THE INTERMEDIATE CITY CONCEPT
REVIEWED AND APPLIED
TO MAJOR CITIES IN SUMATRA, INDONESIA*

by
William A. Withington**

ABSTRACT

A concept of "the intermediate city" has had various defini-
tions as an analytically calculable tool in studying urban systems, par-
ticularly those in Less Developed Countries. The Intermediate City
concept is reviewed and a flexible usage recommended through ap-
plication of the concept to major cities in Sumatra, Indonesia. The
nine major cities identified are examined for the 1961—1980 years
in terms of their qualities as intermediate or major cities, distinctive
changes during the period; and the extent to which these Sumatran
intermediate cities may be representative of major cities in the
broader urban systems of Indonesia, Southeast Asia, and of Mon-
soon Asia.

INTRODUCTION

Several usages of intermediacy have been applied within studies of cities
and city systems. Among these have been Hildred Geertz's use of "interpoles" to
almost serviceable and functionally diverse Indonesian cities identified in the 1930

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** William A. Withington is Associate Professor of Geography, University of Kentucky, Lexington,
Kentucky, U.S.A.
Dutch Census (Geertz, 1953: 24—41); Kingsley Davis and associates (1969, 1972) at the International Urban Institute in Berkeley, California; Philip Hauser (1956), Gerald Brewe (1966), and United Nations (Annual) in United Nations data discussions; Dennis Rondinelli (1983) in his recent articles and books; Withington (1969, 1975) in a number of papers dating from 1969; James Olson (1973) in his Ph.D. dissertation publication; as well as many others (Fawcett et al. 1980; Ubed, 1975). While several of the intermediate city vaguages agree on a lower or upper population threshold, most show considerable variation in other defining bases.

The purpose of this paper is first to review and restate the intermediate city concept and second, to demonstrate the application of the concept to cities in a particular developing world area, in this case the large western island region of Sumatra in Indonesia (Figure 1). Questions posed and at least partially answered are:

1. What definitional guidelines seem most appropriate for defining intermediate or second-level cities in Asia?
2. In Sumatra what cities should be included as major cities fitting the intermediate city concept?
3. For these major cities what are the distinctive characteristics and changes during the 1960s and 1970s?
4. To what extent are the Sumatran cities in their characteristics and changes representative of intermediate cities in the broader urban systems of Indonesia, Southeast Asia and Monsoon Asia?

THE INTERMEDIATE CITY CONCEPT

Thirty years ago Donald Fryer (1958) used the term "millionaire cities" in discussing the primate and other larger cities of Southeast Asia. T.G. McGee's Cities of Southeast Asia focused mainly on the region's primate cities (McGee, 1967). The author's own interest evolved from residence in Honolulu, Hawaii, primate only as the then territorial and now state capital; in Lexington, Kentucky; and during the years 1957 to 1959 in Medan, capital of North Sumatra province and largest Indonesian city outside the national core area of Java.2

1. Karl Polanyi lists cities of Indonesia with populations of 100,000 or 1961, as well as their populations (McVey, 1963: 19).
2. The author's residence was in Hawaii from 1927 to 1941; Lexington, KY, 1951—1952 and 1959—present, and Medan, Sumatra, Indonesia, while a Ford Foundation Visiting Professor, Faculty of Economics, Nommensen University.
Figure 1. Indonesian Kotamadya 1980 with 1961 Proportion of Population
How does one define intermediate importance when much larger cities may dominate? The United Nations Demographic Yearbook enumerates cities worldwide if their populations exceed 100,000 (United Nations, annually). Kingsley Davis and his associates likewise used a population of 100,000 as the lower threshold for any metropolitan area having a central city of 50,000. This is also the usage of the U.S. Census Bureau for metropolitan population clusters and is reflected in "American Metropolitan Evolution" (Bachert, 1967). Beginning in the late 1960s the author discussed intermediate cities, applying a lower threshold of 100,000 people and an upper one of one million people (Witthong, 1969, 1975). In the 1970s James Osborn's focus on the "middle city" of Malaysia included cities ranging from less than 20,000 people to Kuala Lumpur's city figure of more than 500,000 (Osborn, 1973). In recent articles and books Detris Rodbell's "secondary cities" have a lower threshold of 100,000 and include all cities of a nation except its primeate and/or capital largest city in less developed countries (Rodbell, 1983).

The frequency of its application suggests the analytic value of the intermediate city concept. What should the limits by population or other criteria be? The author's own answer is illustrated in detail using cities of Sumatra, Indonesia. In this discussion, all or almost all cities of larger population, except the primeate and usually capital city, are included at the upper end of the population range. At the lower end 100,000 people frequently seems appropriate as a minimum for metropolitan character. However, capital of provinces or equivalent principal administrative divisions as in Indonesia have sufficient functional diversity and circulation infrastructure if not population, to warrant inclusion as intermediate, midly range, secondary or "major cities".

SUMATRA'S MAJOR CITIES, 1961—1980

Sumatra in western Indonesia is that nation's largest outlying region in population and also in amount and diversity of products generating foreign exchange from exports. What are Sumatra's major cities, fitting the definition of an intermediate city? Seven of Sumatra's cities had more than 100,000 people in the 1980 Census of Population (Table 1). In descending rank order by population these cities are: Medan, Palembang, Padang, Tanjungkarang, Teluk Rubiah.

1. Sumatra in 1980 had 26 million people; second only to Java—Madura's 91.5 million. In a total national population of 147.5 (Biro Pusat Statistik, 1981). During the 1973—1977 period exports from Sumatra accounted for between 53 and 64% of Indonesia's values by value (Biro Pusat Statistik, 1978: 278).
Jambi, Pekanbaru and Pematang Siantar. Among these, only Pematang Siantar in eastern North Sumatra is not a provincial capital city. The largest in population is Medan with nearly 1.4 million, ranking fourth in Indonesia. Below only the three Java cities of Jakarta, Surabaya and Bandung (Figure 11).

<table>
<thead>
<tr>
<th>TABLE 1 INTERMEDIATE AND LESSER CITIES OF SUMATRA 1980</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intermediate Cities</strong></td>
</tr>
<tr>
<td><strong>Municipality</strong></td>
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<tr>
<td>------------------</td>
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<tr>
<td>Banda Aceh</td>
</tr>
<tr>
<td>Medan</td>
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<tr>
<td>Palembang</td>
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<tr>
<td>Palembang</td>
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<tr>
<td>Padang</td>
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<tr>
<td>Jambi</td>
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<td>Lampung</td>
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<tr>
<td>Tangerang</td>
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<td>Tjilik ing</td>
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</tbody>
</table>

**LESSER CITIES**

<table>
<thead>
<tr>
<th>City</th>
<th>Province</th>
<th>Population 1980</th>
<th>1989²</th>
<th>1980 Population % of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jambi</td>
<td>D.I. Aceh</td>
<td>23,821</td>
<td>8,500⁸</td>
<td>35.7</td>
</tr>
<tr>
<td>Bojonegoro</td>
<td>North Sumatra</td>
<td>76,040</td>
<td>46,235</td>
<td>69.0</td>
</tr>
<tr>
<td>Taerak</td>
<td>North Sumatra</td>
<td>92,047</td>
<td>36,228</td>
<td>151.0⁴</td>
</tr>
<tr>
<td>Tangerang</td>
<td>West Java</td>
<td>42,154</td>
<td>29,122</td>
<td>44.7</td>
</tr>
<tr>
<td>Sidoarjo</td>
<td>North Java</td>
<td>59,947</td>
<td>38,645</td>
<td>55.5</td>
</tr>
<tr>
<td>Pekalongan</td>
<td>West Java</td>
<td>78,836</td>
<td>21,051</td>
<td>274.0⁴</td>
</tr>
<tr>
<td>Bekasi</td>
<td>West Java</td>
<td>70,771</td>
<td>26,806</td>
<td>177.0⁴</td>
</tr>
<tr>
<td>Sukabumi</td>
<td>West Java</td>
<td>34,517</td>
<td>25,921</td>
<td>38.2</td>
</tr>
<tr>
<td>Malang</td>
<td>East Java</td>
<td>31,728</td>
<td>18,999</td>
<td>67.0</td>
</tr>
<tr>
<td>Surabaya</td>
<td>East Java</td>
<td>13,561</td>
<td>12,276</td>
<td>10.5</td>
</tr>
<tr>
<td>Pekalongan</td>
<td>Central Java</td>
<td>90,096</td>
<td>40,283</td>
<td>95.5</td>
</tr>
</tbody>
</table>

Source: Biro Pusat Statistik (1962, 1981); author’s computations of percentages.

Note:
2. City known as located in other territory since 1916.
3. Lampung Province was established in 1964 as a new province.
4. Tangerang-Tanjungpinang in its capital.
Figure 2. Sumatra: Major and Lesser Kotamadya 1980 & 1941
Among Sumatra's twenty kecamatan (the municipalities) for which 1980 population data are available, two cities having fewer than 100,000 people must be included on any list of Sumatra's major cities (Table 1: Figure 2). These two are the provincial capital cities of Bandar Aceh in Dairah seletama Aceh (D.S. Aceh) near the northern tip of the island, and Bengkulu, the transport city on the southwestern coast of Sumatra and capital city of Bengkulu Province. Each is the "primate city" of its political unit and as such is the major city in diversity of functions and in political, economic, and cultural nodality.

Eleven other kecamatan across the length and breadth of Sumatra have considerable importance in both current and historical terms. Most have localized hinterlands and limited diversity and nodality compared with the nine major cities. All are identified here as "Lesser Cities" often as satellite or military centers in relation to the provincial capitals. The one possible exception is Bulukumba in upland West Sumatra, the Fort de Kock of the Dutch colonial era. Bulukumba has continued to be a cultural and religious center of the Minangkabau people, the dominant ethnic group of West Sumatra (Geertz. 1963: 78—85).

CHARACTERISTICS AND CHANGES IN SUMATRA'S MAJOR CITIES

The nine major cities of Sumatra ranged in population in 1980 from Medan with nearly 1.4 million people to Permatangdamar eight miles away with about 150,000, and to Bandar Aceh's 72,000 and Bengkulu's nearly 65,000 (Table 1). Two decades earlier in 1961 populations of these cities were as low as 25,000 in Bengkulu, not yet a provincial capital, to almost 480,000 in Medan, with Palembang only a few thousand people less. At that time six cities exceeded 100,000 in population; while Palembang's population was about 71,000 (Table 1).

Urban population growth for Sumatra's major cities has been generally rapid during the 1961—1980 period. Six of the nine major cities more than doubled their populations as compared with only three of the eleven "lesser cities" (Table 1, Figure 2). Thus, six of the nine major cities grew in population by more than 100%. Only Permatangdamar (20.4%) and Palembang (65.7%) increased at a rate below Sumatra's population growth rate of 78%. The rapid

1. For a 1960s perspective, prior to today's establishment of Bengkulu Province, see Withington (1967: 534—549) for the region served by Bandar Aceh and Bengkulu cities.

2. The author's fieldwork in June 1984, in Bulukumba-West Sumatra, provided a strong perception of cultural vitality for the Minangkabau people. Fort van den Capellen van den Pol in Bengkulu, Fort de Kock at Muara Kabui, and Paskawan (Pauhus) of Pauhus were used by Lord 1935: 97—99 to form the kernel of Minangkabau
population growth in these major Sumatran cities, as in most Third World cities, resulted from high levels of natural increase combined with large volumes of net immigration. However, at least four of the six cities (six of nine among all kota/madya in Sumatra) having population increases of over 100% also had urban area expansions during the 1961–1980 period. The fivefold increase in Medan's urban area in 1972 was greatest, but Padang, Palembang and Bengkulu also had sizable additions both in urban area and populations. Among the lesser Sumatran cities, Sabang, Payakumbuh and Tebingtinggi had very large percentages of population growth, large enough to result in very small or negative growth in the population of associated kabupatens.

Other urban changes have included: (i) Both forced and voluntary outmigration flows, by non-ethnic Indonesians including Chinese, South Asians and Westerners, plus educated Sumatrans attracted to Jakarta or other large Sumatra places and opportunities. (ii) Considerable urban development in both the older central city areas and in expanding peripheries where residential areas, factories, sports stadia and university campuses have been added. (iii) For some of these cities sizable immigrations related to Indonesia's "transmigration" program have brought many additional people from Java, Bali and southern Sulawesi.

1. Immigration data at the provincial level are available in Biro Pusat Statistik (1981, 1983). Tables on population by place of previous residence five years earlier and place of birth according to place of present residence. Transmigration, also at the provincial but not at the city level, has been stated a successive State Indonesian and Statistical Pocketbooks of Indonesia annually (Jakarta: Biro Pusat Statistik, yearly to the early 1980s). A recent study providing some sample population mobility and growth answers for Medan, Pematangsiantar and Tebingtinggi, eastern North Sumatra, is that of Thomas R. Laitoch and Bernto Suwarno (1984).

2. Comparisons by author of earlier and current Sumatra city maps or plans and of 1961, 1971 and 1980 Indonesian Census data, some specific and some indicative of urban area expansions.


4. From the author's knowledge of employment locations of many students trained under the Ford Foundation project at the Faculty of Economics, Nizamatters University, Medan, who were hired by the Central Government in Jakarta, and others who have been employed by Indonesian or international oil companies, and in consulting positions.

5. Wide-standard hotels in central city areas; study and university campuses usually in urban peripheries; factories and extended airports, also peripheral, along 48th new residential areas have been added in most major Sumatran cities.

6. See footnote 50 comments. Nearly 250,000 persons are listed in the seven years for which I have data as coming to Sumatra. Lampung (95,000), South Sumatra (75,000), Bengkulu (33,000), South (over 17,000) and Bula (over 2,000) were the principal provinces of destination, but no specific data indicate urban destinations.
(6) The eight provincial capitals, all on or near coastlines or major river arteries, show generally rapid growth. The one non-capital city of Penang—George Town—is the largest city in Penang State. George Town has a land area of 226 square kilometers and a population of about 200,000. The city is the commercial and industrial center of Penang State and is connected by road and rail with the mainland of Malaysia. Penang is an important port and a major center for shipping and trade.

7. These cities and others might be added to give evidence of advantages for some cities: handicaps for other cities. The most notable advantage for a city is to serve in the role of an administrative capital. For example, Penang has this role in Penang State, and Malacca has this role in Malacca State. The city of George Town is the capital of Penang State and is the largest city in the state. The city is located on the west coast of Peninsular Malaysia and is connected by road and rail with the mainland of Malaysia. Penang is an important port and a major center for shipping and trade.

8. Tables 1 and 2, which are not shown here, provide more detailed information about the economies of these cities.

MAJOR SUMATRAN CITIES AS SURROGATES FOR ASIAN INTERMEDIATE CITIES

The first question posed in this discussion is: to what extent can Sumatra's major cities—Penang and Malacca—serve as surrogates for intermediate cities more broadly across Asia? The reasons for this question are as follows: (1) the study of intermediate cities is an important regional administrative, cultural and economic centers in Penang State, and are connected by road and rail with the mainland of Malaysia. Penang is an important port and a major center for shipping and trade.

1. Penang and Malacca are the cultural centers of the Penang and Malacca States, respectively. Penang has a land area of 226 square kilometers and a population of about 200,000. Malacca has a land area of 226 square kilometers and a population of about 200,000.

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Navigable river. Only Permataharapan in low uplands of eastern North Sumatra has no airport or seaport. Like most intermediate cities of the Less Developed World, Sumatra’s major cities have had rapid population growth from a combination of high natural increase and steady net immigration flows. Each is involved in public and private attempts to improve its internal urban structural elements and remove any circulation blockages or other deterrents to internal and external services.

On the negative side, that is that Sumatra’s major cities cannot appropriately be considered surrogates, these Sumatran intermediate cities have specific site, situation and national or international linkages different from those of other Asian intermediate cities. In Java, Indonesia’s core, for example, its intermediate cities increased in population far more slowly enough so to suggest problems including economic stagnation. Several cities of Java with high female to male population ratios have had sizeable out-migration losses as men left to search for economic opportunities elsewhere. The diversity among Sumatra’s nine major cities—in population size, rates of growth in the 1961—1980 period, and in diversity of ethnic and religious patrons—can also be cited as reasons why these cities should not be considered as surrogates or models for Asian cities.

Returning to positive reasons why Sumatra’s major or intermediate cities can represent a broader universe of Asian cities, two need to be stressed. These are: (i) the regional setting away from the national core area provides insights into recent peripheral urban development; and (ii) these cities represent real world conditions, providing an understanding of particular cities or groups of cities in their own spatial setting, physical, cultural, political and economic.

**CONCLUSIONS**

What has the application of more flexible threshold limits for the intermediate city concept contributed, as illustrated in its application to the major cities of Sumatra? Past cities rapidly growing in population, such as Medan, which have exceeded the one million population threshold, should remain in the “intermediate city” category until or unless any of these cities should emerge as national capital or most populous and thus prime city. Whether the Republic of Indonesia, Medan has been a regional non-capital for several decades, the

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1. Brosseau Statistics (1962, 1962, 1980) provides comparisons at the municipality or autonomous regional level for female/male ratio. The municipalities having the highest female/male ratios tend to be those with assured population increases and limited or economic development.
most populous city of Indonesia's outer islands or periphery regions. Nevertheless, Medan despite its rapid growth has a population less than one-fifth that of Jakarta.

Second, some important regional centers despite populations below the 100,000 threshold level should be included as intermediate or major cities. In Sumatra two such cities, are Bandara Aceh at the north and Bengkulu in the southwest. The intermediate or major city qualities of these two cities include their roles as provincial-level administrative capitals, regional centers of economic activity, nodes of transportation and communication, and centers of culture and religion.

Thus, identification of urban centers as intermediate or major cities should apply flexible upper and lower limits of either population thresholds or amount and variety of functional elements. The national capital with other multi-million population and highly diverse cities should be excluded as too large for intermediate status at the upper end of the urban system range. By contrast, the many smaller regional centers are too limited in communications modality, functional variety and have populations too small to warrant their identification as intermediate or major cities.

REFERENCES


