Urbanization and Development of Infrastructure in the East Asian Region

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Abstract

Urbanization is characterized by agglomeration of production and consumption, which stimulates overall economic growth. The East Asian region is now experiencing a rapid increase in urban populations. It is projected that in 2030 urban populations in the region will amount to thirty percent of the total global urban population. Although urbanization in East Asia can be characterized in various aspects, one of the most important features is the development of urban systems balanced between urban and regional areas. This can be partly explained by the fact that in East Asia public infrastructure investment has been actively implemented in rural regions with the aim of raising living standards in regional areas and to support the balanced development of urban and regional areas. In this context, in order to sustain balanced urban development an urgent issue that needs to be tackled as part of a mechanism to ensure equitable regional public investment distribution is decentralization, particularly fiscal decentralization. In addition, as a means of responding to rapid urbanization, it is also essential to realize a more service-oriented structure in the urban economy. Development of urban service industries is conducive to employment creation, poverty reduction and self-organized local business development in urban regions. In order to nurture a service economy in urban areas, the development of transportation infrastructure and reliable information and telecommunications systems are required, even at the feeder level, as a means of enabling efficient distribution in urban areas.

Chapter 1: Introduction

Urbanization in developing countries has various impacts on the national economy, society and environment. The current total urban population accounts for about 50% of the world population, three quarters of which is that of medium- and low-income countries (World Bank, 2003a). In developing countries, there is a general tendency for the population to concentrate quickly in urban areas as the economy grows. Following Latin American countries, Asian and African countries have been experiencing such rapid urbanization in recent years. An increase in urban population, particularly, in the Asian region will be the main factor of global urban population growth in the coming three decades (NRC, 2003). Accordingly, in order to address this rapid urbanization in developing countries, which appears to be one of the challenging issues for future economic development, an accurate grasp of the current status of urbanization is essential. The purpose of this paper is to review the current status of urbanization mainly in the East Asian region from various aspects and to examine the underlying issues.[1]

As urbanization is an engine for economic

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1 The East Asian region, in this work, stands for the region covering China, (Japan), South Korea, Mongolia, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Thailand and Vietnam, unless individually specified.

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growth, there is apparently a positive correlation between urbanization and economic development. However, the causality is much complex (World Bank, 2000). The main reason why urbanization accelerates economic growth is the effect of agglomeration economies, which are: (1) internal scale economies generated by inseparability of production technology within a firm; (2) localization economies generated by firms' concentration in a particular industry, particularly through labor or intermediate input material markets; and (3) urbanization economies such as diversification of services enabled by geographical centralization of various industries. These agglomeration economies raise urban productivity and attract more companies in urban areas. As a result, urbanization contributes to economic growth in the aspects of job opportunity and income increase. In fact, numerous positive analyses of urban economics show that concentration of production activities in urban areas is determined by agglomeration economies, particularly by localization economies (Eberts and McMillen, 1999). This implies that wage increase associated with improvement of productivity in urban areas may expand an urban population with increasing speed.[2]

In the above argument for urbanization with a focus on agglomeration economies, one of the important factors is evidently firm location. Above all, while many developing countries suffer from cumulative foreign debt due to long-term worsened market conditions of primary products after the 1980s, industrial localization by multinational companies has played an important role in economic growth in the East Asian region where high growth has been solely maintained. During the course, major cities of the region have been developed and internationalized to a dramatic extent through direct investment from foreign countries (Yeung and Lo, 1998). Firm location is affected by the development level of economic infrastructure, the labor quality and wage level, agglomeration of related intermediate input materials, the scale of and the distance to markets, and the macroeconomic stability. For example, Belderbos and Carree (2002) show that the location of the Japanese electric industry in China is explained by the regional market size, the level of labor costs and locations of their affiliate and group companies. Particularly in direct investment as an export-oriented production base, the agglomeration of group companies and the existence of a harbor are more decisive factors, implying that industry agglomeration mainly by Japanese firms is self-organizing in export-oriented industries (Belderbos and Carree, 2002).

Agglomeration of production in urban areas means concentration of consumption. This is because the labor force as centralized in urban areas has an element of production, which generates large demand, forming a huge consumer market. Regardless of concentration of firms and people, however, usable space is physically limited in urban areas. Therefore, for urban areas to accommodate more firms and people, it is inevitable to develop non-land-intensive industries, resulting in an advancement of industrial structure. Many advanced countries have experienced service orientation of industrial structure as urbanization is furthered. For example, during the 60 years from the 1940s when the U.S. urban population rate increased from 60% to 80%, the employment share of the service sector went up from 55% to 76%, while that of the non-service sector dropped from 45% to 24% (O'Sullivan, 2000). It is also pointed out that in the case of Latin American countries, the rapid growth of urban population after the 1950s was allowed by an increase in employment in the service sector (Hataya, 1999).[3]

Needless to say, however, excess urbanization beyond the appropriate speed for economy and society to adjust causes various problems. These are internal urban issues, such as deficiency in public infrastructure services (i.e. shortage in supply of electricity, tap water and wastewater service), air pollution and water contamination, housing shortage, and heavy traffic. These negative effects of

2 In the case of redundant labor force in urban areas or sufficient new labor force supplied from rural areas, increase of labor cost may be mitigated. However, through price hike of housing rent due to population increase, labor cost generally increases in a nominal sense.

3 It may be true that the expansion of tertiary industries is interpreted to mean that the increased working population is likely to be absorbed by informal commercial and service industries.

urbanizations not only offset a part of urban productivity gains but also are incident to the poor in urban areas. Thus, living environment for the urban poor is further worsened, and the informal economy, which is characterized by expansion of economic activities not captured by formal statistics and not covered by social security and regulation). According to NRC (2003), in the case of about 50 developing countries, the electrification rate in urban areas is 64.5%, while the diffusion rates of tap water or well water and flush toilets are 55.1% and 61.7%, respectively. To satisfy the growing demand for public services in urban areas, a huge amount of funding is required for development of the infrastructure.

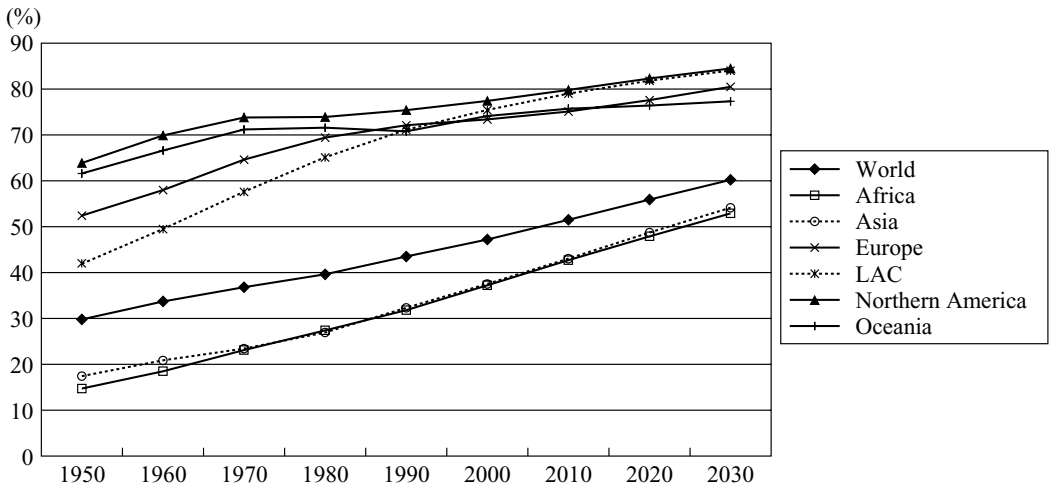
Outstanding development in urban areas has a large impact on the balance between urban areas and rural areas. If there is a significant differential in income or social services provided between urban and rural areas, a further migration from rural to urban areas will be provoked, which may aggravate the issue of overconcentration of population in the capital area. Therefore, even though it is important to enhance economic advantages of urban areas, a mechanism to reallocate the gains obtained in urban areas to rural areas may also be even more important. This viewpoint is closely related to the debate on decentralization of tax sources and public spending. In a decentralized system where each city supports itself in public services, tax sources and public spending tends to be concentrated in large cities with agglomeration of production and consumption. On the contrary, there is another argument that delegation of authorities and transfer of financial resources to the local government at the regional level are necessary for responding to urban issues directly. From the perspectives of urban autonomy and balanced development between urban and rural areas, certain rules seem to be required in the vertical alignment of responsibility and authority for central and local governments.

Based on the above background, this paper aims to review the current status of urbanization in the East Asian region in general terms and to examine the results and problems emerging as a consequence of the urbanization. Focusing on patterns and results of the urbanization, in addition, it discusses issues of urban development and possible effective measures.

Chapter 2: Urbanization in the East Asian Region

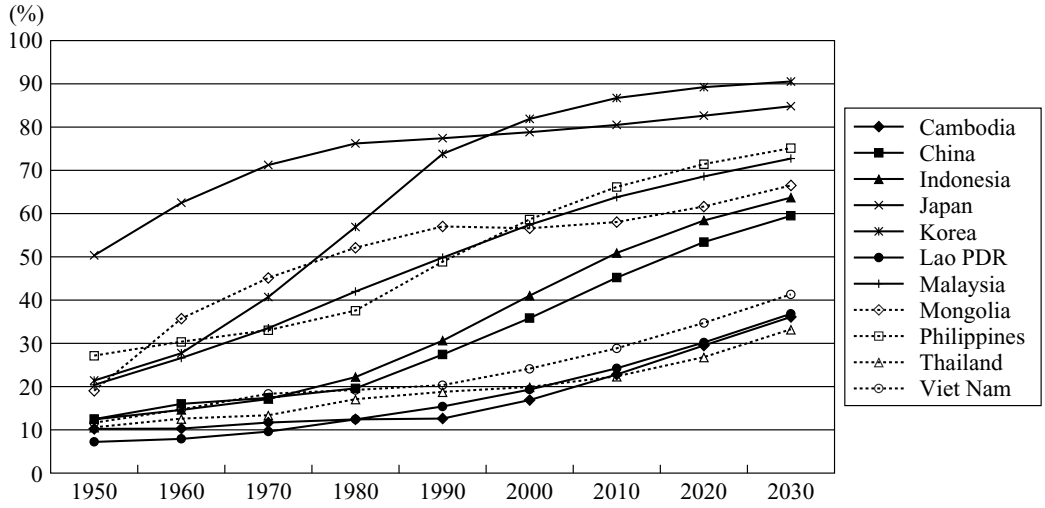
Although urbanization generally stands for concentration of population in urban areas, the concept of "urban areas" varies across countries and it is difficult to measure "urbanization" by only a single indicator.[4] If urbanization is defined by the proportion of urban residents to total population (urbanization rate), Figure 1 reflects the trend of urbanization in major regions of the world. The urbanization rate of high-income countries in the

Figure 1 Trends in Urbanization Rate (by Region)



Source: UN (2002).

Figure 2 Trends in Urbanization Rate of the East Asian Region



Source: UN (2002).

European, North American and Oceanic regions is around 75%, which suggests that these regions are highly urbanized. Among developing countries, urbanization has been accelerating in the Latin American region since the 1950s, reaching 70% in 1990. Meanwhile, the urbanization rates of the Asian and African regions have historically been low. Although they have increased gradually since the 1950s, the rates remain under 40% at the present moment. However, the rate of the Asian region is expected to jump from 37.5% to 54.1% by 2030. In terms of both speed and scale, urbanization of Asia will be a key element in the global urbanization (UN 2002).[5]

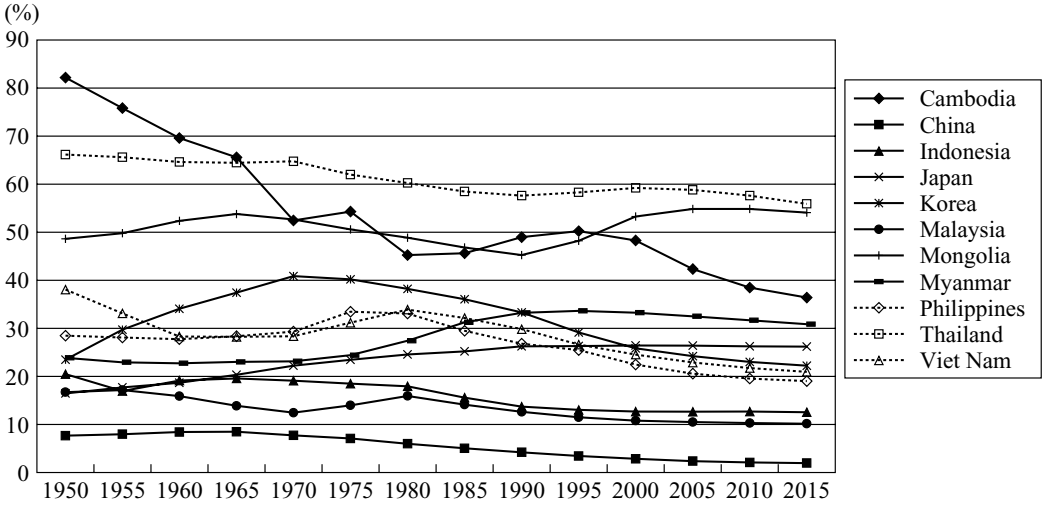
The trend in urbanization rate varies across countries even within the East Asian region. As Figure 2 shows, 80% or more of the population of high-income countries such as Japan and South Korea, except for city-states, lives in urban areas, which suggests that they are highly urbanized. On the other hand, the urbanization rates of Vietnam, Laos, Cambodia and Thailand are less than 30%. Malaysia, the Philippines and Mongolia, of which the current urbanization rate is about 60%, experienced rapid population growth in urban areas at a relatively early stage, from the 1960s through the 1980s. It is remarkable that China and Indonesia, rapidly urbanized after the 1990s, are expected to reach an urban population rate of 60% in 2030 after the coming accelerated increase, although the rates of both countries were about 30% in 1990.

The rate of urban residents to total population is widely used as an indicator of urbanization, but there may be four flaws preventing it from properly capturing multiple aspects of population concentration in urban areas in the East Asian region. First of all, the most significant problem is that an urbanization rate does not provide any information on the city size distribution, which may indicate overconcentration of population in the capital area or balanced growth of cities other than the largest. Secondly, there are some cases in urban issues in which an absolute scale holds greater significance than relative values such as urbanization rate. For example, when considering urban infrastructure supply, the absolute number of urban residents has significance. Thirdly, the trend of urbanization rates does not reveal anything about a dynamic path of each city development. Finally, based on argument using urbanization rates, no reason for urban population increase can be seen. From a political point of view, one of the important questions is why

4 This paper relies on the statistical classification of the United Nations Population Department (UNPD) for data analyses. As for each country's definition of "urban areas," see UN (2001). A city is defined as an administrative unit or as an economic unit. For example, "Tokyo" may include 87 neighboring cities in Kanagawa Prefecture, Saitama Prefecture and Chiba Prefecture, such as Kawasaki and Yokohama, in addition to the 23 Tokyo wards.

5 The urbanization rate of the African region is also expected to jump from 37.2% in 2002 to 52.9% by 2030.

Figure 3 Degree of Concentration in a Primate City: Major Countries in the East Asian Region



Source: Compilation of data from UN (2002).

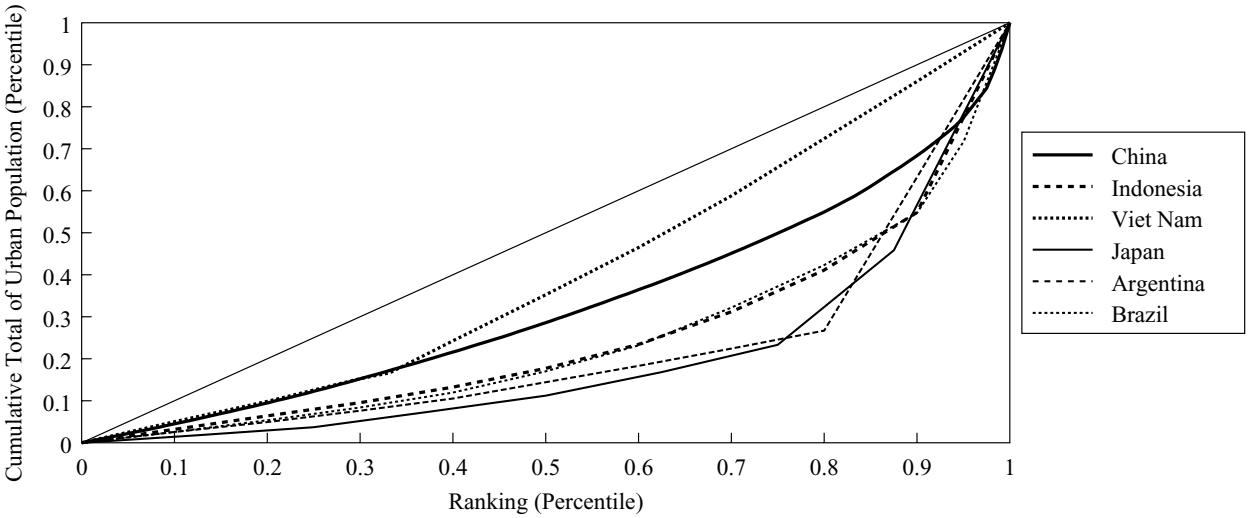
the urban population grows. From these various aspects, in the following sections, the current status and characteristics of the East Asian region will be discussed.

(1) Urban Primacy

The largest problem with an urbanization rate is that it does not provide any relative distribution map of urban scale that allows us to cast a light on overconcentration of population in the capital area or balanced growth of cities other than the largest. For example, the urbanization rate identifies two countries with the same total population, even though one of them has 10 local cities where one million people live and the other has a population-concentrated capital where 10 million people live. As ADB (1999) points out, it is of particular importance to deal with urbanization issues at the early stage and to decentralize and balance domestic industries by promoting local industries through creation of a free trade zone, before cities are being developed into mega cities. In that sense, an important argument is whether an increase of urban population results from overconcentration of population in a particular area or overall development of all the cities including regional satellites. Compared with the Latin American region, one of the characteristics of the East Asian region is balanced urban system development. In fact, while there are no less than 17 countries with its primate city accommodating more than 15% of the population in the Latin American region, there are only 15 countries including city states, such as Singapore, in the Asian region (NRC, 2003).

Figure 3 shows one of the urban primacy measurements, the proportion of population in a primate city to total urban population of major East Asian countries. Several patterns are observed in the region. Thailand, Mongolia and Cambodia have a high urban primacy rate and thus are experiencing excess concentration of population in a single area. Cambodia's degree of concentration in a primate city is expected to slow down rapidly in future. Although the primacy of Thailand has been slowing down over a long period, more than half the urban population is still concentrated in the capital area, similar to Mongolia. Therefore, Thailand will have to deal with the issue of overconcentration of population in the capital area. In fact, to mitigate overconcentration of industries in the capital area of Bangkok, Thailand has implemented the East Coastal Area Development Plan since the 1980s, forming the base of machinery and electric equipment industries in the area from 80 kilometers to 200 kilometers southeast of Bangkok. The east coastal area has played a certain role in absorbing population from other areas. The share of manufacturing value-added amount in the capital area exceeded 70% in 1981 but decreased to 63.2% by 1995. On the contrary, the share of the east coastal area increased from 11.2% to 15.8% for the same period (Ariga & Ejima, 2000). However, as stated above, it cannot be underestimated that the

Figure 4 Urban-Scale Distribution Chart



Note: Data of cities with a population of more than 750,000 is used here.
Source: Compilation of data from UN (2002).

overconcentration in Bangkok is still significantly high in international comparison.

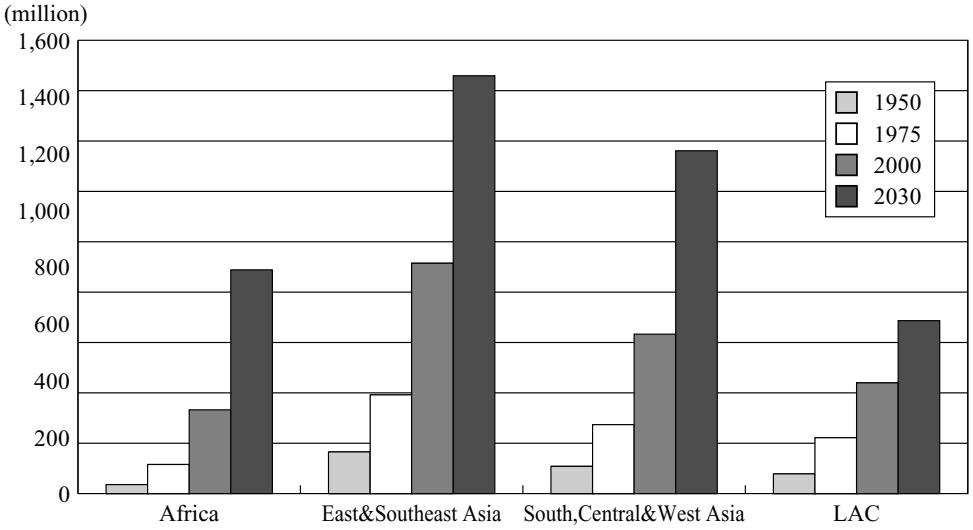
Indonesia, Malaysia and China have a consistently low urban primacy. The degrees as an indicator of concentration in a primate city are around 10% with a tendency to gradually decline. Interestingly, South Korea, Vietnam and the Philippines exhibited a tendency toward overconcentration of population in a primate city until the 1980s, but the primate cities are slowly losing their share due to the national policies of industrial dispersion. In future, it is expected that in these countries, the urban primacy declines to about 30%. Of particular note, since the 1970s, the Philippines has developed infrastructure of the core growth cities other than the metro-Manila, aiming at decentralizing population and industries. One of the projects is the development of the metro-Cebu through the Central Visayas Development Plan. Driven by development of infrastructure such as airports, roadways and electric power supplies, the number of new investments to the metro-Cebu rose dramatically. According to the Department of Trade and Industry, the new investment registration increased from 3,343 in 1990 to 7,759 in 1997-98 prior to the Asian crisis. As in foreign investments, the number of companies established in the Mactan Economic Zone No. 1, which is next to an international airport, increased to reach 103 in 1998 (JBIC, 2003b). It is considered that such national-level dispersal policies leveraging direct investments contribute to lowering the degree of concentration in a primate city in the Philippines.

Although the above urban primacy focuses on the largest cities only, more attention should be paid to a relative distribution of urban scale in each country. The reason is that the extremely low urban primacy of China, for instance, is affected by the fact that in China, there are a large number of cities other than Shanghai.[6] Hataya (1999), measuring urban-scale distributions of Latin American countries, points out that in Brazil all the cities are being developed in a balanced way without a large gap in population scale between the primate city and other cities. On the other hand, the development of the Buenos Aires capital area and Mexico City is salient in Argentina and Mexico, respectively, and the cities second to such largest cities are not fully developed. Based on the similar technique, Figure 4 shows the results of measuring urban-scale distributions of China, Indonesia and Vietnam, which have three cities or more with a population exceeding 750,000 in

6 In China, there are 18 cities with a population of more than 2.5 million.
7 Due to limitations of usable data, only the distributions of large- and medium-scale cities with a population of more than 750,000 are studied here.

the East Asian region.[7] The cities are ranked in order of population scale on a horizontal axis, and the vertical axis shows cumulative totals of urban population from the lowest rank to the highest. Accordingly, the 45-degree line represents a completely uniform urban-scale distribution, while the more uneven the distribution is, the lower the line deviates from 45 degrees. In the chart, the rankings and cumulative totals of urban population are shown in percentile. The data of 2000 shows that all the cities are being developed in a balanced manner in China, for which the urban primacy is relatively low. Although the number of observations is small, Vietnam also has a pattern of balanced city development. In Indonesia, contrarily, the population is concentrated in large cities and the regional core cities have not been developed yet. However, as Figure 4 shows, the distributions of the three East Asian countries presented here, including Indonesia, are much more balanced than those of Argentina and Japan where overconcentration of population in a particular area is remarkable.

Figure 5 Scale of Urban Population by Region



Source: UN (2002).

(2) Absolute Scale of Urban Population

In urbanization, an absolute scale of urban population itself is very important. In addition to balanced development of urban systems, as stated above, one of the characteristics of urbanization in the East Asian region is that the total urban population is overwhelmingly large (NRC, 2003). As Figure 1 shows, the trends in urbanization rate of the Asian region are quite similar to those of the African region. However, while the scale of urban population of the entire African region is no more than 0.3 billion, that of the East Asian region (including Southeast Asian countries) exceeds 0.8 billion. The number of urban populations in the Central and South American region is about 0.4 billion. As Figure 5 shows, the scale of urban population in the East Asian region will double to about 1.5 billion by 2030, which accounts for 30% of the global urban population.

The scale of urban population is varied indeed. There are large cities, such as Shanghai and Jakarta, with a population of more than 10 million, while there are capitals, such as Phnom Penh and Kuala Lumpur, with a population of no more than 1 million. While the urbanization rates of Cambodia, Laos, Thailand and Vietnam are quite similar at this point, the urban population scales of Thailand and Vietnam are 12 times and 9 times as large as those of Laos and Cambodia, respectively. The urban population of China is already over 0.45 billion. Such difference in absolute scale of urban population is particularly important in the area where the absolute number of urban population has a direct implication, such as demand projection and development of urban infrastructure.

Suppose that the urban population of the East Asian region expands as projected. A huge amount of investment in infrastructure will be required so that

an additional 0.66 billion urban residents at maximum are well off in the coming 30 years.[8] This means, for example, that additional electricity supply, which is more than 600,000 MkWh in urban areas, is required, assuming the current average consumption amount per person in developing countries. Significantly, this amount of additional electricity supply is equal to the total installed capacity of India in 2002 (the load factor is assumed to be 50%).

Similarly, in telecommunication, additional equipment for 85 million new phone lines may be required in urban areas. More precisely, in practice, more investments will be necessary, since the consumption amount of public services per person will increase as the economy develops.

In addition to urban infrastructure, an expansion of the absolute scale of urban population will require sufficient development of formal sectors in employment and housing. That is, in urban areas of the East Asian region, employment and housing will be required to accommodate an additional 0.66 billion people in future. Unless employment and housing are sufficient, informal sectors of these areas may be further aggravated.

(3) Dynamic Urbanization

The third problem with an urbanization rate is that the dynamism of each city is hardly captured. It is important to observe the dynamic development process of a city. This is because the urban spatial cycle hypothesis tells us that a city follows the self-directive cyclical development, which consist of urbanization, suburbanization, de-urbanization and re-urbanization, based on housing and rent prices as indicators, with physical population capacity as a limiting condition. In fact, some major cities of Japan, U.S. and European countries have developed, following the urban spatial cycle hypothesis (Klaassen et al., 1981, Ikekawa, 2001). Assuming that the hypothesis is true, the theoretical consequence of rapid urbanization in developing countries might be rather optimistic. While population growth of large urban areas would stagnate as urbanization is furthered, the population of neighboring medium-sized cities would grow and the urban population would end up with a balanced distribution with many small-sized cities.[9]

In urban economics, the explanation for such dynamics is that an incentive for living near central business districts is lowered by the improvement of connectivity from neighboring areas to city central areas through lower transportation and telecommunication costs, while the rent price goes up as the population density increases in central areas. Above all, in segmentalized urban administration systems, the externalities of local public services that people can enjoy urban benefits irrespective of their residential area encourage people and firms to move to suburban areas and emerging cities and avoid paying public service expenses. Consequently, the expense of public services per person in urban areas would be increased for the remaining residents and firms, and such large cities often suffer from financial difficulties due to massive costs of maintaining their old public infrastructure. As a result, suburbanization and development of emerging cities will be further spurred. Such suburbanization has been experienced in the world since the 19th century (O'Sullivan, 2000). In the Tiebout model where decentralization materializes as an equilibrium of local public service provision, it is indicated that local government tax and public service selection are optimized through people's movement (voting with feet) under certain conditions.[10]

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8 As stated later, the additional demand of urban infrastructure is proportionately smaller than the increase of urban population, to be precise. This is because the additional demand of infrastructure does not arise from the increase of urban population due to transfer to urban areas by classification. 9 See Klaassen et al. (1981) for details of the urban cycle hypothesis. The hypothesis mainly focuses on the relative population distribution of central cities and the neighboring cities. A similar argument can be applied for a relationship between large city areas and regional cities.

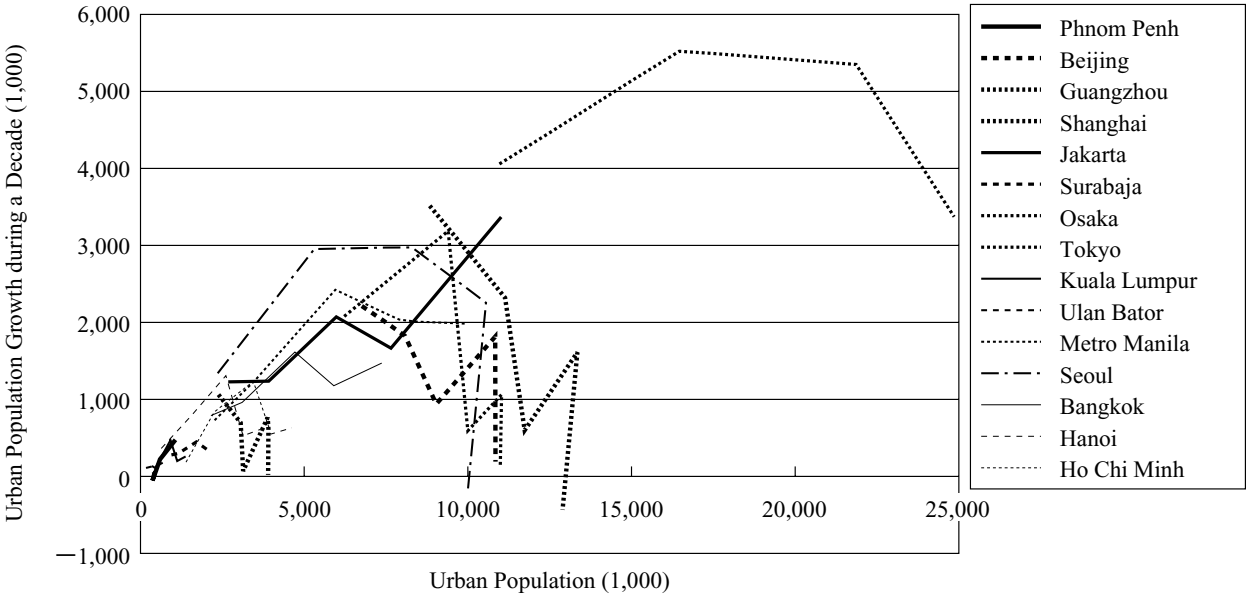
9 See Klaassen et al. (1981) for details of the urban cycle hypothesis. The hypothesis mainly focuses on the relative population distribution of central cities and the neighboring cities. A similar argument can be applied for a relationship between large city areas and regional cities.

10 The Tiebout model assumes that people have complete information about behavior patterns of local governments and enough mobility among geographic areas, that there are no scale economies and externalities in public services that exceed a local administrative unit, and that the expenses are paid out from poll tax. It has frequently been pointed out that these assumptions are not necessarily realistic.

In labor economics, the theory of equalizing differences, focusing on the relationship between wages and working or living environments, predicts that relatively high wages are paid as labor quality and a compensation for disamenity (bad working conditions, long commuting hours and poor living environment). Thus, it is expected that the real wages to which nominal wages are normalized by disamenity should converge at the same level across regions (Rosen, 1986). This is basically the same mechanism as Tiebout's model expecting a self-directive equilibrium of city systems. In fact, the existing empirical work shows that labor wages can be explained by various urban amenities. For example, Roback (1982) finds that a regional wage gap depends not only on land prices but also on the crime rates, unemployment rates and climates of the regions.[11] Therefore, more or less, a mechanism of the self-directive cycle seems to be effective on urbanization.

One of the most important implications here is the length of the urbanization cycle. The decennial movement of the urban population of major cities in the East Asian region for the period: 1960-2000 is shown in the phase diagram (see Figure 6). In this diagram, the process from urbanization to suburbanization in the urban spatial cycle hypothesis is illustrated by the inverted-U on the horizontal axis. In the process of urbanization, a city grows from around the origin on the chart to the upper right and then shifts to the lower right as the growth slows down. When an urban population starts to decrease, it goes into the negative side of the vertical axis, proceeding to de-urbanization and re-urbanization.

Figure 6 Urban Cycles of Major Cities in the East Asian Region (1960-2000)



Source: Compilation of data from UN (2002).

As Figure 6 shows, in the East Asian region excluding Tokyo, the population growth starts to be slowed down and adjusted over 5 million populations. When the number of a population is more than 10 million, many cities stop growing and start decreasing the population. For example, the number of population in Seoul decreased by 0.66 million during the decade before 2000. The population of Guangzhou also declined by 30,000. Tokyo is an exceptional case that the population continued augmenting until it reached 20 million in the 1980s.[12] In the major cities of developing countries in the East

11 Roback (1982) indicates that the crime rate and number of snowy or rainy days have positive effects on wages and that urban crimes and bad weather are disamenities for residents.

12 See Hatta & Tabuchi (1994) and Honjo (1998) for the issue of so-called "Tokyo problem" i.e. overconcentration of population in Tokyo.

Asian region shown in the chart, Jakarta is the only city with a population of more than 10 million and it is still expanding with a steady growth rate. Given the current trend until 2000, therefore, it threatens to follow a transition similar to that of Tokyo.

More importantly, Figure 6 shows that it takes at least 50 years for a city cycle to move from the expansion phase into the adjustment phase and for the population growth to start slowing down, even though there is a certain difference among regions in the adjustment speed of urban cycles. This means that population concentration in urban areas should not be left to simply depend on the self-directive counterturn of the cycle. If we leave excessive urbanization for more than half a century, the social welfare loss in economy would be significant. It is noteworthy that there are only a few East Asian cities that clearly shifted to the phase of de-urbanization or re-urbanization where an urban population decreases. In addition, it is important to recall that the urban cycle is irreversible rather than circulative in the medium term.

(4) Factors of Urbanization

Finally, an urbanization rate does not reveal the backgrounds of urbanization, although this is not necessarily the pitfall of only the urbanization rate. There are three factors of urbanization: natural increase in urban population, rural-urban migration and reclassification from rural to urban areas due to a population increase. It is extremely important in development policies to determine which factor causes urbanization. When the major parts are explained by natural increase or reclassification, the issues of urbanization are not so serious. It is because a change in classification has few significant impacts on the real economy, and a natural increase in population can occur everywhere, not only in urban areas. In that sense, what makes urbanization issues more complicated is rapid rural-urban migration, which generally accounts for about 40% of urban population growth (NRC, 2003). While there is a negative view on rural-urban migration that an excessive population inflow to urban areas expands the urban informal sector and leads to devastation of rural areas, there is also the positive view that it supports growth of urban areas providing inexpensive labor force. Another positive effect is that remittance by migrant workers increases purchasing power of rural areas.

One of the characteristics of urbanization in the Asian region is that rural-urban migration is the largest factor of population growth. On the other hand, the population growth in the Latin American and African regions is caused by natural increase (McGee, 1998). Interestingly, although it has been low in the Asian region compared with that of the Latin American region, the rate of rural-urban migration to rural population has sharply increased since the 1960s (Chen et al., 1998). If it is assumed for simplification that the rate of rural-urban migration to rural population of the Latin American region, the Asian region and the African region is 2%, 1% and 0.5%, the contribution of migration to population growth can be estimated at 25%, 49% and 20%, respectively. Thus, the impact of population flow from rural areas is strong in the Asian region.

Furthermore, Table 1 shows the estimates of the proportion of rural-urban migration rate to urban population growth in East Asian countries, which is based on a simple calculation using macro data, the "residual method."[13] Based on the population in 1985 (N_{1985}) and assuming that the annual death rate (μ) and the younger population rate under the age of 15 (d) are constant, the urban population only due to natural increase by 2000 is estimated (P_{2000}). Then, the proportion of rural-urban migration or reclassification can be computed by the difference between the estimated urban population by natural increase and the actual urban population (N_{2000}).[14] That is, the proportion of change in migration or reclassification to urban population growth (ρ) is calculated as follows:

13 See NRC (2003) for a more accurate calculation technique using the residual method.

14 The average mortality rate of males and females is used for the calculation of the annual death rate. The rate of the 0-15-aged population to total population is used for the calculation of the younger population rate. Each data is provided by the World Bank (2003a).

Table 1 Proportion of Migration or Reclassification to Urban Population Growth in East Asian Countries

	Urban Population (million)		Net Migration & Reclassification Percentage
	(1985)	(2000)	
Less developed regions	1,190,776	1,964,003	44.81
Eastern Asia			
China	246,089	456,340	68.27
China (Hong Kong)	5,070	6,860	51.61
DPR of Korea	10,683	13,415	-8.27
Japan	92,652	100,089	-77.20
Mongolia	1,051	1,434	-4.86
Republic of Korea	26,478	38,269	51.19
South Eastern Asia			
Cambodia	1,011	2,216	51.53
Indonesia	43,552	86,943	66.03
Lao PDR	500	1,018	46.25
Malaysia	7,197	12,758	44.20
Myanmar	8,927	13,220	27.81
Philippines	23,346	44,295	45.97
Singapore	2,709	4,018	50.90
Thailand	9,030	12,453	40.51
Viet Nam	11,558	18,816	36.73

Source: Compilation of data from UN (2002) and WB (2003).

$$\rho = (N_{2000} - P_{2000}) / (N_{2000} - N_{1985})$$
$$= \left(N_{2000} - \frac{N_{1985} \exp\left(-\int_0^{15} \mu dt \right)}{1 - \delta} \right) \Big/ (N_{2000} - N_{1985})$$

Looking at the proportion of migration or reclassification to urban population growth in the East Asian region, we find that those of Thailand and Vietnam are below 40%, lower than the average of developing countries. Meanwhile, the distinctly high numbers of China and Indonesia, which are over 65%, indicate that the major part of urban population growth comes from a population inflow to urban areas. In the existing studies, in China, the contribution degree of migration to the urban population growth is estimated at about 70% (McGee 1998, NRC 2003). This is because the frequent changes in urban classification have a large impact on the estimation, as for other East Asian countries, it is estimated that about half of the urban population growth results from natural increase in urban areas. We cannot classify changes in migration from reclassification in this estimation, which remains controversial. However, as far as urbanization in the East Asian region is concerned, it is clear that one of the challenges in the region is to control excessive rural-urban migration. Moreover, when the absolute scale of urban population, the extremely long urban cycle and the historical background of balanced development of urban systems are taken into consideration, it is concluded that a key task for East Asia is to manage rural-urban migration and maintain balanced growth among large city regions, regional cities and rural areas.

(5) Urbanization Patterns of East Asian Countries

Table 2 summarizes the current status of "urbanization" of major countries in the East Asian region based on the above discussion. China and Indonesia, with a very large urban population in absolute scale, have relatively low primacy rates and maintain balanced urban system development among all the cities including small and medium-sized cities. For both countries to keep this trend, rural-urban migration plays an extremely important role in urban population growth. It cannot be underestimated here that Jakarta is still growing. Thailand, the Philippines and Vietnam have a medium-sized population. While Thailand is showing a tendency

Table 2 Current Status of "Urbanization" of Major Countries in the East Asian Region

	Malaysia	Philippines	Mongolia	Indonesia	China	Thailand	Cambodia	Viet Nam
Urbanization Rate:	High (about 60%)			Rapidly Urbanized		Low (under 30%)		
Degree of Concentration in a Primate City:	Low	Medium (Decentralized)	Overconcentrated in a Particular Area	Low		Overconcentrated in a Particular Area		Medium (Decentralized)
Urban-Scale Distribution:	n.a.			Slightly Concentrated to Upper-Ranked Cities	Balanced	n.a.		Balanced
Absolute Scale of Urban Population (million):	(12.8)	(44.3)	(1.4)	(86.9)	(456.3)	(12.5)	(2.2)	(18.8)
Urban Cycle (major cities only):	Initial Stage of Growth	Stagnation in Population Growth	Initial Stage of Growth	Growing Trend (Jakarta)	Slowdown in Population Growth	Stagnation in Population Growth	Initial Stage of Growth	
Proportion of Migration or Reclassification to Urban Population Growth:	Medium			High		Low	Medium	Low

Source: Prepared by the writer.

toward overconcentration in a particular area, the trend in overconcentration is being mitigated in the Philippines and Vietnam due to growth of cities other than their primate cities during the past 20 years. The population growth in Bangkok has stagnated in recent years, and its challenge is how to deal with natural increase of the urban population in future. In other countries, such as Malaysia, Cambodia and Mongolia, the urbanization issue is considered to be relatively minor.

One key point in the argument on urbanization is that the presence of small and medium-sized cities with most of the urban residents is becoming large, while the international role of primate cities and large cities are becoming notable in the global economy. As Lo and Yeung (1998) point out, in the current global economy, it is the large cities that are expected to play an important role as world cities with network hubs for economic and social activities. On the other hand, large cities with a population of more than 10 million are exceptional in terms of number and urban population scale, and more than half of the urban population lives in small and medium-sized cities with a population of 1 million or less (World Bank 1999, NRC, 2003). Therefore, new issues would be raised, such as the responsibilities of small and medium-sized cities and coordination with and competition against large cities.

Chapter 3: Results of Urbanization: Macroeconomic Effects, Urban Infrastructure and Decentralization of Government Authorities

(1) Macroeconomic Effects

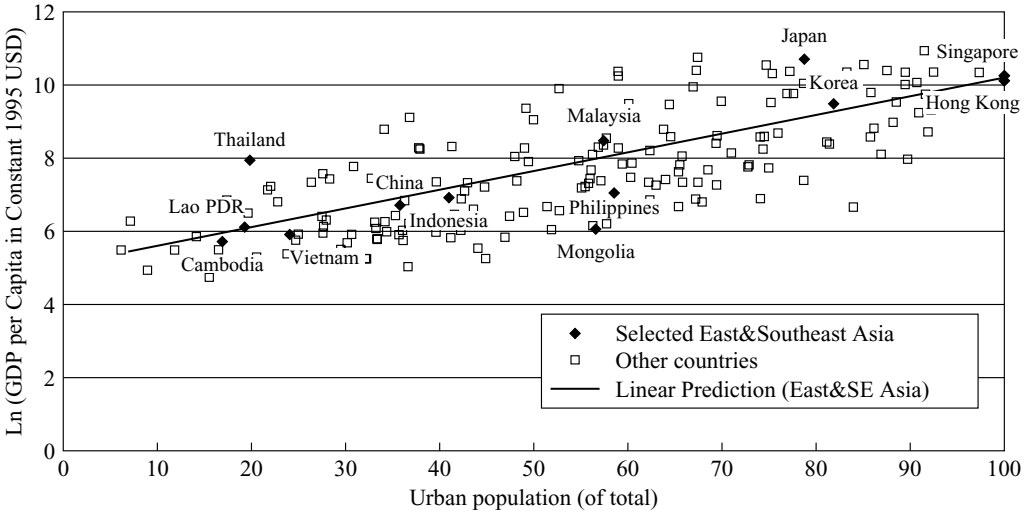
As stated above, urbanization of the East Asian region is defined from various aspects. No matter what definition is used, the importance is its effects and impacts. In this section, the macroeconomic effects of urban population growth are analyzed along with the impacts on quality of infrastructure for human life in urban areas and on the decentralization of government authorities. The urbanization effects on economic growth, poverty reduction and advancement of industrial structures are examined at the macroeconomic level.

① Economic Growth

The relationship between urbanization and economic growth is often pointed out. As Figure 7 shows, there is a significant positive correlation between them in East Asia and other countries (ADB 1999, World Bank 2000). The elasticity of economic growth to urbanization rate is estimated to be 2.71. It implies that a 1% increase in the urbanization rate raises the gross domestic product (GDP) per capita by 2.71%. This is the reason why urbanization is said to be an engine for growth. Although the causality is unsure, high productivity in urban areas by agglomeration economies leads to economic growth after all.

Importantly, however, urbanization is a necessary but

Figure 7 Urbanization and Economic Growth



Source: Compilation of data from UN (2002) and WB (2003).

not sufficient condition for economic growth. In fact, although the African region experienced urbanization at the same speed as that of the East Asian region during the past 40 years, urbanization did not necessarily boost the economy. According to Fay and Opal (2000), the living infrastructure of about two thirds of the urban population in the African region is in the informal sector, and a population inflow to urban areas is not effectively utilized for formal urban economic activities, because the rural-urban migration is induced by frequent conflicts in rural areas and the education standard of incoming people is low. As an inevitable consequence, although the urban population in the African region grew by 5.2% annually due to population inflows from rural areas after the 1970s, the wage gap between urban areas and rural areas was never resolved. Fay and Opal (2000) show that the differences in urbanization rate are explained mainly by the wage gap between urban and rural areas, and that there is a direct correlation between GDP and an urbanization rate, when the wage gap and the industrial structure are considered.[15]

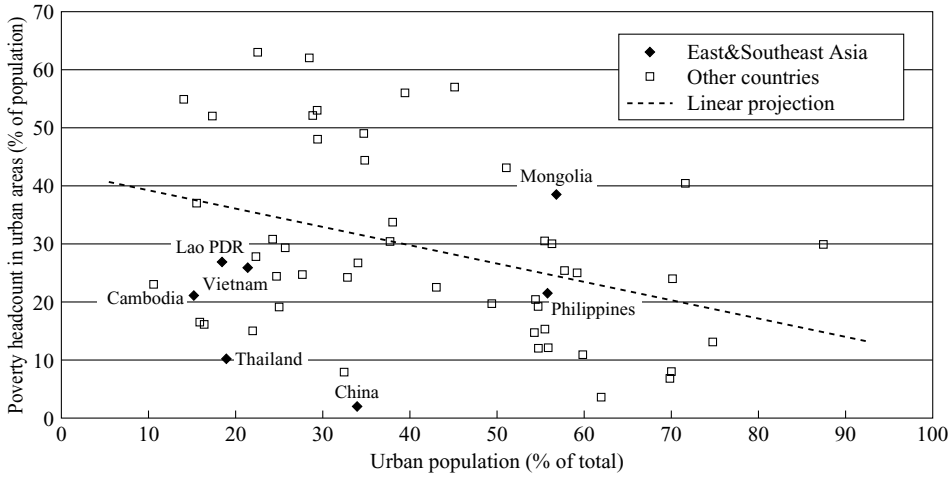
② Poverty Reduction

While urban areas are a strong driving force for economic growth, rapid urban population growth is criticized for deepening the poverty problems in urban areas. However, the aggregated macro data, regardless of one's prior expectation, show that there is no significant correlation between urbanization and urban poverty incidence (Figure 8). Rather, a 1% increase in urbanization rates results in a decline in the urban poverty rate by 0.23%. This means that the economic gains in terms of income and employment generated by the stimulated urban economy are more or less distributed to the urban poor, and thus contribute to poverty reduction in urban areas. However, this argument focuses only on income poverty on an aggregated data basis, paying little attention to social problems such as hygienic and health issues arisen from poverty. In fact, the World Bank (2003c), indicating that in the Philippines, the infant mortality rate of the poor is higher in urban areas than in rural areas, casts light on the fact that the living conditions for the urban poor are particularly weak in the social areas.

gative correlation between the national poverty rates over urban and rural areas and urbanization. Interestingly, this correlation coefficient is larger than that for only urban areas in absolute value. More specifically, when the urbanization rate increases by 1%, the national-level poverty rate goes down by 0.34%. Therefore, it means that the economic effects of urbanization would benefit not only the urban poor but also the rural poor through macroeconomic growth and stability along with remittance by migrant

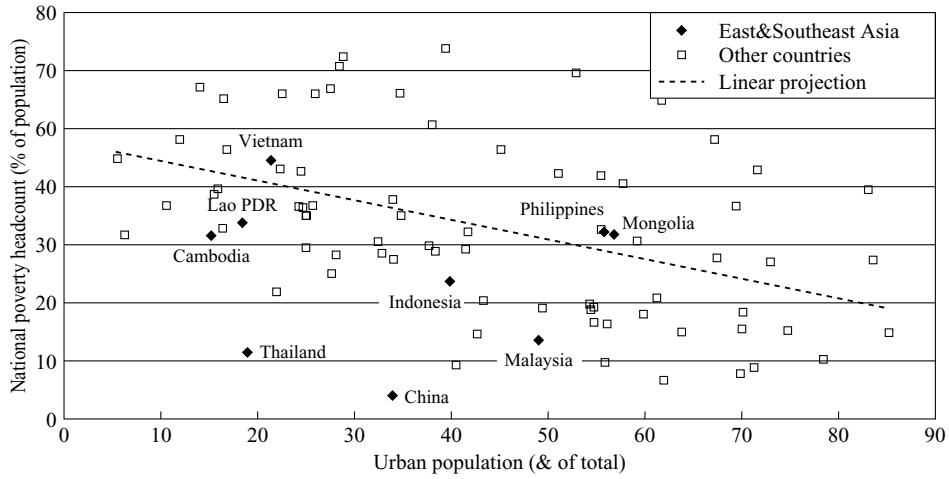
15 If other conditions are controlled, there is a correlation between an urbanization rate and the level of GDP per person. However, the correlation between a change in urbanization rate and GDP growth is still weak.

Figure 8 Relationship between Urbanization Rate and Urban Poverty Rate (Based on Recent Data: 1984-2000)



Source: Compilation of data from WB (2003).

Figure 9 Relationship between Urbanization Rate and Poverty (Based on Recent Data: 1984-2000)



Source: Compilation of data from WB (2003).

workers. In fact, JBIC (2003a) points out that the development of transportation infrastructure in Ha Noi and Haiphong, which experienced rapid urban population growth, not only promoted industrial agglomeration in their urban areas but also contributed to poverty reduction in the neighboring rural areas by accelerating changes in distribution systems and economic diversification in the region.

Another finding from Figures 8 and 9 is that most of the East Asian countries are located around the regression line or below. That is, the national-level urban poverty rates of East Asian countries are in general lower than the average poverty rate, with the urbanization rate controlled. In addition, in respect of a time-series trend in the urban poverty rate, urban poverty has diminished in the East Asian region, while it has expanded in South Asia since the 1990s. It can be concluded that the East Asian region has performed relatively well in poverty reduction. However, it never means that there is no urban poverty issue in the region. As explained in Chapter II, in terms of absolute scale, the number of the urban poor may have significant implications on various social aspects. The poor is also most vulnerable to external shocks so that it is necessary to take care of it from the aspect of social security. The World Bank

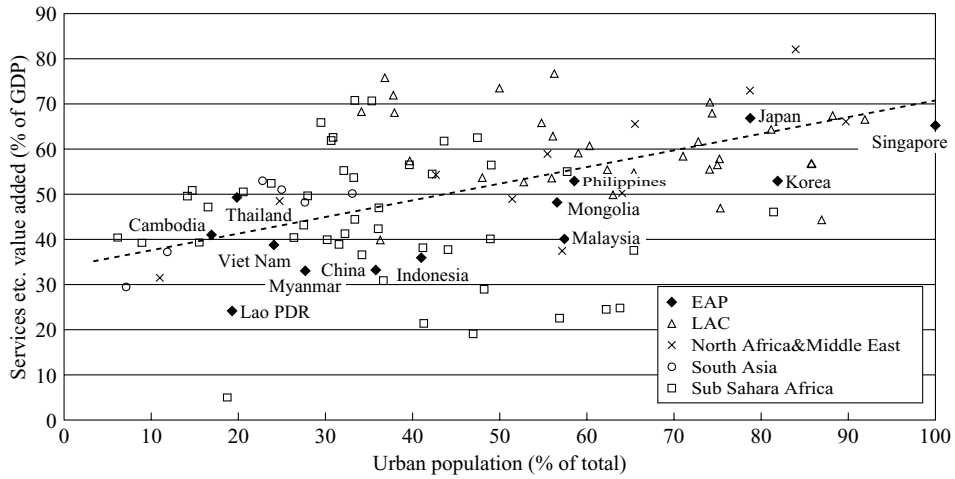
(2003b) stated that the poverty rate of Indonesia rapidly increased from 11.4% to 27.1% after the Asian crisis and that the urban poor was most likely to suffer from unemployment associated with the economic crisis.

③ Industrial Structures

A change in industrial structures should attract special attention in connection with a linkage between urbanization and economic growth. In urban areas, usable space is physically limited. Therefore, for urban areas to exploit more advanced agglomeration effects, development of non-land-intensive service industries is required. Recall that an urban area can be interpreted as agglomeration of consumption as well as concentration of production. Urban areas usually provide more diversified consumption opportunities than rural areas, since many shopping centers, opera houses, convention halls and recreational facilities are located at urban areas in response to their residents' demand. In turn this consumption diversification attracts further urban populations. As previously mentioned, the major employment in the urban areas is service industries in the Latin American region, where urbanization rose rapidly from the 1950s through the 1970s (Hataya, 1999). Figure 10 shows the relationship between the proportion of service industries to the GDP in 2001 and the urbanization rate. In general, there is a statistically significant and positive correlation. Of particular note, the share of service industries is lower in the East Asian region than the global average, except for Japan, Thailand and Cambodia. On the contrary, many of the Latin American countries are much more service-industry-oriented. The rates of service industries to GDP in major Latin American countries, such as Mexico, Argentina, Uruguay, Brazil and Jamaica are more than 60%. In Japan, the industrial structures of Tokyo experienced a quick shift to service industries in the 1970s when the overconcentration in the metropolitan area ("Tokyo problem") began to be concerned. In terms of employment, wholesale, retail sales, telecommunication and other services grew at a high speed (Honjo, 1998).

One of the physical conditions for a shift to service industries in urban areas is the development of thorough transportation infrastructure and information and telecommunication systems that enable efficient distribution. When service industries become the center of urban functions, people and goods generally flow in a small quantity at frequent intervals. Therefore, development and expansion of urban transportation infrastructure is necessary to survive an expansion of public transportation systems to ease heavy traffic. For example, the population of Ha Noi increased by 20% from 3.13 million to 3.75 million in the 1990s. An increase in traffic volume of people and goods including buses and trucks far exceeded the urban population growth in proportion.

Figure 10 Urbanization Rates and Service Orientation in Industrial Structures



Source: Compilation of data from WB (2003).

While the daily traffic volume on the National Highway No. 5 (NW5) around the center of Ha Noi was 281 buses, 1,078 regular trucks and 228 heavy trucks in 1993, it increased to 5,758 buses, 4,250 regular trucks and 4,368 heavy trucks in 2003 (JBIC, 2003a).[16] Such economies of frequency in distribution have an important external effect, possibly being one of the reasons for subsidizing public transport in urban areas. A marginal increase in public transportation users stimulates transport frequency, which in turn enhances the convenience of other users (Kanemoto, 1997). Additionally, the developed two-way information and telecommunication technologies are expected to partially substitute for physical movement of people and goods. For example, when Internet shopping with courier service becomes popular, it will be less meaningful for retail shops to be located on shopping streets in urban areas.

One of the reasons why advancement of industrial structures in the East Asian region is at a low level, in connection with urbanization, is that Asian countries have transferred more resources to the agricultural sector through investment in infrastructure, such as irrigation facilities and rural roads, than the Latin American region and the sub-Saharan African region (Teranishi, 1997). Consequently, the difference in utilization factors between rural and urban areas has been smaller than that of other areas. Furthermore, it is considered that urbanization of the East Asian region has been restrained because investment in rural infrastructure has created employment in rural areas and facilitated development of agriculture-related industries.[17] Fan et al. (2002) also point out that public investment in rural areas has partially contributed to poverty reduction and prevention of further widening of regional gaps in China, by estimating the effects of public investment in education and economic infrastructure in rural areas of the inland on agricultural productivity and regional economic gaps.

In summary, in the East Asian region, intensive public investment in rural areas has historically supported balanced development for urban and rural areas. In order to prevent excessive population concentration in urban areas, public investment in rural areas will continue to be important, and it is also expected that advancing industrial structure in urban areas will be essential if urbanization in the East Asian region is further accelerated in future.[18] Needless to say, all countries cannot shift to service industries, and industrial structures should be in accordance with the principle of global comparative advantages. It is important to remember that promotion of development of the agriculture sector not only mitigates urbanization but also plays an essential role in guaranteeing food security for a huge number of urban residents.

(2) Infrastructure in Urban Areas

It is reported that an excessive increase in urban population leads to aggravation of living infrastructure in urban areas. According to NRC (2003), public infrastructure, such as services of electricity, tap water and wastewater, is better provided, as the urban scale becomes larger, and the diffusion rates are lower in small and medium-sized cities and rural areas. This may differ from our intuitive understanding. However, from a viewpoint of statistics, it is also true that urbanization never lowers utilization factors of urban public infrastructure.[19] It is considered that this stems from the fact that a high ability to pay for public services in urban areas allows extensive investment in the

16 The observational data comes from the traffic volume at a spot closer to the National Highway No. 1 on the National Highway No. 5. For the purpose of data consistency, hourly fluctuations in traffic volume are ignored and the traffic volume (2003) observed in 14 hours is simply converted to the base of 24 hours a day. The traffic volume of regular cars increased from 1,424 in 1993 to 4,860 in 2003.

17 In fact, in Teranishi's analysis in which an urbanization rate is regressed by the agricultural GDP rate, the regression coefficient is not significant but negative.

18 If information and telecommunication technologies are further developed and cost less in the future, the significance of the geographic location of service industries may be meaningless (Kikuchi, 2004). Meanwhile, according to Park (2003), even if information and telecommunication infrastructure is fully developed, face-to-face communication is important in economic activities and decentralization of geographic agglomeration is difficult.

19 When data from the World Bank (2003) is used, the correlations between urbanization rate and urban access rates of tap water and wastewater are both positive.

better quality of infrastructure capital. Of course, the income level is relatively high in urban areas. Moreover, in construction of infrastructure networks, urban areas may be able to take advantage of scale economies because of their higher population density. In fact, McIntosh (2003) shows that the willingness-to-pay for tap water services of the urban poor is much higher than expected. Some households in the metro-Manila without access to public water supply services are purchasing water from private vendors at more than quadruple the public water tariffs. Therefore, as far as public services in urban areas are concerned, an institutional question is how to design mechanisms to encourage the private sector participation.

Figures 11, 12 and 13 show the diffusion rates by urban scale of tap water & well water, flush toilets and electricity, respectively, for home use.

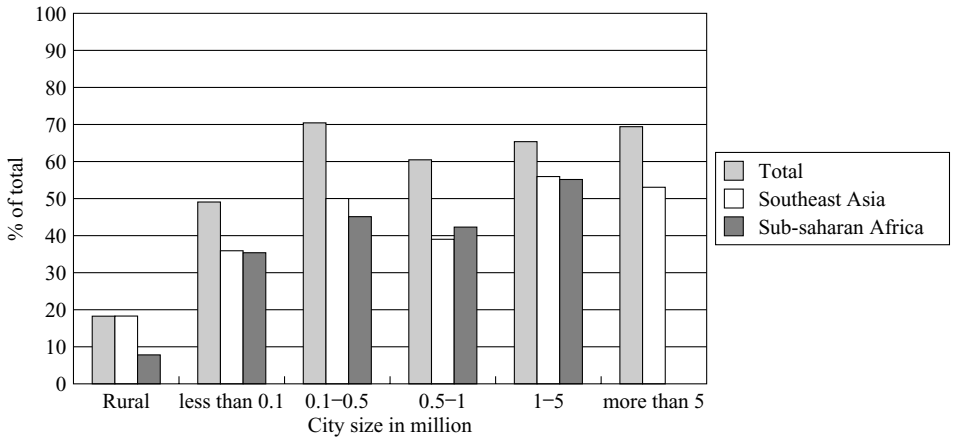
For comparison purpose, these figures reflect the diffusion rates of the sub-Saharan African region where the urbanization rate denotes the same tendency as that of the East Asian region. The first characteristic of the infrastructure diffusion in East Asia is that gaps among large cities, medium-sized cities and rural areas are small, which is consistent with the above finding by Teranishi (1997).Investment in infrastructure in the East Asian region has been evenly distributed geographically. The second characteristic is that the infrastructure development in small cities with a population of 100,000 or less and of rural areas is relatively limited in the East Asian region, and thus intensive investment in such areas may be necessary for balanced development for urban and rural areas. However, it is noteworthy that although public investment in urban areas in general mitigates congestion and partly solves the overconcentration problem, it sometimes fosters further overconcentration by inducing private firms and people to move to urban areas with a better quality of infrastructure. (Yoshino & Nakano, 1994). The third characteristic is that in East Asia, the access rate of water is lower than the global average and no more than around 50% in large urban areas with a population of more than 5 million, while the diffusion rates of electricity and flush toilets are higher than the global standard, reaching more than 80% in cities with a population of more than 100,000. In small cities with a population of 100,000 or less and rural areas, the access to water is no more than 20-30%. Because of the difference in data definitions, a time-series comparison with the above data is not straightforward, but the rate of access to high-quality water in East Asian urban areas decreased from 97% in 1990 to 93% in 2000. On the other hand, the rate of access to sanitation facilities improved from 61% to 72%. In the rural areas, the rate of access to water increased from 61% to 67%, and that to sanitation facilities increased from 24% to 34%, during the same period (World Bank 2003a). Therefore, in terms of sectors, access to water would be one of the most important areas to develop among public infrastructure services in urban areas of the region in future.

(3) Decentralization of Government Authorities

Along with the discussion of urbanization, there is much debate about decentralization of governmental responsibilities and authorities in the East Asian region. As World Bank (2000) points out, it is not possible to tell whether decentralization is right or wrong, since it is just a political and administrative tool. In basic theory, decentralization is rational since public services are more effectively and efficiently provided by the local government than by the central government. This is essentially because the local government is more familiar with the preferences of local residents through political channels, such as local elections. This argument is based on the informational advantages of the local government and is called the decentralization theorem. In urban economics, this decentralization theorem is implicitly assumed in the discussion of a mechanism for supplying local public services, including the Tiebout mechanism mentioned in Chapter II.. If a local government does not provide public services so that the demands of local residents are met, they would move out to other areas. Therefore, it creates an incentive for the local governments to respond to their local residents and maximize local tax revenues.

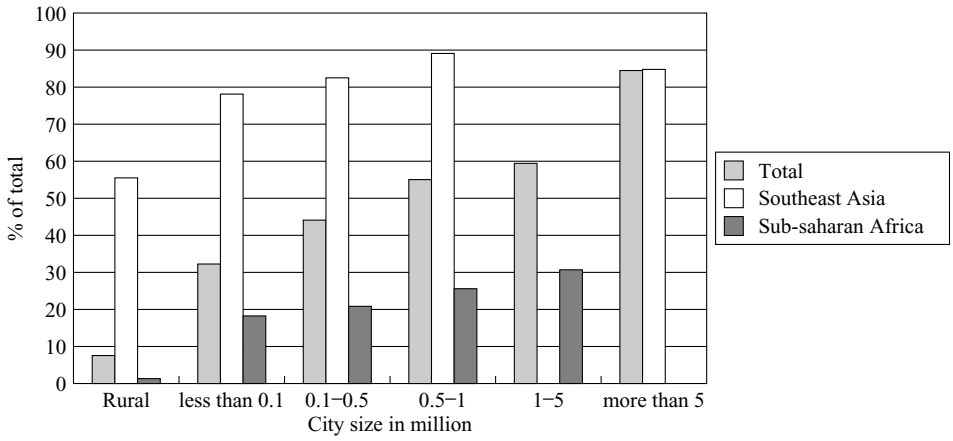
However, in reality, the relationship between decentralization and economic growth is not so self-evident. As explained by Sato (2004), the existing analyses indicate that in developing countries, there is

Figure 11 Diffusion Rates by Urban Scale of Tap Water & Well Water for Home Use



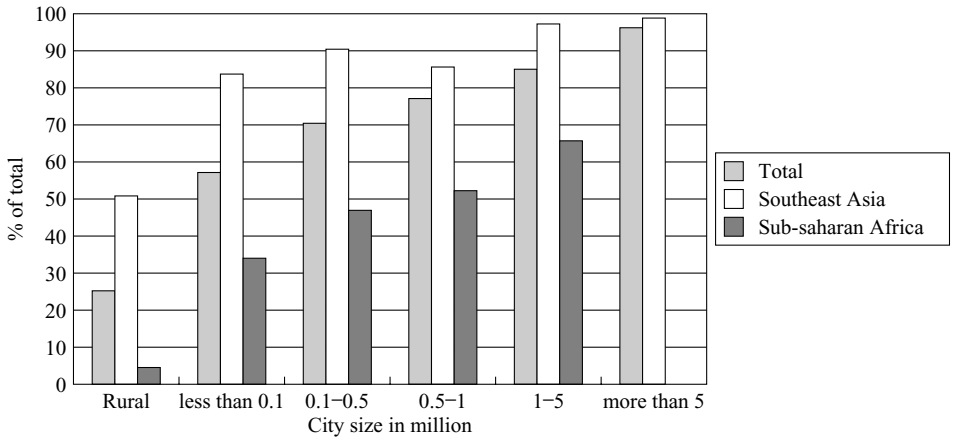
Source: NRC (2003).

Figure 12 Diffusion Rates by Urban Scale of Flush Toilets for Home Use



Source: NRC (2003).

Figure 13 Diffusion Rates by Urban Scale of Electricity for Home Use



Source: NRC (2003).

a negative correlation between devolution of public spending to the local level governments and regional economic growth. It seems to be really difficult to ensure that the benefits of decentralization in decision making would materialize. For example, Zhang and Zou (1998), examining the relationship between the share of the local government's financial spending and the growth of local economy, based on the provincial-level data from 1980 through 1992, show that there is a negative correlation between decentralization and growth. Note that in China, fiscal decentralization has been rapidly promoted since the 1970s. While development spending by the central government contributes to growth, spending on education and other human investments by local level governments is conducive to economic development. In a cross-country analysis, moreover, Davoodi and Zou (1998) points out that decentralization is negatively correlated with growth, based on the data of the 1970s to the 1980s.[20]

Such negative correlation between decentralization and growth is caused by various factors related to decentralization, including the relationship between the central and local governments under the decentralized circumstances, and the alignment of responsibilities and authorities over governments. That is, the question is what functions should be transferred to which level of governments. Generally, there are three types of decentralization: political, fiscal and administrative. Moreover, there is decentralization of financial resources and public spending in fiscal decentralization. The administrative decentralization takes place in various areas, such as planning, implementation and management of public services. Further discussion is needed about which government functions should or can be delegated to which government levels. It is also controversial when it is possible.. In that context, it is important to note that many local governments currently have their own limit in administrative capacity, and thus it would take certain time to build up their capacity. It is also noteworthy that participation of local residents in governmental decision-making might foster corruption. Therefore, the governance factors of the local governments are considered to crucially affect success of decentralization.

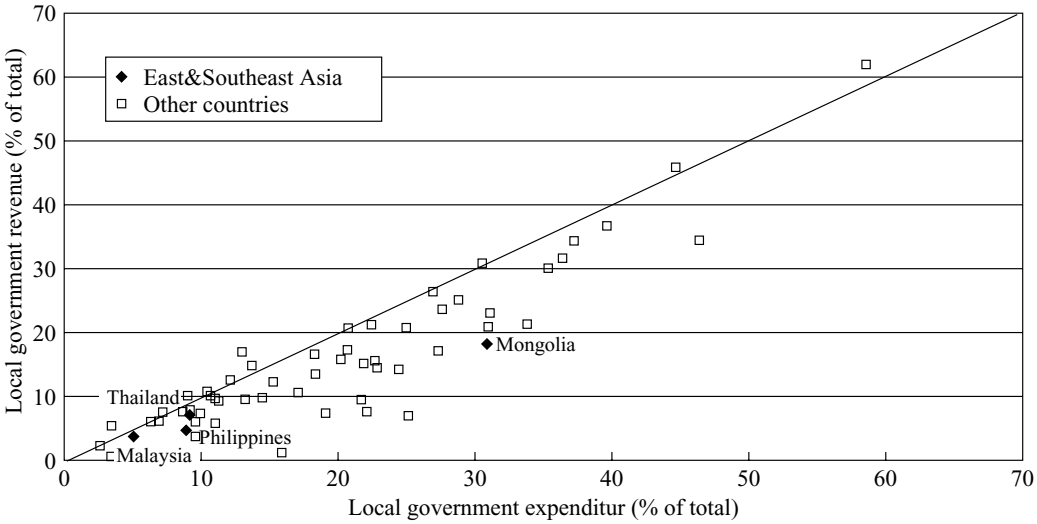
In the relationship with urbanization, there is an argument that local level governments, which directly manage rapidly growing urban areas (urban governments), can play a main role in providing public services more effectively in line with decentralization (World Bank, 2003b). Theoretically, whether the urban government is an optimal unit for supplying local public services depends on the relationship among economies of scale for the supply of public services, presence of critical mass, and externalities of public services, cross subsidization and universal services. Obviously, excessively segmented public service networks are inefficient in terms of cost performance. If network externalities across jurisdictions are not accommodated, it is a coordination failure. For example, the separate electricity systems operated by individual local governments lead to a huge loss of economic benefits, since intergovernmental coordination in supplying and purchasing electricity would improve efficiency of power generation and distribution.

The decentralization theorem tells us that the first requirement for urban government to efficiently supply local public services is a mechanism in which the demands of citizens are reflected in the plans of the local government through political decentralization. It is a key how to systematize citizen participation in budget preparation and planning of public investment, not only in direct election at a local level. The second requirement is fiscal decentralization. This is because the urban

20 Davoodi and Zou (1998) present a framework of the theoretical analysis about optimal financial decentralization. According to the framework, given the rate of total government spending to GDP, optimal allocation ratios of fiscal spending by central and local government are in proportion to the elasticity of their public investment to GDP.

21 In these respects, in the East Asian region, although financial decentralization in China is advanced, the mechanism of citizen participation in the decision making of public investment still seems to be weak. Meanwhile, in the Philippines, although political citizen participation seems to be advanced, financial decentralization is insufficient. In recent years, the proportion of government spending by local government has been decreasing in the Philippines. Indonesia is trying to promote decentralization in both areas simultaneously with a "Big Bang".

Figure 14 Decentralization of Tax Sources and Public Spending (Based on Recent Data: 1991-2001)



Source: Compilation of data from Government Finance Statistics Yearbook 2001.

governments that understand their citizen demands should actually provide public services.[21] In the discussion of decentralization, revenue shortage of the local government is always problematic. In the general discussion of local government finance, there are two approaches for local governments to supply public services: (1) tax sources are kept by the central government and government spending is decentralized through intergovernmental transfer to local government; and (2) taxation itself is delegated. If tax sources are distributed in proportion to spending, there is no difference between the two approaches. However, if tax sources are allocated disproportionately to urban areas, for example, reallocation by the central government is possible in the former approach, while it is impossible in the latter. Therefore, fiscal decentralization, discussed in relation to urbanization, is necessarily closely related to regional disparity and balanced urban system development.

Figure 14 plots the shares of tax revenue and public spending by local governments as the degree of fiscal decentralization. It is shown that decentralization in tax sources and spending does not progress globally in gross, although there is a sample problem. The share of the local government is about 10-30% and the role of the central government is still significant. Secondly, it is also found that focusing on the relationship between the two, decentralization on the revenue side tends to follow that on the expenditure side. This is because politicians might be concerned that too rapid decentralization of tax sources might impede balanced development of urban areas and rural areas. Otherwise, the central government may adhere to financial authorities simply due to political reasons. Therefore, thirdly, the transfer of financial resources by the central government has a certain role to play in many countries. The limited funding capacity of the local governments can be explained by the fact that the authority for taxation is not sufficiently delegated to local governments while their responsibility for providing services is more decentralized. Without sufficient fiscal autonomy, it is even difficult for local governments to fund through the market in a form of public bonds or foreign loans. Unless tax sources are delegated in proportion to public spending it is necessary for the central government to clarify the rules of intergovernmental transfer. In the decentralization of Indonesia, the allocation ratio of tax revenues collected by the central government is clearly defined.

In sum, the challenges for East Asia where urbanization would be accelerated in future are how to decentralize taxation to the urban governments, and how to design a reallocation mechanism among governments under the leadership of the central government. In fact, in Indonesia, which has been working on decentralization most rigorously in the East Asian region, most of the authorities and roles of

the central government, excluding diplomacy, finance and military affairs, have been delegated to 416 local governments (ko-tas, kabupatens) since January 2001. However, as a result of drastic decentralization, there emerges institutional flaws, such as a shortage of fundamental tax sources for local level governments, abuse of authorities to levy taxes, and insufficient regulation of national tax reallocation. Particularly, it is a problem in Indonesia that the fixed-asset tax, used as a fundamental local tax globally, is still federal tax (World Bank, 2003b). The taxes suitable for local tax are consumption tax and sales tax in addition to fixed-asset tax, in a sense of even distribution between urban and rural areas. From the viewpoints of geographical balance and stability in tax revenue, business tax and income tax are not suitable for local tax (Sato, 2004). Moreover, in the "Big Bang (decentralization)" of Indonesia, the tertiary level local governments, as a subordinate administration unit of 30 provinces under the central government, undertook full obligations of managing and providing public services, education, medical services, public investment and environmental conservation. Therefore, it is now essential for them to foster administrative abilities of local government staffs.[22]

Another decentralized nation in the East Asian region is China, which is in some sense regarded as a nation of one-party rule where the central government has a strong authority. Since the 1970s, it has actively promoted decentralization in economy and fiscal affairs. As a matter of fact, decision-making in corporate tax rate is delegated to each city, and induction of direct corporate investment is completely under the control of the local governments (332 local-level governments) (Won, 2003).[23] The difference inIndonesia is that the administrative process is obscure and the discretionary zone of the local government is very wide. Such obscurity might lead to corruption or create unstable factors in the macroeconomy (World Bank, 2000). However, China is also faced with the same challenge as Indonesia, that is how the central government should coordinate cities and regions. As Won (2003) points out, as independence of cities becomes strong in China, investments by many cities are duplicated. The intense competition among cities in the domestic market may lead to inefficiency in economic systems as a whole. Accordingly, their future assignment is to determine to what extent they accept regional disparity and how they would control for excessive regional gaps through fiscal decentralization and coordination under the central government, as urbanization proceeds.

Chapter 4: Conclusion

The urban population of the East Asian region is growing rapidly and will become the core of global urbanization in future. The absolute scale of the urban population is overwhelmingly large and expected to account for 30% of the global urban population by 2030. Urbanization is partly captured by the proportion of urban residents to total population. However, the urbanization in the region is more diverse and the characteristics vary throughout regions. One of the characteristics has been the balanced urban system development in urban and local areas. Although concentration of population in a primate city is observed in some countries, such as Thailand, local cities have been developed in a balanced manner in the East Asian region. This is partially because of the improvement of living standards in non-urban areas by public infrastructure investment in rural areas. Furthermore, policies aimed at disperse industries and employment to areas other than capital areas have been implemented in Thailand and the Philippines, contributing to the balanced urban development to some extent. In fact, there has been no significant difference in diffusion rates of public infrastructure, such as electricity, tap water and wastewater services between urban and local areas in East Asia.

With the economy presently being globalized, the major cities of the East Asian region are expected to function as global cities. As urbanization proceeds, further advancement of urban industrial structures,

22 There occurs an issue of disparity in laws for regulation of decentralization.
23 In China, there are 31 provinces, which include 332 local-level governments under which 2,873 prefectural governments exist.

along with development of non-land-intensive industries such as service industries, is required. The development of service industries creates employment in urban areas and would be useful for urban poverty reduction and self-directive development of local economy. Actually, as a global trend, there has been a significant relationship between service orientation in economy and urbanization. Urbanization has been a driving force for economic growth and poverty reduction. For promoting service orientation in urban economy, it is essential to develop street-level transportation infrastructure and information and telecommunication systems that enable efficient distribution in concentrated urban areas.

Accordingly, in response to rapid urbanization in the East Asian region, a key issue is how to maintain balanced development of large cities, regional cities and rural areas by taking proper steps toward urbanization promoted through service orientation in the urban economy. This cannot be underestimated, when (1) the absolute scale of urban population in the region, (2) the irreversible urban cycle with a long adjustment period, and (3) the significance of rural-urban migration to urban population growth are taken into account. Under the present situation, the public service infrastructure in small and medium-sized local cities and rural areas is relatively weak compared with that in large cities. To prevent excessive population concentration in urban areas, public investment in such areas continues to be necessary. Promoting rural areas will also be important in terms of food security for urban areas.

As urban areas are dominating economy, decentralization, particularly fiscal decentralization, becomes an important instrument for public investment allocation among regions. Since some cities have been developed enough, , it is necessary to further discuss which functions and authorities of the central government should be delegated to which local government, and how the central government should coordinate cities under the decentralized environment.

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