Internationality of Asian megacities

- Viewed through mobility comparison

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Abstract

Foreigners' rate, defined as the proportion of the number of foreigners (non-citizens) against the total population was calculated using most recent census data around 2010 for 10 megacities located in Eastern and South-Eastern Asia. The highest foreigners' rate is of Singapore (36.4%), followed by Hong Kong (6.9%). The rest of megacities show substantial lower rates of foreigners ; Tokyo (2.4%), Osaka (1.9%), Seoul (1.7%), Bangkok (1.1%), Shanghai (0.6%), Beijing (0.5%), Jakarta (0.3%) and Manila (0.2%). The marked high foreigners' rate of Singapore does not mean that Singaporeans move more than the dwellers of other megacities, as the proportion of people born in Singapore is similar to the same rates of other megacities, around the level of slightly above 50%. The high foreigners' rate of Singapore is not the results of high mobility of Singaporeans but rather the fact that all the people coming from outside of Singapore are automatically labeled as international immigrants.

Hong Kong's foreigners' rate is much higher than that of other Chinese megacities, and this can be due to its historical background and different immigration control system. However, average mobility index of Hong Kong is lower than that of Beijing or Shanghai.

The foreigners' rates of Western countries such as New York, London, Paris are respectively 36.8%, 36.7% and 15.0%, much higher than Asian megacities' rates and historical transition of foreigners' rates in these cities would give insights to the developing Asian megacities' internationality.

Keywords: migration, mobility, Asian megacities, foreign population

Introduction

It has been widely acknowledged that Japan has extremely low level of international migrants compared to other OECD member countries. Although the number of foreigners is increasing in Japan, the foreigners' rate, defined as the proportion of foreigners (non-citizens) against total population is merely 1.7% (2010), very low compared to USA (13.8%), United Kingdom (10.4%) or France (10.6%) (UN 2012). There have been several explanations for this low rate of foreigners of Japan, such as the cultural and historical aspect of closed character of Japan and consequent tight border control, or the language of Japanese which is only spoken by Japanese and low usage of English within the country.

However, it is not only Japan which is keeping this low level of foreigners' rate. For example, the foreigners' rate of China is 0.1%, India 0.4%, South Korea 1.1%, Bangladesh 0.7%, Indonesia 0.1% or Thailand 1.7% in 2010 (UN 2012). The exclusiveness against foreigners might not be only the specific case of Japan but a common characteristic of Asian countries.

This might be due to the large size of country in terms of area and/or population. For example, the large total population is the denominator to calculate the foreigners' rate which would mathematically dwarf the rate. Or, the country size in terms of area might confuse the comparison. For example, even though the migrants move the same distance, in China or India they are still domestic migrants but in Romania or Nicaragua, they are quickly become international migrants.

To avoid these problems inherent to country level comparison, city-level comparison will be carried out here. To start with, the megacities of Eastern and South-Eastern Asia are chosen for the comparison.

Data

Information on the number of foreign residents in each country can be obtained through foreigner's registration system and/or census. The advantage of census data compared to registration data is that census data is more easily available especially for the figures on the provincial level, i.e. the megacity level. Due to the recommendations made by United Nations (UN 2008), increasing number of countries is including foreigners in census and asking questions on the country of birth and/or citizenship. For example, in the census of 2010, China covered foreign residents for the first time and data on the number of foreigners became available even to the provincial level.

However, one has to be cautious with the fragility of foreigner's statistics. They are often omitted in census due to their mobile or informal status, or in case of

registration, foreigners tend not to de-register when they leave host country, and thus the registered number of foreigners can be over-counted. For example in Japan, the census figure of foreigners was 1,648,037 whereas registered foreigners counted 2,134,151 both in 2010.

Nonetheless, acknowledging the possible shortcomings, the most recent census data for megacities in Eastern and South-Eastern Asia (hereinafter referred to as "Asian megacities") available on internet was collected as shown in Table 1.

For each megacity, administrative division should be chosen more or less arbitrary. Here prefectural level Tokyo-to (東京都) was chosen, which is different from, for example, United Nations' urban agglomeration data of Tokyo where its population is that of Kanto Major Metropolitan Area approximately consisted of Tokyo, Saitama, Kanagawa and Chiba prefectures. The same difficulties of determining the area of megacities are found in almost all cases, so here the most convenient and appropriate administrative division to obtain foreigners population data are used.

Table 1. Definition of megacities in census of selected Eastern and South Eastern Asia

Country	Megacity	Census Year	Administrative Division	Website
Japan	Tokyo	2010	Tokyo-to (東京都)	http://www.e-stat.go.jp/
	Osaka	2010	Osaka-fu (大阪府)	
Republic of Korea	Seoul	2010	Seoul Special City (서울특별시)	http://kosis.kr/index/index.jsp
China	Beijing	2010	Beijing city (北京市)	http://www.stats.gov.cn/tjsj/pcsj/rkpc/6rp/indexch.htm
	Shanghai	2010	Shanghai city (上海市)	
	Hong Kong	2011	Special Administrative Regions (香港特別市)	http://www.census2011.gov.hk
Singapore	Singapore	2010	Country	http://www.singstat.gov.sg
Indonesia	Jakarta	2010	DKI Jakarta	http://sp2010.bps.go.id/
Philippines	Manila	2010	National Capital Region	http://www.census.gov.ph/statistics/census/population-and-housing
Thailand	Bangkok	2010	Bangkok Region	http://web.nso.go.th/en/census/poph/tables_e.htm

Results

The number and percentage of foreigners of each Asian megacity are listed in Table 2. The foreigners are defined as those whose citizenship (nationality) is not that of the host country.

Table 2. Foreign population in Asian megacities

Megacity	Year	Total population	Foreign population	%
Tokyo	2010	13,159,388	318,829	2.4%
Osaka	2010	8,865,245	164,704	1.9%
Seoul	2010	9,794,304	162,822	1.7%
Beijing	2010	19,612,368	91,102	0.5%
Shanghai	2010	23,019,196	143,496	0.6%
Hong Kong	2011	7,071,576	485,000	6.9%
Singapore	2010	5,076,700	1,846,000	36.4%
Jakarta	2010	9,607,787	27,882	0.3%
Manila	2010	10,624,000	19,000	0.2%
Bangkok	2010	6,320,170	70,710	1.1%

Note : Hong Kong foreigners do not include Chinese nationals. Singapore foreigners are non-Singapore citizens comprised of permanent residents and non-residents.

Singapore, with its 1/3 population foreign, is the most international megacity among those listed, followed by Hong Kong with 6.9% of foreigners. Tokyo comes next with modest rate of 2.4%, Osaka and Seoul come next and are around the same level of foreigners' rate, 1.9% and 1.7% respectively. Bangkok (1.1%), Beijing(0.5%), Shanghai(0.6%), Jakarta(0.3%) and Manila(0.2%) are having very low level of foreigner's population rate. In brief, the level of foreigners' rate of Singapore and Hong Kong is exceptional and for the rest, the level of foreigner's rate seems to correspond to economic level of each country.

Foreigners tends to come from neighbouring countries. Table 3 shows the most populous foreign nationalities in each of Asian megacities. As the data in Beijing, Shanghai, Jakarta and Manila is not available, the respective country data was listed for reference in the same table.

Table 3. Top 3 foreign population by nationality in Asian megacities

Megacity	Nationality	person	%[1]	Nationality	person	%	Nationality	person	%
Tokyo	China	96,208	30.2	Korea[2]	77,223	24.2	Philippines	20,461	6.4
Osaka	Korea[2]	90,506	55.0	China	29,614	18.0	Philippines	3,627	2.2
Seoul	China	106,485	65.4	USA	17,684	10.9	Japan	6,038	3.7
Hong Kong	Indonesia	137,403	28.3	Philippines	135,081	27.9	British	33,733	7.0
Singapore[3]	Malaysia	842,899	45.7	China	487,909	26.4	Indonesia	81,324	4.4
Bangkok	China	35,650	50.4	Japan	13,120	18.6	USA	3,650	5.2

(Reference)									
Country	Nationality	person	%	Nationality	person	%	Nationality	person	%
China	S.Korea	120,750	20.3	USA	71,493	12.0	Japan	66,159	11.1
Indonesia[4]	East Timor	21,304	17.3	Libya	18,517	15.1	Myanmar	16,063	13.1
Philippines[4]	China	136,313	31.3	USA	55,465	12.7	UK	51,806	11.9

note :
1) Percentage(%) is against total number of foreigners.
2) Korea in Tokyo and Osaka designates both Republic of Korea and Democratic People's Republic of Korea
3) Nationality data of foreigners in Singapore was derived from UN(2012). In this data, the total number of
   foreigners equals that of Singaporian census data shown in Table 2.
4) Data is derived from UN(2012)

Americans in Seoul might be due to the return migrants, and British in Hong Kong might be due to the historical legacy. In several megacities, one nationality forms the majority. For example, Koreans in Osaka, Chinese in Seoul (including ethinic Koreans in China), Malaysians in Singapore and Chinese in Bangkok.

Discussion

Internationality contrasted with the mobility (internal migration trends)

Even though located in the same Asian continent, there is marked difference in the rate of foreigners between Singapore / Hong Kong and the rest of the Asian megacities. For sure one can guess the reason due to the fact that both Singapore and Hong Kong used to be a colonial city of British Empire. Although time has passed since the independence, 1957 (as Federation of Malaya) or 1965 (as Singapore) for Singapore and 1997 for Hong Kong, immigration institution of the 2 cities might be still keeping the British legacy.

On the other side, these 2 cities are city-state (in case of Hong Kong, there is control for domestic migration from continental China) where the city border is the national border. International migration from the neighbouring area for Singapore and Hong Kong is the same thing as internal migration in other cities, where control was absent or ineffective. To see this effect, the comparison should be extended to internal migration. Table 4 shows the various internal migration indicators derived from the same census data of megacities listed in Table 1 and from survey data of Japan (The Seventh National survey on Migration (IPSS 2013)).

Among the indicators, the rate of persons who were born in the same megacity (listed as "Birth in same megacity" in Table 4) is available for 8 cities. Apart from Osaka, this rate is around the same level in Tokyo(51.0%), Seoul(53.5%), Beijing(54.6%) Shanghai(55.2%), Hong Kong(60.5%), Singpore(57.4%) and Jakarta(57.5%). This shows that regardless of the foreigners' rate, the proportion of those who were born

locally, in this case in each megacity, against total population is similar throughout Asian megacities, and the difference of foreigners' rate is merely according to the nature of boundary, international or domestic. In case of Singapore, everybody coming from the outside of megacity are foreigners and in case of Beijing, for example, some small number come from foreign countries but majority come from outside of Beijing but within China.

In case of Hong Kong, Chinese nationals who came from mainland China is now counted as nationals (not as foreigners) so Hong Kong's foreigners rate is much smaller than that of Singapore. On the other side, the foreigners' rate of Hong Kong is substantially higher than that of Beijing or Shanghai, even though the 3 megacities belong to the same country and surrounded by a huge Chinese populaton eager to move in to these megacities.

There are several other indicators regarding internal migration such as 1, 5 or 10 year mobility according to the range of movement (e.g. between prefectures, districts etc.). Due to the differnce of census questionnaires which formulated differently according to the specific needs of each country, the obtained indicators varies in its coverage as shown in Table 4. Only in case of Japan, using survey data, all of the indicators are available. Supposing that each indicator would change proportionately to the overall level of mobility, each megacity's available indicator is calibrated by Tokyo indicator and obtained index is averaged to determine the approximate level of mobility of each megacity. The results show that Hong Kong and Singapore mobility is substantially lower than that of Seoul, Beijing and Shanghai. Tokyo is in the midle between the 2 groups of cities and Jakarta and Osaka's mobility level is much lower compared to other megacities. When average index of mobility is plotted against foreigners' rate, there is no correlation between the two (Figure 1).

Table 4. .Mobility in Asian megacities (internal migration)

Megacity	Immo-bility	Birth in same place	**Birth in same megacity**	Birth in same minor	Lifetime in minor	10 year mobility	10 year from out. megacity	5 year mobility	5 year from out. megacity	5 year in minor	1 year mobility	1 year from out. megacity	1 year in minor	20-39%	65+%
Tokyo	8.6	13.9	**51.0**	28.5	20.0	40.4	13.0	31.2	12.0	79.9	12.4	3.3	93.3	30.4	20.1
Osaka	12.7	18.2	**72.0**	42.4	29.8	35.9	5.0	27.2	4.7	87.2	6.9	1.4	97.4	26.1	22.4
Seoul		5.4	**53.5**	34.9				54.7	11.8	80.0	18.2	3.9	93.6	34.2	9.6
Beijing			**54.6**	46.1					21.6					43.6	8.7
Shanghai			**55.2**	45.0					22.7					40.1	10.1
Hong Kong			**60.5**				16.9	28.7	5.8	81.4		2.2		27.6	13.3
Singapore			**57.4**											30.2	9.0
Jakarta			**57.5**						7.4					41.5	3.1
Index														**Average**	
Tokyo	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Osaka	0.955	0.950	0.571	0.806	0.877	0.890	0.385	0.871	0.390	0.637	0.553	0.417	0.390	0.669	
Seoul		1.098	0.950	0.911					1.756	0.983	0.998	1.465	1.188	0.962	1.146
Beijing			0.927	0.754					1.804					1.162	
Shanghai			0.915	0.770					1.895					1.193	
Hong Kong			0.807				1.302	0.922	0.484	0.928		0.672		0.853	
Singapore			0.871											0.871	
Jakarta			0.867						0.618					0.742	

Notes

Immobility = Rate of persons who always stay in the present residence (%)

Birth in same place = Rate of persons who were born in the same place as present residence (%)

Birth in same megacity = Rate of persons who were born in the same megacity (%)

Birth in same minor = Rate of persons who were born in the same minor administrative division of present residence (%)

Lifetime in minor = Rate of persons who have been living in the same minor administrative division of present residence (%)

10 year mobility = Rate of persons who moved within past 10 years

10 year from out. megacity = Rate of persons who moved from outside of currently living megacity within past 10 years

5 year mobility = Rate of persons who moved within past 5 years

5 year from out.megacity = Rate of persons who moved from outside of currently living megacity within past 5 years

5 year in minor = Rate of persons who remained within the same minor administrative division within past 5 years

1 year mobility = Rate of persons who moved within past 1 year

1 year from out.megacity = Rate of persons who moved from outside of currently living megacity within past 1 year

1 year in minor = Rate of persons who remained within the same minor administrative division within past 1 year

20-39% : Proportion of population aged 20 to 39 years old

65+% : Proportion of population aged 65 years old and more

* Sources are the census data listed in Table 1 except ;
 - Singaporean 20-39% and 65+% as the official census data does not cover information on non-residents
 - The data of Tokyo and Osaka which is derived from the Seventh National Survey of Migration of Japan (IPSS 2013) as Secondary Use stipulated in the Article 32 of Statistics Act of Japan.

Major administrative division is the same as the boundary defined in prefecture（都道府県）for Japan, Province for

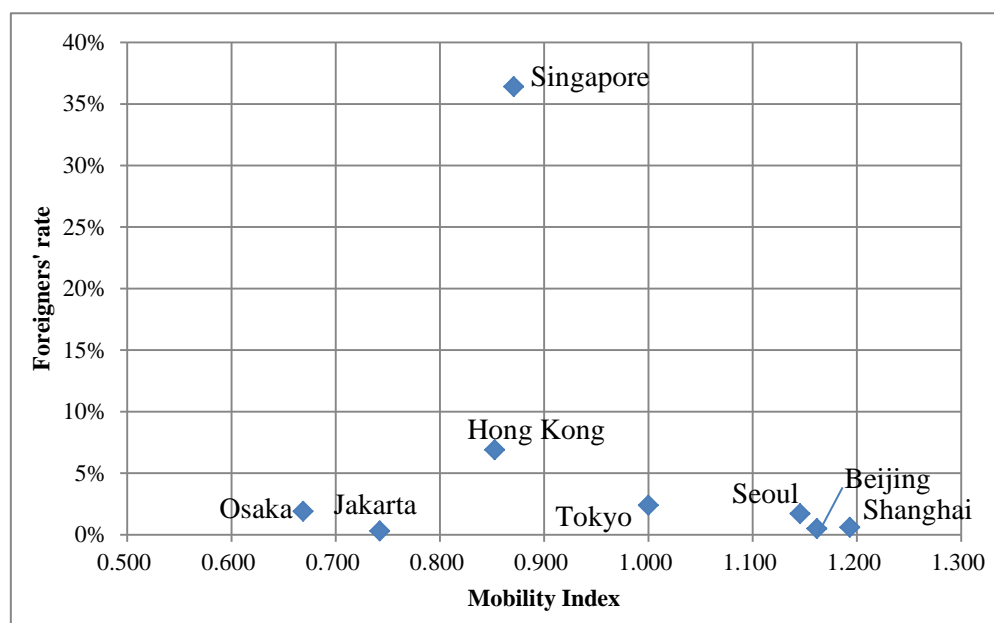Mobility data of Manila and Bangkok has not been available.

Figure 1. Domestic mobility index and foregners' rate

Comparison with Western megacities

Using the census data, the level of foreign population rate in Western megacities such as New York, London and Paris can also be obtained and summarized as shown in Table 4.

Table 4. Population of foreigners in Western megacities

City	Definition	Year	Total population	Foreign population	%
New York	City	2010	8,175,136	3,008,450	36.8%
London	Region	2011	8,173,941	2,998,264	36.7%
Paris	Département	2009	2,234,105	335,429	15.0%

For New York and London, foreigners are those who are born in foreign country. For Paris, foreigners are defined as non-French nationals. Population of Paris is small as this is the central part of the agglomeration. If we see larger regional level, the foreigners' rate of Île-de-France, the region which contains Paris with total population of 11,786,234 (2010), drops to 12.5% (2009).

Source)　New York : http://quickfacts.census.gov/qfd/states/36/3651000.html
　　　　London　: http://www.nomisweb.co.uk/census/2011/ks204ew
　　　　Paris : http://www.insee.fr/fr/themes/tableau.asp?reg_id=99&ref_id=t_0405D

Although foreigners' rate of Paris is less than half of that of New York or London, all three cities are having quite high level of foreign population. Compared to Asian megacities, apart from Singapore, the level of foreigners' rate is apparently higher in Western megacities. In case of London, among the 36.7% of foreigner's rate, 26.4% foreigners are from outside of Europe, and the high rate cannot be attributed to the high mobility among European countries. The fertility decline and inherent low growth of domestic population started earlier in Europe than in Asia, and it is plausible that the need for immigrants were high since while ago. Historical observation in foreigners' rate in Western countries should give interesting contrast with Asian countries.

Conclusions

Widely held notion that Singapore and Hong Kong are more international compared to other megacities in Asia is partly true as the foreigners' rate is indeed much higher. However, this is partly due to the fact that Singapore and Hong Kong is, and used to be city-states where all the migrants coming from outside of the city are labelled as international migrants. When mobility is compared, the rates of people born within Singapore and Hong Kong are similar to the rates of other Asian megacities such as Beijing, Shanghai, Tokyo, Seoul or Jakarta, which is just above 50%. This is to say, little less than half of population of all those Asian megacities are comprised of the locals, those who were born within each megacity.

With globalization, there is increasing number of international migration all over the world, but that does not mean that everybody moves to everywhere. In growing Asian megacities, there are domestic and international migrants as well as those who were born there and immobile, or came back after a while. There are certain similarities and differences between the population dynamism of Asian megacities and comparative analysis is an effective tool to understand how they are and to better plan for the future.

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