.35 | 0.88 | 0.72 | 0.62 |

Bangkok's dominance over Chiangmai and other towns in Thailand may be explained by the physical topography in which it is located. The geographi-

¹⁰ Larry Sternstein, “A Critique of Thai Population Data,” *Pacific Viewpoint*, VI (May 1965), 15-38.

¹¹ The simple index is the ratio of the population of the first city to that of the second city: $1 = \frac{P_1}{P_2}$ where 1 is the index of primacy, P₁ is the population of the first city, and P₂ is the population of the second city. A four-city index is $\frac{P_1}{P_2 + P_3 + P_4}$

$P_2 + P_3 + P_4$

cal focus of the whole country being towards the lower Menam-Chao Praya plain, emphasizes its importance as the chief export port for Thai rice and its being a capital city attracts a long surplus population from the rural areas while drawing in large external economies from its export and tourist trade. Other towns in the country are not strategically located for they lie in areas of subsistence—agricultural activities which lack vital factors for urban development. Thus, because of their isolation, such towns as Chengmai Nan, Lampong, Uttaradth, Makhon Sawan, Chunpon, Pukhet and Songkhla, function only as local centers, serving their immediate population without ever being strong contenders for primacy.

Like those of Thailand, the cities of Burma¹² also show the primacy pattern which is characterized by one large city with an approximate population of 774,676 (1958), an absence of towns between 250,000 to 500,000 people, four towns between 50,000 to 250,000 people and forty nine small towns (Table 7).

Table 7: Distribution of Cities in Burma (1958)

| Population Size | No. of Cities | Total Population |
|-------------------|---------------|------------------|
| 10,000-20,000 | 26 | 367,018 |
| 20,000-50,000 | 23 | 655,318 |
| 50,000-100,000 | 2 | 139,877 |
| 100,000-250,000 | 2 | 251,047 |
| 250,000-500,000 | — | — |
| 500,000-1,000,000 | 1 | 774,676 |
| | — | — |
| | 54 | 2,186,936 |

At the top of the hierarchy is Rangoon which is about four times larger than Mandalay and almost eight times the size of Moulmein, the second and third largest cities in the country respectively, while at the same time containing 35 per cent of the total population living in cities of over 10,000 people. With rural-urban migration from adjoining deltaic areas and the development of inland waterways, transport and road communications which focus on lower Burma, Rangoon's population is expected to increase to 1¼ million people by 1983 thus increasing its lead over other towns which generally show limited growth. For instance, even with further industrialization and improved roads and railways, Mandalay's future population is estimated to be no more than 250,000 people during the same year.

With reference to the Philippines¹³ the primacy pattern is characterized by the city of Manila dominating over twenty-five or more cities of smaller population size (Table 8).

¹² V. Antolic, "Town Planning in Burma," TAO/BUR/31 (Restricted), Department of Economic and Social Affairs, United Nations, 1960.

¹³ Much of the information in this section was gleaned from Preliminary Report on Housing Needs, the People's Homesite and Housing—United Nations Survey, Manila (1963); and D. J. Dwyer, "The Problem of In-Migration and Squatter Settlement in Asian Cities," *Asian Studies*, II (August 1964), 145-169.

Table 8: City Size Distribution in the Philippines, 1957

| Population Size | No. of Towns | Cumulative percentage |
|-------------------|--------------|-----------------------|
| 10,000-20,000 | 15 | 57.7 |
| 20,000-50,000 | 4 | 73.1 |
| 50,000-100,000 | 2 | 80.8 |
| 100,000-250,000 | 4 | 96.2 |
| 250,000-500,000 | — | 96.2 |
| 500,000-1,000,000 | — | 96.2 |
| Over 1,000,000 | 1 | 99.9 |
| | — | |
| | 26 | |

The causes underlying such a distribution may be attributed to a matrix of historical, locational, economic and political advantages of the capital city in relation to the development of the country as a whole. Particularly significant is the fact that Manila is spreading outwards in all directions beyond its official boundary so as to create one conurbation referred to as Greater

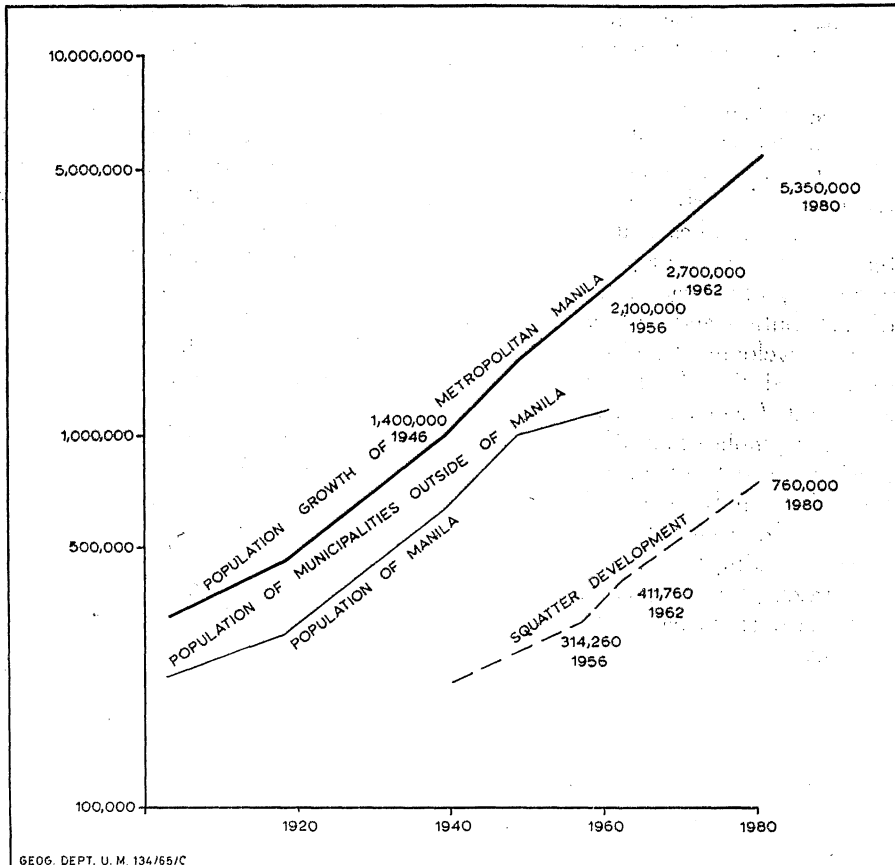


FIGURE 3: GROWTH OF METROPOLITAN MANILA

Manila. This spread occurred mainly after the Second World War when, among other areas, the Gonzales Estate in Caloocan (1963), Sta. Mesa Heights in Quezon City (1956), Forbes Park in Makati (1963), and San Roque in Pasay (1946), were fully established. By incorporating seventeen municipalities, Greater Manila grew in size from 1.4 million people in 1948 to about 3 million people in 1962. With massive rural-urban migration caused partly by distress and poverty in the outer islands, and the growth of industry and increasing government functions in the city, its population is expected to rise to 5.4 million people in 1980 (Figure 3). Concomitant with this growth is the development of shack settlements which, in a sense, represents a heavy waste of economic resources (apart from land resources), for the value of the materials from which these shacks are made cost more than ₱75 million. To a considerable extent, Greater Manila is, therefore, typical of the personality and problems faced by the primate cities of Southeast Asia.

Conclusion

From these cases, it is observed that the distributions of cities in Indonesia and Malaysia are approximately log-normal in contrast with the primate city-size distributions of Thailand, the Philippines and Burma, where there are many small towns followed by a general deficiency of towns of intermediate sizes and then a single primate city. The distribution for the Indo-Chinese peninsula is a variation which departs from primacy approaching the log-normal city-size distribution. There is no evidence, however, that primate city-size distributions would evolve into the other types of city-size distribution. It is, however, clear that the two basic patterns reflect underlying forces of urban development of varying intensity. While the log-normal distribution implies many forces acting in diverse ways, the primacy distribution appears to suggest strong and dominant forces of urbanization focused upon only one large city. There is no simple correlation between each type of distribution and such variables as average national income, levels of economic development and ethnic homogeneity of population, although it should be stressed that further research is essential before urban phenomenon of Southeast Asian countries can be adequately described.

The implications of these patterns should also be worth studying but much more data on urban development on Southeast Asia are necessary before they can be analyzed in detail. Although some fundamental facts may be obtained from national censuses, background documentation in its diverse aspects relating to urbanization and city growth, is much to be desired. For the present, the analysis on the social, economic and city-planning implications of these phenomena must necessarily be confined primarily to broad generalizations.