MEGACITIES IN SOUTHEAST ASIA
- THE PROGRESSION OF UNIPOLAR CONCENTRATION AND EXPANSION INTO THE SUBURBS -

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SUMMARY

- All five major cities in Southeast Asia (not including Singapore) are expected to become megacities with populations of over 10 million in the near future.
- Each country will see unipolar concentration progress, leading to megacities. There will be a big gap between the megacities and other cities in the country.
- Megacities will spread into surrounding suburban areas, expanding the metropolitan area. Although populations in these surrounding areas will grow, there will be a big difference in earnings between the megacity center and the surrounding areas.

According to World Urbanization Prospects, a report by the United Nations, as of 2018 there were 1,830 cities around the world with populations of over 300,000 people. Out of these, 33 cities in 20 countries were defined as "megacities" with populations in excess of 10 million people. Out of the major cities in Southeast Asia, in 2018 Bangkok, Thailand, followed Manila in the Philippines and Jakarta in Indonesia in reaching a population of over 10 million. Furthermore, Ho Chi Minh, Vietnam, had a population of 8.15 million and the UN predicts this will exceed 10 million in 2026. Also, Kuala Lumpur in Malaysia had a population of 7.56 million, which is expected to reach 10.08 million in 2032. With the exception of Singapore, Southeast Asia's major cities are forecast to become megacities in the near future.
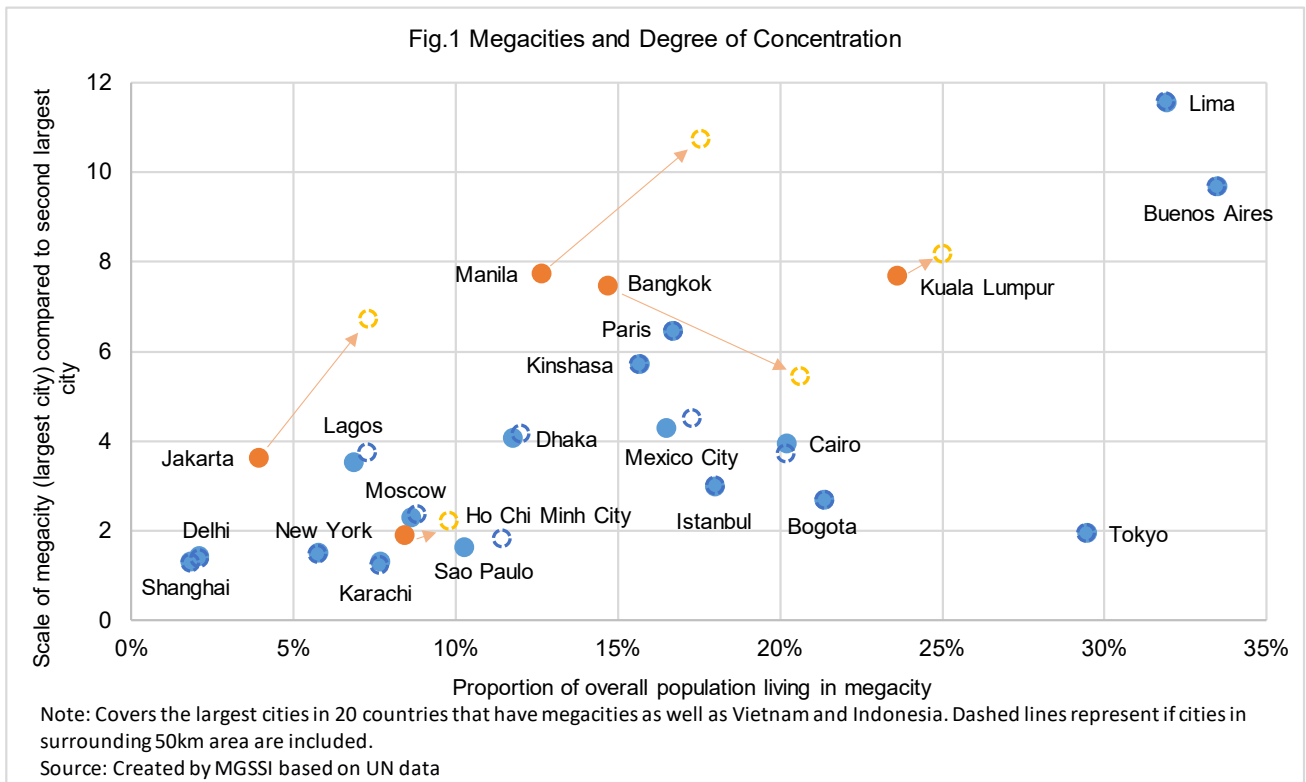
In these five countries, the percentage of the overall population living in cities is quickly rising above the global average, and it is certain that the population living in megacities will grow. While economic and population growth is leading to a rise in the number of cities in each country, there remains a big disparity in population and earnings between megacities and these other cities. This report will focus on these Southeast Asian megacities and test whether they show the following characteristics: 1) a growing gap between the population in the megacity and the next largest city, 2) the formation of a "greater metropolitan area" as the megacity spreads into surrounding suburban areas, and 3) a growing disparity in earnings between the center of the megacity and the surrounding area.

THE PROGRESSION OF UNIPOLAR CONCENTRATION

According to World Urbanization Prospects, in 2018 there were 28 cities in Thailand with populations of over 300,000, an increase of 19 compared to 2014. There were similar increases of 13 cities in the Philippines, five in Indonesia, two in Vietnam, and one in Malaysia. Furthermore, in each country the difference in population between the megacities and the next largest cities is bigger than before. Manila, Bangkok, and Kuala Lumpur

each have populations more than seven times larger than the next largest city in their respective countries, and Jakarta is 3.6 times larger than Surabaya, Indonesia's second largest city. Also, looking at the percentage of each country's overall population living in megacities, Kuala Lumpur leads the way with 24%, followed by Bangkok with 15%, Manila with 13%, and Ho Chi Minh with 8%.

In the case of Tokyo, 29% of the overall Japanese population are concentrated there, but for Osaka, this percentage is 15%, meaning that the population of Tokyo is only 1.9 times the population of Osaka. Although the criterion used to measure populations makes a difference, unipolar concentration in megacities is observed especially in Southeast Asia. Incidentally, the unipolar concentration of populations is not necessarily a worldwide phenomenon. Looking at New York, the largest city in US, the percentage of the overall population living in the city has decreased from 7.8% in 1950 to 5.8% in 2018. Also, the population of Shanghai in China is 25.58 million, but this is just 1.8% of the overall Chinese population (Fig. 1)

Fig.1 Megacities and Degree of Concentration

Note: Covers the largest cities in 20 countries that have megacities as well as Vietnam and Indonesia. Dashed lines represent if cities in surrounding 50km area are included.
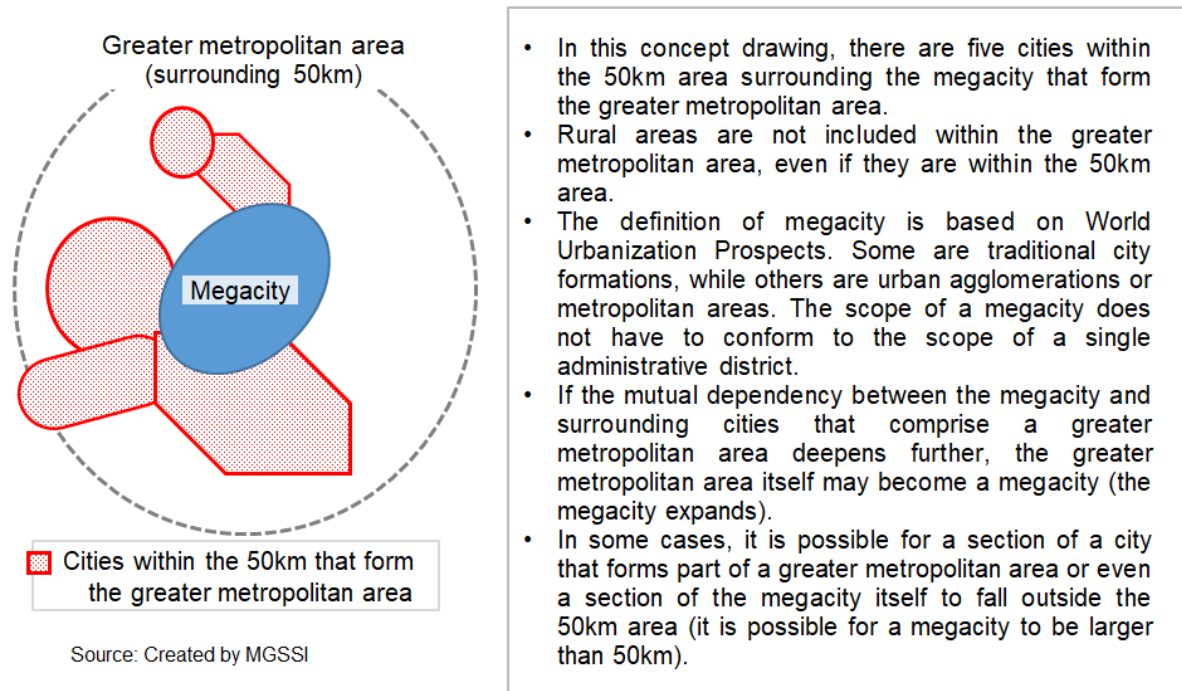Source: Created by MGSSI based on UN data

EXPANSION INTO THE SUBURBS

Although the populations of the Southeast Asian megacities are increasing, looking at trends over the last 10 years reveals that at the same time, the increase of the populations of cities that are close to megacities is accelerating at a rate that exceeds the megacities themselves. The reason behind this is thought to be that as people in megacities gradually become conscious of congestion, it has a ripple effect prompting growth in areas around the expanding city. It also seems that the development of these surrounding areas results in the emergence of new cities.

However, there are no uniform international standards for defining cities. As each country has different criteria, there are large differences in the areas of cities. Even in World Urbanization Prospects, while the scope of a city that fits into its relevant administrative district is uniformly defined as a "city proper," an "urban agglomeration"

or a "metropolitan area" that span multiple administrative districts is also defined as single "city*1." Based on World Urbanization Prospects, this report has not made a distinction as to whether the scope of a megacity conforms to a single administrative district or covers multiple districts. However, if the scope of each city differs too much, it is difficult to make a comparison. Therefore, this report has supposed that any city cited on World Urbanization Prospects within the 50km area around a megacity must form a "greater metropolitan area" that has a mutual socioeconomic dependency with the megacity at the center (Fig. 2). This report considered the actual circumstances of each Southeast Asian megacity and its surroundings, bearing in mind the 50km area, to see if these hypothetical greater metropolitan areas could be recognized, based on preliminary calculations made using a greater metropolitan area centered around a megacity such as 10-year population trends.

Fig. 2   Concept Drawing of Megacities and Greater Metropolitan Areas in this Report

Greater metropolitan area
(surrounding 50km)

Megacity

Cities within the 50km that form the greater metropolitan area

Source: Created by MGSSI

- In this concept drawing, there are five cities within the 50km area surrounding the megacity that form the greater metropolitan area.
- Rural areas are not included within the greater metropolitan area, even if they are within the 50km area.
- The definition of megacity is based on World Urbanization Prospects. Some are traditional city formations, while others are urban agglomerations or metropolitan areas. The scope of a megacity does not have to conform to the scope of a single administrative district.
- If the mutual dependency between the megacity and surrounding cities that comprise a greater metropolitan area deepens further, the greater metropolitan area itself may become a megacity (the megacity expands).
- In some cases, it is possible for a section of a city that forms part of a greater metropolitan area or even a section of the megacity itself to fall outside the 50km area (it is possible for a megacity to be larger than 50km).

The next section discusses the details of each city, but ultimately, recognizes that the Jakarta and Bangkok and their surrounding areas have already become greater metropolitan areas with a megacity at the center, and that Manila and Ho Chi Minh and their surrounding areas are close to becoming the same. On the other hand, the probability that Kuala Lumpur and its surrounding areas will become the kind of greater metropolitan area supposed in this report is low. While the rate at which populations in the areas surrounding the greater metropolitan areas of Jakarta, Bangkok, Manila, and Ho Chi Minh are increasing is relatively high, in Kuala Lumpur's case, it is actually declining (Fig. 3). Also, in the cases of Jakarta, Bangkok, and Manila, the populations in surrounding cities are high, so when considered as a greater metropolitan area, the proportion of the country's overall population living in the city rises considerably (Fig. 1 above).

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[1] One of the criteria for judging the scale of the city is the proportion of people in a certain region who are commuting to the city center for work or school. For example, in the case of Japan's national census, an area needs to have over 1.5% of its resident population over 15 years of age commuting to the city center for work or school for it to be considered part of the greater metropolitan area. This is one of the reasons why this report assumed that a city with an area that has a radius of up to 50km has formed a greater metropolitan area. Additionally, consideration has not been given as to whether a megacity is at the center of a traditional city formation, an urban agglomeration, or a metropolitan area. Furthermore, if a location is not considered a city by World Urbanization Prospects, even if it is within the 50km radius of a megacity, it will not be included as part of the city's greater metropolitan area in this report.

Fig. 3 Major Cities of Southeast Asia

	Indonesia	Thailand	Philippines	Vietnam	Malaysia
Total population (1,000 people, 2018) (Compared to 2008)	266,795 (13.0%)	69,183 (4.0%)	106,512 (17.4%)	96,491 (11.3%)	32,042 (18.2%)
GDP per capita (US$, 2016)	3,604	5,970	2,953	2,172	9,415
Megacity (Based on UN's World Urbanization Prospects)	Jakarta	Bangkok	Manila	Ho Chi Minh	Kuala Lumpur
Population (1,000 people, 2018) (Compared to 2008)	10,517 (12.3%)	10,156 (29.3%)	13,482 (18.8%)	8,145 (41.0%)	7,564 (39.1%)
Proportion of total population	3.9%	14.7%	12.7%	8.4%	23.6%
Size compared to next biggest city (times)	3.623	7.464	7.726	1.902	7.692
GDP per capita (US$, 2016)	15,931 (Special Capital Region of Jakarta)	15,407 (Bangkok Metropolitan Region)	9,806 (Metropolitan Manila)	5,241 (Ho Chi Minh City)	N/A (Greater Kuala Lumpur)
Number of cities in the 50km greater metropolitan area	4	5	10	2	1
Total population (1,000 people, 2018) (Compared to 2008)	9,000 (40.8%)	4,131 (35.5%)	5,218 (39.0%)	1,314 (62.0%)	456 (28.4%)
GDP per capita (US$, 2016)	2,791 (Jabodetabek)	8,037 (Bangkok & vicinities)	N/A	N/A	N/A
Total population of the greater metropolitan area (1,000 people, 2018) (Compared to 2008)	19,517 (23.8%)	14,287 (31.0%)	18,701 (23.9%)	9,459 (43.5%)	8,020 (38.4%)
Proportion of total population	7.3%	20.7%	17.6%	9.8%	25.0%
Size compared to next biggest city (times)	6.724	5.428	10.717	2.209	8.155

Note: The number of cities, population, and GDP per person of each greater metropolitan area does not include the megacity. The total population of the greater metropolitan area includes the megacity and surrounding 50km area.

Source: Created by MGSSI based on data from the UN, IMF, official statistics from each country, and other sources

Jakarta

In 2018, the population of Jakarta was 10.52 million. There are four cities in the surrounding 50km area (Bekasi, Depok, Tangerang, and Bogor), and the combined population of these cities was nine million. Jakarta's population increased by 12.3% in the 10 years since 2008, which was greatly exceeded by combined population growth of 40.8% in the four surrounding cities. The total population of the Jakarta greater metropolitan area was 19.52 million.

In World Urbanization Prospects, Jakarta is defined administratively as the Special Capital Region of Jakarta, while the term Jabodetabek is used to indicate the wider Jakarta area. The Jabodetabek includes the Special Capital Region of Jakarta and the previously mentioned four cities in the surrounding 50km area as well as one more city (Tangerang Selatan), and the total population in 2016 was 20 million. A survey carried out by Statistics Indonesia in 2014 showed that around 1.38 million people were commuting from surrounding areas into the Special Capital Region for work or school, so Jakarta is already recognized as a greater metropolitan area with the Special Capital Region of Jakarta at the center which has spread into surrounding areas.

Bangkok

Bangkok had an estimated 10.16 million people, and five cities in the surrounding 50km area (Samut Prakan, Nonthaburi, Pathum Thani, Samut Sakhon, and Nakhon Pathom) had a combined population of 4.13 million. Over the preceding 10 years, Bangkok's population grew by 29.3% while the combined population of the five surrounding cities grew by 35.5%. This gave the Bangkok greater metropolitan area a population of 14.29 million.

In World Urbanization Prospects, Bangkok is defined administratively as the Bangkok Metropolitan Region. Also, regional GDP statistics compiled by the Office of the National Economic and Social Development Council (NESDB) include statistics for the Bangkok Metropolitan Region and five surrounding cities under "Bangkok & Vicinities." It is one of the evidences that Bangkok is expanding into surrounding areas to become a greater metropolitan area with the Bangkok Metropolitan Region at its center.

Manila

Manila had an estimated population of 13.48 million people, and 10 cities in the surrounding 50km area (Antipolo, Bacoor, Binan, Cabuyao, Calamba, Dasmarinas, Imus, San Jose del Monte, San Pedro, and Santa Rosa) had a combined population of 5.22 million. Over the preceding 10 years, Manila's population grew by 18.8% while the combined population of the 10 surrounding cities significantly exceeded this, growing by 39.0%. This gave the Manila greater metropolitan area a population of 18.7 million.

Manila is generally referred to as Metro Manila, and World Urbanization Prospects does the same. This indicates a relatively small area ranging about 25km north and south from the center. However, the North-South Commuter Railway Project, a railway almost 150km in length travelling from Clark International Airport in the North to Calamba in the south, which is currently under development, will cut through Metro Manila, and it will service five of the 10 cities in the 50km surrounding area. Also, while not necessarily in general use, the name Greater Capital Region can be seen in government development plans and the like, showing the beginnings of the areas surrounding Metro Manila gradually being recognized as part of a greater metropolitan area.

Ho Chi Minh

Ho Chi Minh had an estimated population of 8.15 million people, and two cities in the surrounding 50km area (Bien Hoa and Thu Dau Mot) had a combined population of 1.31 million, giving the Ho Chi Minh greater metropolitan area a population of 9.46 million. Over the preceding 10 years, Ho Chi Minh's population grew significantly by 41.0%, while the combined population of the two surrounding cities showed even greater growth, increasing by 62.0%.

In World Urbanization Prospects, Ho Chi Minh is generally defined administratively as Ho Chi Minh City. In Vietnam, the resident registration process is not necessarily performed in a smooth and efficient manner, and it is thought that Ho Chi Minh has already surpassed 13 million residents. Furthermore, to date, the ties between Ho Chi Minh and the two cities in its surrounding 50km area are not necessarily strong. However, there are plans to extend the Ho Chi Minh City Metro to these two cities, which facilitate urban development, so it is possible there will be a gradual recognition that a greater metropolitan area with Ho Chi Minh at the center is spreading into surrounding areas.

Kuala Lumpur

Kuala Lumpur had an estimated population of 7.56 million people, and one city in the surrounding 50km area (Seremban) had a population of 460,000, giving the Kuala Lumpur greater metropolitan area a population of 8.02 million. Over the preceding 10 years, Kuala Lumpur's population grew 39.1% while Seremban's grew 28.4%.

Kuala Lumpur's center is the Federal Territory of Kuala Lumpur, but the terms Greater Kuala Lumpur or Klang Valley are more generally used to describe the city and its surrounding area. However, there are no strict definitions and the 30km area surrounding the central part contains as many as 10 municipalities or 6-7 administrative districts. World Urbanization Prospects currently defines Kuala Lumpur as Greater Kuala Lumpur, but in 2011 it used the Federal Territory of Kuala Lumpur. Additionally, Seremban is not usually recognized as part of Greater Kuala Lumpur, although it is cited by World Urbanization Prospects as a city within the 50km

area. The possibility of Kuala Lumpur and Seremban forming a greater metropolitan area featuring a strong mutual socioeconomic dependence thought to be low. Among the five Southeast Asian countries mentioned in this report, Malaysia has already achieved a fairly high level of economic development, and as its population is small, therefore its urban expansion might be reaching its mature stage relatively early.

THE NEED TO GIVE ATTENTION TO EARNINGS DISPARITIES

The earnings levels in each megacity vastly exceeds the average for its respective country. For example, in 2016, the Special Capital Region of Jakarta had a GDP per capita of 15,932 dollars, four times the average for Indonesia. This figure was 15,407 dollars for the Bangkok Metropolitan Region, 9,806 dollars for Metro Manila, and 5,241 dollars for Ho Chi Minh City. Compared to each country's national average, Metro Manila's was three times greater, while the GDPs of the Bangkok Metropolitan Region and Ho Chi Minh City were more than double.

However, what really deserves attention is that within the greater metropolitan areas, there still seems to be a significant disparity in earnings between the megacity at the center and the cities in the 50km surrounding area. The four surrounding cities in the Jakarta greater metropolitan area have a GDP per capita of 2,791 dollars, which is below average for Indonesia. Also, while the 8,037-dollar GDP per capita found in the five cities surrounding Bangkok is higher than the average for Thailand, it is still just around 50% of the GDP of the Bangkok Metropolitan Region.

One of the reasons for this is thought to be that companies tend to concentrate their business activities in the megacities. Using Japan as an example, about 50% of the country's GDP is originated from companies. If surrounding cities are not chosen by companies as a place to establish facilities, GDP levels will tend to remain low, even if it is in a greater metropolitan area2. However, if they leverage the benefits of being located close to a megacity and increase the number of companies that have facilities in the city through means such as developing industrial parks, then it will emerge as a localized area of high earnings. There is a strong possibility that so-called corporate demand will occupy a relatively large percentage of this kind of area, so how GDP per capita reflects earnings levels should be looked at more comprehensively.

Take Bekasi Regency in the area around Jakarta as an example. Although Regency is basically recognized as farming region, it also has a concentration of industrial parks partly developed by Japanese sogo shosha along its expressway, so although its GDP per capita is lower than that of the Special Capital Region, at 5,847 dollars it is still relatively high. Also, the GDP per capita of Binh Duong in Thu Dau Mot, one of the cities forming the Ho Chi Minh greater metropolitan area, is 4,856 dollars. This is because it houses an industrial park developed through an agreement made between the Vietnamese and Singaporean governments in 1994, and recently the Tokyu Corporation has also been participating in new urban development in the area.

The expansion of Southeast Asian megacities should continue in the medium- to long-term. According to World Urbanization Prospects the rate of population growth up to 2035 will be 50% for Ho Chi Minh, More than 30% for Kuala Lumpur, Manila, and Jakarta, and 25% for Bangkok. Economic growth is expected to lead to a significant increase in purchasing power in each country, while unipolar concentration into the megacities will progress accordingly, meaning that the metropolitan area of each megacity will expand and the proportion of the population living in surrounding areas will increase. It is highly likely that there will remain a disparity in purchasing power between the megacity and other areas and regions, or between the megacity and its suburbs.

Businesses aimed at the upper classes and that handle luxury goods are thought to be targeting megacity centers first. As earnings levels grow, consumer lifestyles might not differ so greatly from those in megacities in the developed world, such as Tokyo and New York. However, in the areas surrounding the megacities, there is

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2 If looked at in a different way, such as using household disposable income as an index, it is possible to surmise that the disparity would be smaller than that found in a comparison of GDP per capita.

likely to be continued demand for the basic urban infrastructure needed to cope with the growth in population, including electricity, water, healthcare, schools, and transportation.