East Asian Urbanization
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Abstract
East Asia’s urbanization has taken place five to ten times faster than urbanization in Europe, North America, and elsewhere. The region includes Japan, South and North Korea, China, Hong Kong, Macao, and Mongolia. Although cultural and social differences in the region have led to distinct socio-cultural, political, and economic dynamics, spatial polarization, the emergence of mega-urban regions, world-cities, and regional, international and transborder development strategies are characteristic for East Asia’s urbanization. Major challenges facing the region include sustainable economic growth, environmental sustainability, balanced urban development, spatial and administrative fragmentation, and the provision of affordable housing and services.

Keywords:
East Asia, globalization, industrialization, migration, urbanization

Main Text
Countries in East Asia have gone through rapid urbanization at a pace five to ten times faster than that of Europe, North America, and elsewhere. Current urbanization levels are estimated at about 60 percent, exceeding the world average of app. 55 percent (see Figure 1). East Asian urbanization represents the profound economic, political, and socio-cultural change experienced by the region over the last century.

Figure 1: Percentage of Urban Population 1950-2050. Source: UN-DESA (2014).
Definitions of East Asia as a region vary, but most commonly, it is understood to include Japan, South and North Korea, China, Hong Kong, Macao, and Mongolia (UNSD 2017). This is also the definition adopted in this entry, distinguishing the region and its distinct paths of development from that of South-east Asia (comprising Brunei Darussalam, Cambodia, Indonesia, PDR Lao, Malaysia, Myanmar, Philippines, Singapore, Thailand,
Timor-Leste, and Vietnam). The focus here is on the distinct experiences of Japan, Korea, China, and Mongolia because they share certain aspects in their trajectories despite the time-lagged onset of their urbanization.

The urban restructuring in East Asia has often taken place with a view of competing for world-city status, guided and aided by government policy. Transnational corporations, thought to circulate three quarters of global commodity and services within their networks, have invested in East Asian cities since the late 1960s. Governments in East Asia have funneled finance capital into urban land development and construction and mega-infrastructure projects, thus effectively integrating local and global finance markets. Today, cities compete for investment and an advantageous position high up the global spatial hierarchy (Douglass 1998). Cities promoted for their world-city status include Osaka, Nagoya, Beijing, Shanghai, Taipei, Kuala Lumpur, and Singapore. Such cities are viewed by their national governments as symbols of the successful transition to being an advanced economy.

As East Asia urbanizes, strategies have been emerging to connect world cities and mega-urban regions through international development corridors. Such projects include new hub airports (such as in Osaka, Nagoya or Seoul) or new rapid rail service (for instance from Hong Kong to Shanghai) in addition to improved national transportation and communication links.

Eight East Asian Cities are already among the top 30 cities by population (above 10 million): Tokyo and Osaka (Japan), and Shanghai, Beijing, Chongqing, Guangzhou, Tianjin, and Shenzhen (China). Currently the world’s largest city, Tokyo (38 million residents), is expected to move to second place following the Pearl River Delta (including Guangzhou, Shenzhen, Foshan, and Dongguan). Shanghai is the world’s third-largest city (23 million residents). Regardless of the visibility of these mega-cities, however, the world’s fastest growing urban agglomerations are medium-sized cities in Asia.

The emergence of mega-urban regions, such as Tokyo, Shanghai, and the Pearl River Delta, is facilitated by modern transportation systems. These mega-urban regions extend well beyond the original administrative boundaries, and hence wide swaths of land are included which are not subject to formal planning and management activities. Yet a range of urban transformation processes, such as the conversion of agricultural to urban land use, takes place in these areas.

Overall, East Asian cities can be regarded as a compact and efficient form of human settlement. Lower-middle-income countries tend to grow their urban populations fastest, whereas upper-middle-income countries tend to expand their cities spatially. Urban areas in East Asia are generally 1.5 times as dense as the world average. The typically high density of cities in East Asia gives them a comparative advantage. Hong Kong is the densest urban area in the region with 32,000 people per square kilometer in 2010. However, China’s high density typology of high-rise residential developments surrounded by multilane highways, for instance, does not benefit from the advantages of mixed-use high-density environments. Street intersections, transportation nodes, public spaces, public services, and a mix of land uses are essential for sustainable high-density development. Meanwhile, cities like Shanghai, Tianjin, and Chongqing in China have reduced their density over the past decades.

Contemporary urbanization in East Asia is the spatial expression of the globalization of production, commerce, and finance. However, the patterns of urbanization appear radically different in different contexts: Hong Kong, for instance, is spatially compressed; housing here was used to organize labor; the structure of the city was developed to accommodate micro enterprises. South Korea’s urbanization produced spatial polarization with a bi-coastal pattern which is clearly dominated by the capital Seoul (Douglass 1997). Notwithstanding country specificities, the spatial transformation of East Asia can be characterized by spatial
polarization, the emergence of mega-urban regions, world-cities and regional, international and transborder development strategies (Douglass 1998). East Asia’s nations share a hierarchical (top-down) approach and have introduced policies and regulatory tools aiming to achieve regional balance in growth and concentration.

**Industrialization and Urbanization in East Asia**

Some observers attribute East Asia’s successful economic development – understood as industrialization and urbanization based on the experience and trajectories of countries that had developed earlier – to the politics of ‘opening-up’ as advocated by the World Bank. Others argue that it is due to the many ways in which East Asian states facilitated the transition from agrarian to industrial society and intervened in most aspects of national economy development planning.

The emergence of the East Asian developmental state is closely linked with regionally specific factors, such as Confucianism, and the region’s external geopolitical environment. This includes the influence of the two superpowers, USA and USSR, during the Cold War. The aims of government elites were framed as nurturing industrialization and managing and resolving the social conflict resulting from social restructuring. Between 1950 and 2000, Japan’s industrialization level increased by almost 44 percentage points. Similarly, in 30 years from 1966, South Korea’s industrialization grew by 43 percentage points. In the case of Japan and South Korea, extended state intervention was justified with the need to protect the national economy from market failure and to resist the spread of Asian communism. In response to the winding down of the threat of Asian communism toward the end of the Cold War, the developmental state in some East Asian countries began to lose legitimacy to be replaced with a new neoliberal agenda. The United States, who had not previously objected to stringent social control policies implemented by some of their East Asian allies, began to exert pressure towards the liberalization of the region’s economies. This included deregulation and privatization.

Japan's journey began in the late nineteenth century with the so-called Meiji Restoration based around interventionist industrial and financial policies, technological advances, social reforms, and – ultimately – military expansion. The country’s level of urbanization was 37 percent in 1950, 76 percent in 1980, and it stands currently at approximately 91 percent (see Figure 1). Between 1950 and 1975, an approximated 11 million people moved to Tokyo, Osaka, and Nagoya to work in heavy and chemical industries. From 1975 onwards, there was a shift from heavy industry to the high-tech and service industries. Tokyo was particularly quick to transform its industries and hence succeeded to become a global center. Occupying only 4 percent of the country’s territory, by the year 2000 the Tokyo region housed 33.4 million people and produced some 30 percent of the national GDP. Over the years, the state introduced a series of Comprehensive National Development Plans (CNDPs) designed to address emerging spatial polarization and other challenges resulting from rapid urbanization.

Following the Korean War and approximately ten years later than Japan, South Korea embarked on a similar journey. In 1960, the country was 37 percent urbanized, 80 percent in 1990, and currently 92 percent (see Figure 1). Here, too, urbanization was driven by rapid industrialization initiated by the state. It was characterized by massive rural-to-urban migration in the 1960s and 70s and resulted in the predominance of large cities, spatial polarization, and mega-city region formation. Large urban centers and port cities grew because of Korea’s export-oriented growth strategy. Seoul alone absorbed more than half of the total net rural-to-urban migration, followed by Busan and Daegu. By 2005, almost half of the country’s population lived in the capital region. Information on North Korea’s development and urbanization is extremely restricted. From the limited available data, it can
be inferred that the country went through a phase of rapid urbanization from 1950 to 1970, platoooning since (Jo and Adler 2002). Pyongyang, the capital city, is thought to concentrate around 10 percent of the country’s population.

In China, the role of the state has been larger than in Japan and other East Asian countries following the communist revolution in 1949. China’s urbanization level was 19 percent in 1980, 36 percent in 2000, and 45 percent in 2010. Currently, it stands at 56 percent (see Figure 1). Industrialization increased by almost 19 percentage points in twenty years (1980-2000).

China’s urban planning system sets specific targets for urban population numbers and designates areas for urban development as well as urban infrastructure. Such development goals are subject to approval by higher level government. The State Council approves province-level cities; the master plans of other cities are approved by province-level governments. Furthermore, land ownership in the country is divided: urban land is owned by the state, rural land is collectively owned by farmers. Rural land can only be developed if converted to state-owned. Farm land is protected by a land use quota system which determines the maximum of land that can be converted for development during a specific five year plan period. The quota, in turn, is determined by a higher level of government.

In China, Special Economic Zones (SEZs) were introduced from 1979 and firms began to receive greater autonomy since the mid-1980s. SEZs offer legal and economic incentives for foreign investment and international trade and have been highly successful, triggering some of the highest amounts of foreign direct investment into the country globally. Unfortunately, however, there have been concerns over land requisition, farmland depletion, and food security. Local governments are often overly determined to promote growth, regardless of actual demand. This has led to overinvestment in manufacturing and the development of countless redundant projects.

The surge of foreign direct investments and the boom of export-oriented industries in China’s coastal cities following opening up and reform from 1978 caused some regional disparity: the eastern coastal regions, occupying only 14 percent of the country’s territory, produced more than 58 percent of national GDP in 2004. Regardless, Beijing and Shanghai do not dominate the country’s economy as much as Tokyo in the case of Japan and Seoul in the case of South Korea. A shift inwards and away from the predominantly coastal SEZs can be noted from 1989, when China’s national development strategy began controlling the growth of large cities and encourage that of small and medium-sized cities and towns. Approximately 500 new cities emerged between 1990 and 2010.

Mongolia’s rapid urban transformation started around 2000 and the country is currently app. 70 percent urban (see Figure 1). The average annual urban growth rate between 1950 and 2014 was around two percent. Ulaanbaatar is the country’s largest city with a population of app. 1.4 million residents (46 percent of the country’s population). The city is growing fast, owing to rural-to-urban migration. Increase in migration is attributed to harsh weather conditions in recent years. Demonstrating the primacy of the capital city, the country’s second-largest city is Darkhan, with app. 180,000 residents. Many other towns experience shrinkage. Nevertheless, urban centers are struggling to provide the rural-to-urban migrants with jobs, housing, and infrastructure.

Migration and Socio-spatial Polarization under Rapid Urbanization
Urbanization is a dynamic and challenging development process. It is linked with large-scale rural-to-urban migration to already densely populated geographic areas. Countries with similar levels of urbanization can have radically different population distributions. Spatial polarization can be observed at varying degrees in Japan, Korea, and China, among other
countries. Here, capital and industry are concentrated in coastal regions (or the capital city) and linked with industrial decline in peripheral regions.

Generally, concentrations in one or to primate cities can be observed in less developed countries, whilst a more balanced urban population distribution (i.e., a distribution among many cities and towns of different sizes) is typical for more developed countries. For instance, Hong Kong, a Special Administrative Region (SAR) of China, is considered a “primate city” in that it concentrates its urban population within a single city. Ulaanbaatar in Mongolia also concentrates more than 60 per cent of the country’s urban population. Here, the share of urban residents rose from 56 percent in 2000 to 66 percent in 2016.

To manage rapid urbanization, Japan introduced its Comprehensive National Development Plan (CNDP) in 1962. The plan sought to restrict growth in Tokyo, Osaka, and Nagoya in order to achieve balanced development across the country. It encouraged suburban development in areas of adjustment around existing large cities in the 1960s and 70s. However, the population of large cities continued to grow rapidly, triggering a new CNDP in 1969 which encouraged the development of entirely new cities, the relocation of industries to less developed areas, and the improvement of transportation and communication systems. The strategy backfired: it made the largest metropolitan areas even more appealing to businesses and population, and regional development gaps continued to increase. Eventually, the 1987 CNDP recognized Tokyo’s importance as a global city. The latest CNDP (1998) places the emphasis on environmental issues and the challenges of an ageing and decreasing urban population. It stresses the importance of modernizing metropolitan areas, encouraging interregional cooperation and the improvement of transportation and communication infrastructures.

On the local level, Tokyo developed Capital Region Development Plans (CRDPs) to restrict and manage the metropolitan region’s growth. The 1956 CRDP introduced the greenbelt to restrict urban growth, dividing the Tokyo metropolitan area in (1) existing built-up urban area; (2) the greenbelt; (3) satellite cities beyond the greenbelt. Development was encouraged in satellite cities so as to reduce regional disparity. However, because of strong development pressures, the greenbelt was abolished as soon as 1968 and the CRDP designated the area within 50 kilometers of Tokyo Station for suburban development. Emphasis was placed on the development of transportation infrastructure (Tokyo has added some ten kilometers of subway line every year since the 1950s). The growth of sub-centers was further promoted by the 1976 CRDP, aiming to relieve pressure from the traditional Central Business District. Following the 1986 CRDP, business cores were then developed in every city. This CRDP sought to achieve a careful balance between overconcentration and the maintenance of Tokyo’s world city status. Finally, the 1998 CRDP focused on the strengthening of a regional structure (the center of Tokyo vs core cities for each sub-center, now expected to become autonomous).

There continues to be an economic concentration in Japan’s Tokyo, Osaka, and Nagoya. Regional disparities between these three largest metropolitan areas and the rest of the country persist.

Similar to Japan, South Korea formulated its first Comprehensive National Physical Development Plan (CNPDP) in 1971 to control urban sprawl and to encourage growth in regions apart from the capital city. Increased congestion in Seoul had resulted in housing shortages, traffic congestion, environmental deterioration, and, ultimately, in the degradation of quality of life. Like in Japan, an increase in disparity between the capital region and the rest of the country was a negative outcome of otherwise welcomed urbanization. Seoul’s growth created a network of cities around the capital. Special Measures for the Restriction of Population Growth in Seoul were introduced in 1964, including initiatives such as slum clearance in Seoul City or the establishment of industrial parks along major transportation
corridors. The 1977 Seoul Population Redistribution Plan (SPRP) sought to maintain Seoul’s population at around seven million by coordinating governmental efforts and regional collaboration and introducing a range of efforts, such as land-use management and industrial redistribution. Industry and education were not permitted to expand in Seoul City and instead encouraged to relocate outside city boundaries.

The failure of formal urban control policies became evidenced in the 1989 New Town Development Plan. The government had to house over one million people in five new towns because the greenbelt and strict controls on development had quickly led to significant housing shortage and very high housing prices. In an effort to curtail the expansion of the city beyond its boundaries, the 1984 Capital Regional Plan divided the capital into five functional zones (Relocation Promotion Zone, Restricted Rearrangement Zone, Development Inducement Zone, Natural Preservation Zone, and Development Reservation Zone). Various measures were later taken to make land use and development less restrictive. New town development and the relaxation of land use regulation in the 1980s and 90s accelerated the scale and speed of urban sprawl. All following CNPDPs encouraged growth dispersion and regional balance. The most recent Comprehensive National Territory Plan (2000-2020) further encourages a multinuclear and decentralized territorial structure and good links and cooperation among self-supporting regions.

Unlike the majority of other countries, China has had an administrative system in place since the 1950s to restrict the mobility of its population and rural-to-urban migration: the *hukou* (registered residence) system. The system was introduced to control movement between rural and urban areas. It was the foundation for the allocation of resources and provision of services. Under this system, individuals were registered at their place of residence. Workers required special permits to take up non-agricultural work in urban areas. If outside their place of registration, workers were not entitled to services such as housing or health care. Rural-to-urban migrants thus faced sub-standard living and working conditions in cities.

The system was rigidly implemented for two decades until opening up and reforms from 1978 onwards, when migration restrictions were relaxed. Migration was even encouraged from China’s interior to the coastal areas in order to meet the demand for cheap labor. Since then, the largest mass migration in human history has been taking place and rural-to-urban migrants have been pouring into China’s cities. Yet, even the reported 52 percent population growth in the eastern coastal areas during the two decades 1978-1998, for instance, may not appropriately describe the actual growth of the urban population, as it does not include a considerable number of undocumented rural-to-urban migrants: holders of a rural *hukou* who work in cities were considered “floating population” and not included in statistics, resulting in skewed data on the size of Chinese cities.

**Socio-spatial Inequality in East Asia’s Cities**

Overall, East Asia’s urban transition has created positive outcomes, including health care, education, and infrastructure for a new urban middle class. However, the processes associated with urbanization have triggered new or exacerbated existing challenges, including unemployment, urban poverty, and environmental and social problems.

On the one hand, many cities in East Asia are located in areas frequently affected by natural disasters, leading to population decline in some urban areas (for instance, Sendai, Japan, following the 2011 earthquake). Many low-income communities – and migrants, in particular – often settle in disaster-prone areas, thus becoming multiply vulnerable. Persistent decline in fertility rates has also contributed to the drop of urban population in some areas. Finally, economic contraction has contributed to the emergence of the “shrinking cities” phenomenon in the region. On the other hand, urban growth has exacerbated inequality, such
as in access to services and housing. Uncoordinated and inefficient development has led to emerging spatial patterns which are linked with congestion, pollution, and lost productivity. Land price increases have led to economic stratification in many East Asian cities. New gated communities for the rich emerge, giving rise to Asia’s enclave urbanism. Many older communities have disappeared from the region’s cities due to major restructuring efforts, with inner-city housing becoming unaffordable.

Scarcity in the availability of affordable housing and public transportation leads the urban poor to live far from their place of work and other amenities. Japan and Korea have used land pooling and readjustment and land sharing to help share the benefits of urban expansion. However, questions of social justice arise if taking into account the condition of immigrants (and rural-to-urban migrants) in cities. These groups are faced with exploitation, social discrimination, and severe injustices. Low-income social groups often lack the power to assert rights to better housing or access to services such as sanitation. Although the formation of slums and informal settlements is more prevalent in countries were rural-to-urban migration was not restrained, even countries with high levels of managed migration, like China, are expected to struggle with the provision of affordable housing in the future.

Some nation-states choose to control urban development and housing provision (for instance, Hong Kong), whilst others have relied on cooperation with the private sector (for instance, South Korea). In Korea, the state led and implemented industrialization in the 1960s and implemented an urban redevelopment program in the 1980s with heavy reliance on the collaboration of real estate and developers. This program promoted high-density development and was associated with the displacement and relocation of thousands of residents. The state went from demolition of old neighborhoods and displacement of their residents in the 1970s over the establishment of collaborative redevelopment teams of local property owners and builders in the 1980s to densification of low-rise formal neighborhoods by relaxing planning regulations in the 1990s. Seoul’s New Town Programme of the early 2000s aimed to scale up redevelopment projects following a demolition and reconstruction policy which led to the displacement of a high percentage of low-income residents due to increased housing costs. Korea’s speculative urban development is thus closely associated with new-build gentrification.

Compared with other developing countries, China’s urban poverty levels are low. The fact that slums are rare in the country is attributed to the hukou system, which restricted rural-to-urban migration for a long time, and the provision of housing by workplaces and high municipal standards (Webster 2004). However, poverty is a problem for the floating population as well as a large segment of the urban population, particularly those who have been laid off from redundant industries. Since 2015, rural-to-urban migrants who have lived in a city for six months or more can apply for a permit, granting them access to health care and public education.

Although jobs are plentiful in many urban centers in East Asia, countries like Mongolia are faced with “hyper urbanization”, or the mismatch between the growth of urban population and (formal) urban jobs. Ulaanbaatar, at the center of Mongolia’s unbalanced urban dynamics, exemplifies socio-spatial inequality in being divided in two areas – the formal part of the city (and legacy of the Socialist era) and the informal, temporary city (Gher), where a majority of people live in tents. The Gher area is not connected to public services, such as running water or central heating. An unusually high proportion of the capital’s population is categorized as poor. As with other East Asian countries, air pollution is serious owing to increasing automobile traffic and smoke from stoves used in the Gher areas.

**Outlook**
Cities are the lifeline for a range of East Asian countries. Some go as far as to argue that a new, urban-based and region-wide system of capitalism has emerged in East Asia and that this new regional geography is led essentially by cities, rather than nation states (Rohlen 2002). China’s coastal regions and their cities, for instance, currently produce some 60 percent of the country’s GDP. However, fierce competition for foreign direct investment has led to short-sighted attempts to attract such investment using incentives with detrimental effect on a healthy environment.

Over the last four decades, China has become the world’s second largest economy, following the United States and surpassing Japan. Regrettably, the growing GDP is jeopardizing cultural heritage and putting environmental resources at risk. The increased demand for power, for instance, still primarily fuelled by coal, is reflected in the country’s place as the world’s number one in greenhouse gas emissions. Environmental change and its impacts and risks are of particular importance as increased consumption of fossil fuels contributes to climate change and increases the risk of natural disasters (such as flooding). Air pollution resulting from increased car traffic due to urban expansion and polluted waterways are common problems in the region. Such issues are damaging to health and are linked to thousands of deaths every year. Affected are especially the urban poor who often lack access to safe drinking water. Deteriorating environments have negative implications with regards to attracting further investment. The sustainable economic growth of cities is therefore linked with environmental sustainability.

Especially in view of rapid urbanization, land, housing, and services for new urban residents will have to be provided. Urban planning will need to match jobs, affordable housing, shopping, public transportation, and health and education services with rapid physical expansion so that disadvantaged communities are included.

Policy makers at the national and municipal levels will have to ensure that urbanization takes place in an economically, environmentally, and socially sustainable way, allowing all social groups to benefit. Originally largely export driven, urban economies in East Asia are now turning to local consumers. For instance, in order to boost the local economy, China has been changing its strategy from being the world’s workshop to producing for the domestic market. It is shifting its focus to urbanization and development of its central and western regions, and planning its transition to a low-carbon economy. The country’s main challenge is seen as the absorption of approximately half a billion more people in cities over the next two decades, whilst avoiding to give rise to urban poverty.

With decentralization a major trend, local governments are gaining power. Urbanization has triggered economic growth and the emergence of an urban, educated middle class which has contributed to the rise of political reforms in many East Asian countries, such as Korea, Taiwan, and China. Citizens today demand better and cleaner housing.

New models of metropolitan governance will need to address fragmentation or over-reliance on central authority. Local administrative boundaries do not always succeed in containing urban spillovers. Urban growth can transgress administrative boundaries and spill into neighboring jurisdictions; alternatively, multiple cities can merge into a single entity under separate administration. For instance, Tokyo encompasses 240 municipalities and is split between seven prefectures. Failure to plan for future urban expansion results in fragmented and inefficient urban growth, particularly in low-middle-income countries. The logistical and political complexities around the generation of coalitions among participants with conflicting priorities will have to be addressed. Dissolving the lowest tier of government or annexing adjacent territories may help to overcome emerging issues of metropolitan fragmentation. Guided land development, land pooling and readjustment, land sharing, transfer of development rights and many other mechanisms can be used by governments to facilitate planned access to new urban land.
East Asia’s urbanization is an ongoing process offering significant theoretical, methodological, and applied challenges which can be addressed from multiple disciplinary and professional perspectives. In particular, in view of the multi-faceted nature of the challenges identified here, interdisciplinary and transdisciplinary approaches seem very well suited.

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