

1. Understanding China's urbanization

This book is intended to provide the most comprehensive and up-to-date description of Chinese urbanization since the beginning of the period of reform and opening up that began in 1978. It will draw together and summarize the complex and rapidly changing body of demographic and statistical information on Chinese urbanization. Beyond the numbers, it will present results of our extensive fieldwork in all parts of China and an original theory of the way in which political, economic, and social forces have shaped the vast transformation that has occurred as the urban population of China has grown from 17.9 percent in 1978 to over 54.8 percent in 2014.

China's society has undergone a series of radical institutional transformations since reform and opening up. Central governmental control has been reduced and partially decentralized and China now relies largely on market forces as it has changed from an agricultural society to an urban one. This is a true urban transformation with economic, social, spatial and demographic dimensions. Simple population counts or studies that only describe the relationship between economic growth and urbanization do not adequately describe the dynamics or nature of the change. Aggregate numbers tell us little about China's urban transformation. China is a vast and diverse country and the extent of urbanization varies enormously from region to region due to different development conditions (Li, 2008). Many of China's provinces have land areas and/or populations larger than entire countries. The historical, cultural, physical, resource, social, political, and economic features of different provinces and regions within provinces are as different from each other as individual countries. It is helpful to think of China as a "country of countries." Most studies, however, focus only on aggregate urbanization statistics or on the role of China's changing economic system in shaping Chinese urbanization and neglect other dimensions of China's urban transformation.

A basic hypothesis of this book is that China's urban transformation is related to many factors—not only differences in the regions and regional policies, but also governmental urban development and finance policies, administrative divisions, the household registration (*hukou*) system, globalization, and migration. These factors operate at the level of regional and provincial development and will affect future urbanization trends.

Based on this hypothesis, this book focuses on four key attributes of urbanization—demography, economics, space and society. It describes the whole process of urban transformation, including the impact of institutional transitions and the influence of globalization as an external force with the best available statistical data and supporting materials.

The book argues that China's urbanization process since reform and opening up has shifted from central government control of the planned economy to a new phase supervised by the government, but primarily driven by market forces. This deep social transformation and changes in the external environment due to globalization have jointly affected regional migration and have created regional disparities in urbanization that have produced a disconnect between the quantities and qualities of Chinese regional urbanization development.

We divide Chinese urbanization since the late 1970s into three phases: (1) the period of the planned economy from 1949 to 1977; (2) the period of reform and opening up from 1978 to 2013; and (3) a new phase beginning in 2014 characterized by a new style of urbanization. Of course the transitions were not immediate. We argue that the great ongoing transition from a planned to a market-based economy is beginning to have a parallel second transition from favoring the quantity of urbanization to improving the quality of urbanization. We argue that the second transition is necessary and indispensable for China's future.

Based on an analysis of the first transition and our examination of population structure and evolving social and economic development in different regions of China, our study concludes that overall the rate of increase in Chinese urbanization will continue, but is likely to slow down in the near future. Much of China's urbanization in the next 30 years will take place in central and western China. Rather than a problem, we argue that this slowing down in the rate of urbanization and the shift from eastern China to central and western China creates opportunities for China to focus on the quality of urbanization, rather than just focusing on the quantity of urbanization as in the past. But achieving the second transition of urbanization in China will require changing deeply embedded conservative ideas about development.

CHINA'S URBANIZATION

Stages of China's Recent Urbanization

For millennia, China was a traditional agricultural society. Some modern urbanization occurred in foreign-dominated treaty port cities as early

as the mid-nineteenth century and between 1920 and the mid-1930s there was additional modest urbanization in a few areas of China. But a quarter-century of war with Japan and civil war disrupted normal development and urbanization in China between the late 1930s and the founding of the People's Republic of China in 1949. The years 1949, 1961 and 1978 are pivotal dividing lines between three periods in the urbanization of the People's Republic of China that we term the periods of "unrestrained urbanization," "counter urbanization," and "rapid urbanization."

The period of unrestrained urbanization (1949–1960)

The People's Republic of China was founded in 1949. Peace, greater stability, a strong central leadership that had not yet restricted urban–rural migration, and the need for post-war reconstruction resulted in a period of unrestrained urbanization when large-scale urban rebuilding and investment in basic industries and infrastructure (with aid from the Soviet Union) led to a great deal of urban construction and millions of rural residents poured into China's cities. China's planned economic system was not yet fully established at this stage. While a limited population registration system has existed in the PRC since its creation, the central government had not expanded this registration system countrywide and did not use it to limit rural–urban migration. The rural population could migrate freely between rural and urban regions. China institutionalized and greatly expanded its household registration (*hukou*) system in 1958 and began using it to manage the population's registration and social security. During this period China's urban population grew from 58 million in 1949 to 131 million in 1960. The urban population nearly doubled in 11 years, and the urbanization level increased by 9.2 percent from 10.6 percent to 19.8 percent (NBSC-ccs, 2005).

The period of counter-urbanization (1961–1977)

By 1963 a series of droughts and unrealistic projects brought the Great Leap Forward to an end. China's centralized economic planning and *hukou* systems were fully in place and the national government began to restrict urban migration, so the period of rapid urbanization effectively ended at that time. Urbanization experienced a sharp decrease between 1960 and 1963, decreasing by 2.91 percent. After a short period of fluctuation, China's Cultural Revolution (1966–1976) began a period of turmoil in China. Policy was driven by a desire to eliminate class distinctions and differences between urban and rural areas. In addition to the ideological motive to create a more egalitarian society, to relieve employment pressure in urban areas, over 43 million urban residents—particularly urban youth—were sent to work in rural regions (Liu, 2009: 532, 537). At the

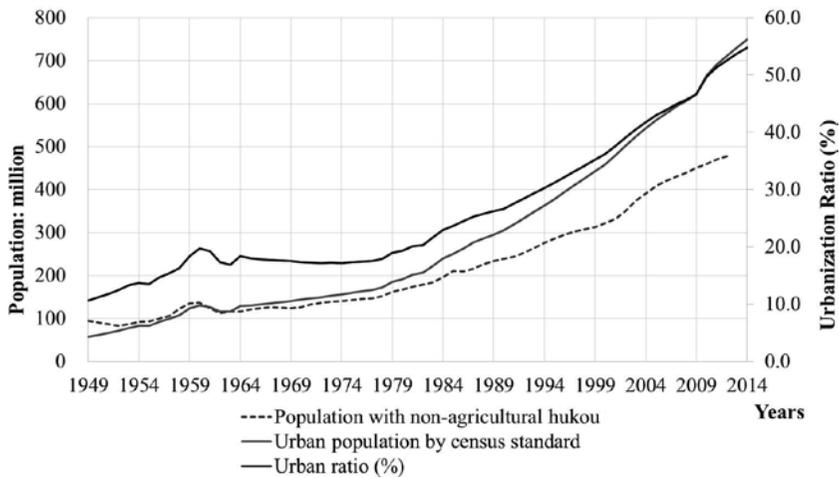
end of the Cultural Revolution in 1978 China's urbanization level was only 17.4 percent (NBSC-ccs, 2005), 2 percent less than the level 17 years earlier at the end of the Great Leap Forward.

As the Cultural Revolution ended, the Chinese Communist Party (CCP) under the leadership of Deng Xiaoping changed the course of national policy. We use 1978 as the dividing line ending the period of counter-urbanization and beginning the period of reform and opening up. That is the year in which the new direction was established and counter-urbanization ended. It took several years for new policies to be implemented and their impact to be felt. As described in subsequent chapters, China's real rapid urbanization was clearly evident by 1984.

The period of rapid growth (1978–present)

The household contract responsibility system (HCRS) introduced under Deng Xiaoping's leadership beginning in 1978 in rural China endowed peasants with autonomy in production and management. It remains the system in China governing land tenure and the sharing of agricultural produce between rural collectives and individual households. Rural land in China is owned by agricultural collectives. The initial practice was that the government specified quotas of agricultural production the collectives must sell to the state each year. Collectives in turn contracted arable land parcels to households and specified how much each household had to contribute to the required quota. Households could keep any surplus over the contracted amount for their own consumption or for sale on the private market. Establishment of the HCRS in the late 1970s succeeded in greatly increasing agricultural productivity in China. The HCRS represented not only liberation of rural productive forces, but also created favorable conditions for rapid urbanization.

At the same time as the HCRS was being implemented, the large population of educated youth (and others) who had been sent to work in the countryside during the Cultural Revolution was allowed to return to cities and towns. This resulted in huge employment pressure. The fragile recovering urban economy was not able to absorb all the new migrants returning from or migrating for the first time from the countryside. The new surplus labor force released in both rural and urban areas were preconditions for rapid growth and diversification of China's urban economy. The massive surplus labor force resulting from the liberation of rural productive forces and the original urban employment pressure encouraged individual and private entrepreneurship. In the countryside farmers rapidly increased agricultural production resulting in grain which could be used to feed a larger urban population. Freedom to start businesses and engage in market transactions spurred new enterprises in both cities and the countryside.



Source: NBSC, selected years.

Figure 1.1 Chinese population with non-agricultural hukou, urban population, and urban ratio, 1949–2014

These developments expedited China's economic restructuring and urbanization process. China emerged from stagnation during this stage.

By the end of 2014, China's urban population had reached 749 million, with a 54.8 percent urbanization level (NBSC, 2015b). During the 36 years from 1978 to 2014 China's urbanization level increased by 36.9 percent, at an annual average rate of increase reaching nearly 1 percent. Figure 1.1 illustrates changes in China's total urban population and urban population rate from 1949 to 2014.

How China's Recent Urbanization Compared With Global Patterns

The most common definition of urbanization and the one we employ throughout this book is the percentage of a country's population that lives in places classified as urban rather than rural. While increases in urbanization generally occur as a country's urban population is increasing, urbanization is not the same as urban population increase. It is a ratio, not an absolute number (Davis, 1965).

In most countries a national census or statistical offices produce a regularly updated number for the urban and non-urban population. In the essentially urbanized developed countries of North America, Europe and Australia census geographical unit definitions of urban and rural are

relatively stable and census data inclusive—with the exception of illegal immigrants and some special hard-to-classify categories of people.

In China, because of China's hukou system there are two fundamentally different ways of describing the urban population: the *de facto* urban population who actually reside in places officially classified as urban for enough time to qualify as residents and the *de jure* urban population: residents of urban areas with official residence addresses there. How to classify China's urbanization has been the subject of extensive scholarly debate (Zhang and Zhao, 1998; Zhou and Ma, 2003; Shen, 2005, 2006; Chan, 2007) and the methodology used to define urban and rural areas has changed in different Chinese censuses, making longitudinal description difficult, as described in Chapter 3 on administrative divisions.

As this book goes to press the latest available official data shows that at the end of 2014 China's *de facto* urban population accounted for 54.8 percent of China's total population (NBSC, 2015b), but one-third of China's urban population does not have urban hukou (PRC-MHURD, 2014); this means they can't enjoy the full urban welfare benefits.

University of Washington geographer Kam Wing Chan has summarized different ways of classifying China's urban and rural population over time and provides detailed statistics through 2008 (Chan, 2010). Chapter 2 on hukou and hukou reform and Chapter 6 on large-scale population flows summarize the most important data and discusses this complex issue in depth.

For more than two centuries the world's urbanization level has been increasing, and this pattern has accelerated since 1950. A review of recent world patterns is helpful in understanding the context of China's urbanization and the importance of reform and opening up. It is useful to distinguish between two periods: 1950 to 1980 when urbanization in China rose and fell and 1980 to the present when rapid urbanization has been fully underway.

During the first period, from 1950 to 1980, medium-income countries and countries in Asia experienced the most significant growth. The United Nation's *World Urbanization Prospects: 2014* reports that in the 30 years from 1950 to 1980 the world's urbanization level increased by 9.7 percentage points from 29.6 percent to 39.3 percent (UN, 2014). The increases in high, medium, and low-income countries were 15.2 percent, 11.7 percent and 9.4 percent respectively. During this period the overall urbanization level of Asia increased by 9.6 percent. Urbanization was most rapid in high-income countries.

During the second period, from 1980 to 2015, the world's urbanization level increased more rapidly—by 14.3 percent compared with 9.7

percent between 1950 and 1980. Urbanization was most rapid in low and medium-income countries. The increases were 8.6 percent, 20.6 percent and 12.4 percent, respectively in high, medium and low-income countries. During this period Asia's overall urbanization level increased by 21.1 percent, which was driven mainly by the change in China from slow urbanization to rapid urbanization.

During the past three decades, the most rapid urbanization worldwide has occurred in medium-income countries, rather than high-income countries. This has occurred especially in Asian countries in what economist Walt Whitman Rostow (Rostow, 1956) call their periods of "takeoff." The world's urbanization level crossed the 50 percent threshold, which means that over half of the world's population lived in urban areas in 2007.

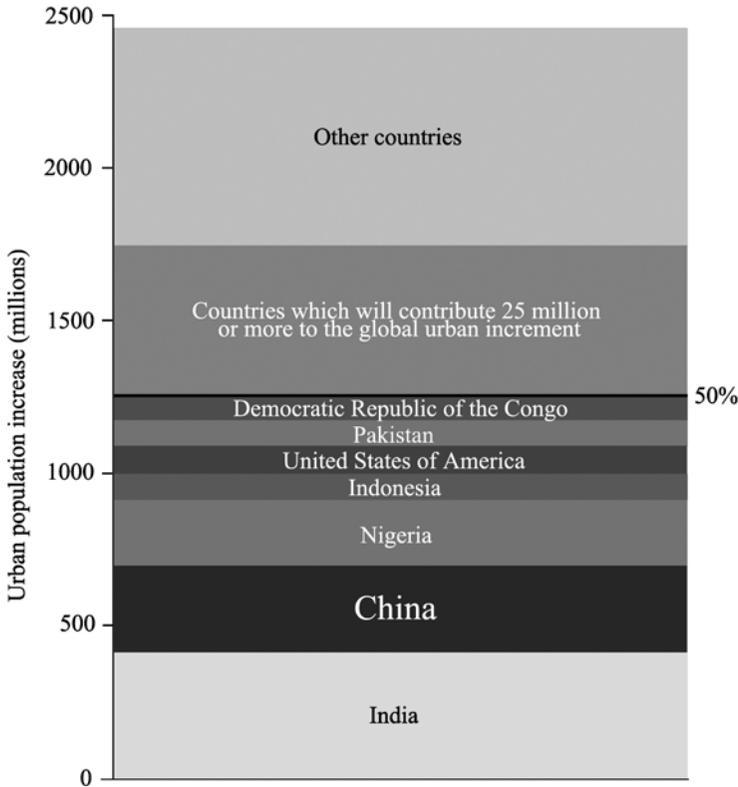
By 2014, the Chinese population had reached 1.37 billion (NSBC, 2015b)—the largest population of any countries'—and accounted for 20 percent of the world's total population. Hence China's urbanization is of global significance. China's urbanization level increased by 36.2 percent within 35 years from 1980 to 2015, by 15.1 percent more than the population increase of all other Asian countries combined, 15.6 percent more than medium-income countries as a group, and nearly 22 percent higher than the world average.

Between 1980 and 2014 China's urban population increased by 567 million—a quarter of the world's total urban population increase (UN, 2014). The United Nations estimates that China, India, and Nigeria will collectively contribute over 30 percent of the world's total urban population increase between 2014 and 2050, as illustrated in Figure 1.2.

Urbanization today is faster in developing countries than it was in the early stages of urbanization in countries which developed in the nineteenth and twentieth centuries, and are now at or above the 70 percent urban level.

"Catch-up" is often easier than "ground breaking." Developing countries are catching up fast with technology and capital provided by developed countries as described in Chapter 5 on the impact of globalization on China's urbanization. Unfortunately, this may lead to the "over-urbanization" phenomenon, which has occurred in some countries—particularly in Latin American and Africa—as a result of unsynchronized population growth and industrial and municipal development as described in Chapter 6 on large-scale population flows and Chapter 9 on China's double dual transformation. Urban slums and sprawl in countries which are urbanizing too rapidly without adequate control gives rise to a multiplicity of problems. In a re-interpretation of world urbanization data in Chapter 9 on China's double dual transformation, we conclude that China's urbanization development is nearly balanced with the rapid

Contribution to the increase in urban population by country, 2014 to 2050



Note: The countries shown are projected to contribute 25 million or more to the global urban increment between 2014 and 2050. The category “Other countries” includes with urban increments of less than 25 million each.

Source: United Nations (2014: 12).

Figure 1.2 United Nations estimate of the contribution to the increase in urban population by country, 2014 to 2050

development of the economy and social progress: that China is not significantly under-urbanized as many other scholars claim.

China’s GDP reached 63.6 trillion RMB (US\$10.3 trillion) in 2014, ranking second after the US (NSBC, 2015b). China’s per capita GDP estimated by purchasing power parity was US\$9,800 in 2013—only 19 percent of US per capita GDP.

In terms of economic and social development China’s experience is

unprecedented in speed and scale in human history. In the space of three decades China has lifted more than half a billion people from abject poverty. In 1981 China's desperately poor population accounted for 39.5 percent of the world's total, but by 2011 it had declined to 1.32 percent (World Bank, 2014b). China's middle class, which was essentially non-existent in 1981, now numbers in the hundreds of millions. More international tourists are now from China than any other country. In 2014 more than 110 million Chinese traveled overseas (China News Web, 2015).

At the same time the distribution of wealth in China has become increasingly unequal. Gini coefficients are the most common measure of inequality, though we describe their limitations in Chapter 9. The higher the coefficient the more unequal the distribution of wealth. If estimates by academic researchers and China's National Statistics Bureau are correct, China's Gini coefficient may have increased from about 0.330 in the 1980s (Fan and Sun, 2008) to 0.469 in 2014 (NBSC, 2015a). This latest figure has exceeded the warning line—0.400 laid down by the United Nations—and is higher than the United States' Gini coefficient. Whatever China's true Gini coefficient is or how accurately it reflects true income disparity, China clearly faces growing income inequality.

China is rapidly building a nationwide social welfare/social security system. As described in Chapter 4 on regional policies and regional urbanization the process is being implemented on a decentralized basis. Coverage and the adequacy of programs are still far from adequate—particularly in rural areas. But pension, health, unemployment, job training, welfare and other social security and social welfare systems now cover the great majority of China's population. Rural cooperative medical service and pension security systems have been established, and coverage and the adequacy of benefits is increasing rapidly, as described in Chapter 4 on rural urbanization and rural policies.

More than 90 percent of China's rural areas can now be accessed by roads, although a large gap exists between urban and rural areas, different cities and even within the same city-region. China has not seen the emergence of extensive slums similar to what has occurred in many African, Asian and Latin American countries.

URBANIZATION STUDIES

Dual Structure of Urbanization in Developing Countries

Nobel Prize winning economist Arthur O. Lewis established the dual sector model of economic development in 1954. This model divides the economic

structure of developing countries into industrial and agricultural sectors. Lewis assumes that a large surplus labor force exists in rural regions of developing countries and that the marginal productivity of the agricultural labor force is almost zero. Therefore, the agricultural labor force is impelled to migrate to cities. The Lewis model assumes that this process will continue until all the rural surplus labor force is absorbed by cities and salaries in rural regions and urban areas are comparable. At this point, the rural–urban gap will narrow and eventually disappear (Lewis, 1954).

Lewis' dual sector model has had a great impact on the formulation of economic policies in many developing countries and on the birth of developmental economics. The model serves as the theoretical basis for many studies of population urbanization (especially rural–urban migration). However, assumptions in the Lewis model do not fit with current phenomena in China such as limited surplus labors and the existence of unemployment in cities.

Addressing the defects in the basic assumptions in Lewis' dual sector model, Harvard economics professor Dale Jorgenson contended that the root cause of the migration of rural population to urban areas lies in changes of a country's consumption structure (Jorgenson, 1961). People have limited demand for agricultural products, but the demand for industrial products is unlimited. According to Jorgenson, once the supply of agricultural products can satisfy the demand the driving force for agricultural development will recede, leading to the transfer of rural population to the industrial sector. Both Jorgenson and Lewis emphasized the importance of facilitating rural–urban migration.

Yale economics professors John C.H. Fei and Gustav Ranis argue that the supply of rural labor force is not unlimited (Ranis, 2004). They believe that when the supply of agricultural labor has declined to the extent that total agricultural output begins to decline, the price of agricultural products will rise, and the profit of the industrial sector will decrease. As a consequence, the average salary of the rural labor force will become comparable with the average level in the industrial sector. As that happens, the unidirectional transfer of the rural labor force to the industrial sector will slow and eventually stop. The subsequent transfer of the labor force between the agricultural and industrial sectors will be determined by the market (Fei and Ranis, 1964). The Ranis–Fei model considers the increase of agricultural productivity. However, it assumes that unemployment does not exist in the industrial sector or cities. As long as the salary of workers in the industrial sector in the cities is higher than that of the agricultural sector, the hidden rural surplus labor force will continue migrating to cities and the industrial sector.

Jorgenson and Ranis and Fei improved Arthur O. Lewis' dual sector model. However, they still failed to account for the phenomenon of

simultaneous growth of urban unemployment and the rural migration to cities in developing countries. Based on six years living and working in Africa, New York University economist Michael Todaro recognized the prevalent unemployment problem in rural regions and urban areas of the developing countries, and thus he proposed another variation on the rural–urban migration model. Todaro believed that what actually influences migrants' decisions to migrate is not just income, but expected income (Todaro, 1969). The concept of expected income can better explain the coexistence of large-scale rural–urban migration and high urban unemployment rate in developing countries.

Although the dual sector economic model is not directly about urbanization, the model has become an important explanatory theory in urbanization. China's economy still has a dual sector structure and China is now facing an increasingly urgent contradiction between large population size and limited land resources. For China, the rural–urban dual structure is manifested in the level of economic development and in the gap in public services and administrative systems.

Desakotas

Canadian geographer Terry McGee conducted a large number of empirical studies on urbanization in Indonesia and elsewhere in Southeast Asia (McGee, 1991a, 1991b). McGee concluded that the Western model of urbanization does not adequately describe or explain the pattern of urbanization in agriculturally fertile urbanizing areas in Indonesia and elsewhere in Asia. As a result McGee proposed a model of mixed industrial and agricultural development and a unique Asia settlement form he named a *desakota*, combining the Bahasa Indonesian words *desa* (village) and *kota* (city).

Desakotas—very dense formerly rural areas that mix agriculture and industry—are arguably a distinct settlement pattern that is neither rural nor urban (McGee, 1991b). McGee argues that formerly high-density agricultural areas are becoming desakotas as their density increases and industry and other urban economic activities develop mixed in with agriculture. According to McGee, desakotas are most likely to develop along transportation corridors between major cities. They are most often found in wet rice agriculture areas because the high yield per unit of land can support dense rural populations. Desakotas are typically unplanned or poorly planned and take a variety of forms. Common features are: (1) average residential densities above the threshold that qualifies as urban, (2) mixing small-scale industry alongside agriculture, (3) water, electricity, transportation, sewage, and other infrastructure problems, and (4) serious air quality, water quality, and other pollution problems.

In China areas resembling Indonesian desakotas have arisen not only as urban centers have expanded, but even more often as industrializing villages are becoming more like towns (Abramson and Qi, 2011). Greg Guldin describes the processes he observed in southern China as former villages became mixtures of agriculture and industry as deagriculturalization, townization, and urbanization in place (Guldin, 1996).

McGee argued that the system in parts of Southeast Asia under which urbanization is combined with regional development is a complex system with the mixing of urban and rural elements. This situation is mainly due to industrialization and urban sprawl. McGee's concern focused on traditional agricultural areas in highly concentrated urban regions such as peri-urban areas around city centers and transportation corridors through agricultural land connecting major cities (McGee, 1988, 1991a, 1991b).

General Theories of Urbanization

In addition to research on the mechanism of migration and urban–rural spatial transformation, theories of urbanization are helpful as background for the chapters that follow. Demographers, geographers, and others who have studied the pattern of urbanization in different countries over time have concluded that urbanization—measured by the proportion of the population living in urban areas over time—tends to follow the shape of an attenuated S curve.

The earliest, and still the most complete and intellectually rigorous, description of the urbanization S curve was formulated by American sociologist and demographer Kingsley Davis [1908–1990] in a classic 1965 *Scientific American* article (Davis, 1965). Davis served as president of the Population Association of America and the American Sociological Association and was the first sociologist in the United States to be elected to the National Academy of Sciences. Davis and his students carefully assembled and analyzed data on 1,000 years of urbanization in Europe. Davis did not study China and his generalizations are Eurocentric.

Davis defined urbanization as an increase in the proportion (percentage) of the population in a given region, such as country, that lives in urban areas as opposed to the rural countryside or villages and towns that are too small to qualify as urban. Davis identified and clearly described core definitional and conceptual issues that plague all scholars attempting to demarcate urban and rural population: what population size or density of a settlement qualifies it as urban? Where is the boundary line between urban and rural areas on the urban fringe?

Davis argues that urbanization follows an attenuated S curve in which pre-industrial cities urbanize very slowly at the long bottom of the S, shoot

up at the middle of the S as they industrialize, and then level off at the top of the S as they become fully urban. He observed that advanced industrialized countries had already reached the top part of the S curve by the mid-1960s, but that many rapidly urbanizing developing countries were in the steep middle of the S at that time. The pattern Davis described holds true today. Many developed countries in Europe, North America and Australia and some developing countries in Latin America have reached the flat top part of the S curve with urbanization levels higher than 75 percent. Many developing countries in Africa and Asia are in the steep part of the S curve. Some of the poorest countries in the world are still largely rural and are urbanizing only slowly. Davis' article was written shortly after the Great Leap Forward when only about 18 percent of China's population was urban. As described above, China's urbanization took off in the early 1980s after reform and opening and China's urbanization level reached 54.8 percent at the end of 2014 (NSBC, 2015b).

Six years before Davis' classic article was published, economist Walt Whitman Rostow developed a theory about the stages of economic growth in developing countries, as measured by indicators such as industrial output and per capita gross national product (Rostow, 1956). Rostow argued that when traditional economies reach a level of economic "take off", a limited group of sectors where modern industrial techniques are applied achieve rapid growth and this leads to diffusion of growth to other sectors. Eventually economic growth tends to level off as the country's economy matures (Rostow, 1956). While Rostow focused on economic growth others were quick to point out the connection between economic development and urbanization.

Geographer Ray Northam incorporated the concept of "take off" and maturity into the S curve. Northam argues that urbanization tends to proceed slowly during an initial state until a country is about 30 percent urban; shoot up much more rapidly during an acceleration stage; and then level off during a terminal stage when about 70 percent of the country's population is urban (Northam, 1979).

The Davis, Rostow, and Northam models are all simplifications of reality designed to reveal general truths. The reality of urbanization is more complex. Events such as epidemics, economic crises, political movements like the Cultural Revolution, and wars may disrupt the curve substantially. Economic historian Jan DeVries concluded that the bubonic plague epidemic of 1347–1351 which killed an estimated one-third of Europe's population, for example, reduced the urbanization rate in many countries because it hit urban areas particularly hard (DeVries, 1984). DeVries concluded virtually all cities of 10,000 or more in Europe had recovered their pre-plague populations by 1500.

Kingsley Davis describes a “family of S curves” on a horizontal x-axis representing time and a vertical y-axis representing the percentage of a country’s population that is urban. England, which was only about 5 percent urban in 1500 and is now 80 percent urban, is at the top of the family of S curves in Figure 1.3. A long slowly rising left tail shows that England slowly urbanized during the middle ages. The steep part of England’s S begins about 1750 with the start of the Industrial Revolution. A nearly level top to the S shows that England became nearly fully urbanized several decades ago. The long attenuated parts of the S curve for Germany and France follow a pattern similar to England’s, but the time at which the S starts to rise rapidly occurs later in Germany and later still in France. In Japan the steep part of the S curve begins only after 1850 when Western colonial powers pushed the opening of Japan.

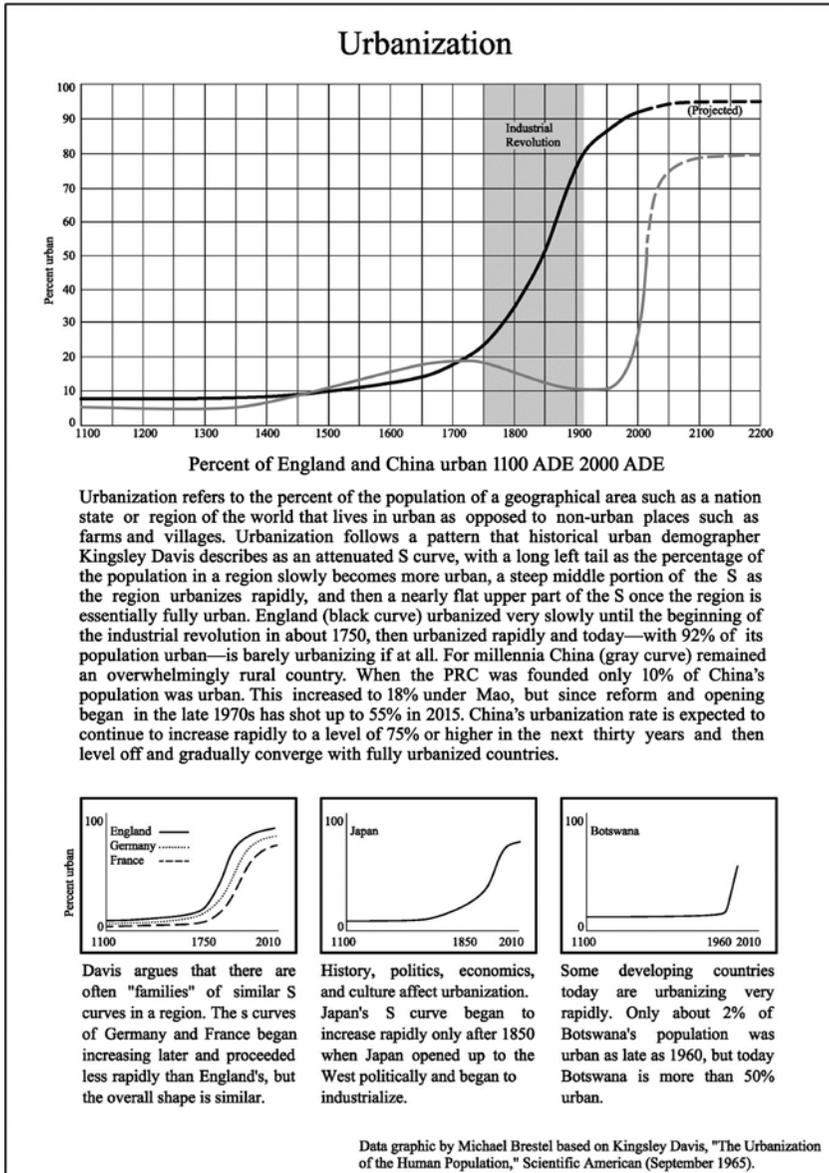
China is a special case. The long bottom part of China’s S curve extends until about 1980 and only then begins to rise rapidly. The S curves for a few very poor African countries still have only the bottom part of the S because they have not yet begun to urbanize rapidly.

The developing countries of Asia, South America, and Africa already have many large and rapidly growing cities. As the twenty-first century progresses, it appears likely the human population will increasingly live in “megacities” of 10 million inhabitants and more, often flowing together in vast urban conurbations called mega-urban regions, megalopolis, or our preferred term “large city clusters” (LCCs) described in detail in Chapter 7 on large city clusters, megalopolises, and China’s evolving city system.

Davis concludes that there will be an end to urbanization—but not necessarily to absolute population growth, the physical size of cities or the absolute number of people cities contain. He found that the rural population in developing countries today often continues to grow as these countries urbanize, unlike European cities in the nineteenth century where industrialization led to depopulation of rural areas. This occurred in China after reform and opening up, but is now changing direction and the rural population is declining as China continues to urbanize.

Research and scholarly debate continues on the nature and causes of world urbanization. The majority view, based on research and projections by the Population Division of the United Nations, holds that total world population will increase from about 7 billion today to about 9 billion in 2050, and that urbanization will continue virtually everywhere but especially in the developing world (UN, 2014).

The unique course of China’s economic and social development has created a fundamental debate about whether China is urbanizing too slowly and whether its present urbanization level is appropriate given its current level of development. Most Western scholars believe that China’s



Source: Drawn by Michael Brestel based on Kingsley Davis' "The Urbanization of the Human Population" *Scientific American* (September, 1965). Chinese urbanization curve added by Lijuan Wang.

Figure 1.3 Kingsley Davis urbanization S curve

urbanization level is too low (Chan, 1992, 1994; Wang, X., 2002; Zhang, 2004; Perkins, 2013), but a few consider China as over-urbanized (Kirkby, 1985; Ran and Berry, 1989; Chang and Brada, 2006; Chen et al., 2013). This debate is complicated by China's hukou system and 220 million members of China's floating population who live and work somewhere other than their official residential address and are not true urban citizens and by the enormous differences in the level of development and urbanization in different parts of China. Aggregate data at the national, provincial, and even sub-provincial level is useful, but can also mask complexity. What is an appropriate level of urbanization is a normative question about which reasonable people can disagree. There is no "scientific" answer to this question.

Scholars who consider China to be under-urbanized base their argument on the fact that industrialization and urbanization are closely correlated and China's urbanization level is lower than it should be compared with other countries in the world (Wang, X., 2002). They rely on a methodology developed by economists Hollis Chenery and Moise Syrquin that compares urbanization and industrialization rates. A number of scholars have revisited this question using more recent data provided by the World Bank on countries' development and urbanization levels and refinements on the Chenery–Syrquin methodology (Zhao and Zhang, 2009).

Other scholars argue that China's urbanization rate is appropriate given its level of economic development (Li and Chen, 2001; Fan and Tian, 2003; Li, 2004; Ge et al., 2003; Zhao and Zhang, 2009). One argument is that the gap between China's urbanization level and industrialization level exists because industry—including small and medium-sized industries in towns and villages—is flourishing, that is, China is "over industrialized", not "under-urbanized" (Fan and Tian, 2003). Another argument is that measures of development that rely on per capita Gross Domestic Product (GDP) or income don't accurately reflect economic well-being where goods and services are less expensive. Comparing per capita Gross National Income (GNI) based on Purchasing Power Parity (PPP) and considering the extreme unbalance of China's regional development China's urbanization rate is arguably more appropriate (Ge et al., 2003; Li, 2004; Zhang and Zhao, 2003; Zhao and Zhang, 2009).

Chapter 9 reviews and presents the results of our own analysis of the most recent available data. We conclude that China's urbanization level is appropriate or only slightly lower than it should be.

Changing Motivations for Urbanization

Since the founding of the PRC, the national government in China has played a large role in urbanization and its motivations have changed dramatically over time. Both deliberate changes in policy and change as a result of decentralization and marketization have impacted the nature of China's urbanization since 1949.

American economist Allyn Abbott Young pioneered theory about the motivations for and mechanisms of urbanization. Young (1928) argued that, "the urbanization level is determined by the level of social division of labor, which is in turn determined by the magnitude of market; the realization of returns to scale relies on the division of labor." Given that the division of labor happens earlier in the industrial sector than in the agricultural sector, a large segment of the agricultural workforce migrates to cities as a result of market mechanisms. This accelerates the urbanization process.

Economists Masahisa Fujita and Paul Krugman build on Allyn's theory. They argue that urban economies provide returns to scale, which provide constant fuel for the urbanization process (Fujita and Krugman, 1995).

Weber and Gerth (1951) adopted a cultural perspective on development in China. They argue that Confucianism has hampered the development of China's capitalism and urbanization by promoting ruralism. In their view, China continued to be a rural society through the mid-twentieth century, and all social relations were based on rural connections.

Using the new classical urbanization model, Yang and Rice (1994) relate scale to the division of labor through the concept of transaction efficiency. They proposed that evolution of the division of labor, market expansion, and increases in transaction efficiency are the three pillars of urbanization development.

Yang and Zhang later developed the argument that external economic efficiency, rather than the internal economy of scale drives urbanization (Yang and Zhang, 2000). They suggested that, "the boundary of resources" and "surplus population" are the main factors restricting China's urbanization. The new classical urbanization model implies two development strategies for solving these problems: outward expansion or internal upgrading.

Outward expansion seeks to expand resources and markets through expansion of economic activities beyond a country itself through trade. In new classical economic theory internal upgrading seeks to promote development by knowledge accumulation and institutional innovation. This involves constant evolution of the division of labor within the system as well as overcoming resource boundaries. Under the new

division of labor, the surplus population will be transformed into “utility population.”

Although providing useful theoretical explanations for urbanization that can be adapted to understand China, Western classical theory fails to recognize and incorporate special features of China. China has a unique political and economic trajectory. Before 1978, the planned economy, withdrawal from the global economy, industrial location for defense purposes, and massive political struggles make much of Western theory about the division of labor, knowledge accumulation, expanding resource boundaries, and transaction efficiency irrelevant or require radical adaptation to Chinese circumstances. While Western theory is more relevant to understanding China's development and urbanization after 1978, the great changes that have taken place in economic, social, and institutional aspects since 1978 as China was experiencing transition towards a market economy and today's unique brand of market socialism require developing a new institutional economic theory with Chinese characteristics.

For a long time after the founding of the PRC, scientific research activities were suspended, and research on urbanization was stopped. Despite persisting doubts about the Soviet model, a highly centralized planned economy was established in China and development policy mainly bolstered the planned economy. Thereafter, and particularly during the Cultural Revolution, research and scholarly debate about the nature of Chinese urbanization and theorizing about alternative development and urbanization strategies were non-existent.

In 1979, after the Cultural Revolution, Youren Wu, a professor at Nanjing University, published an article titled “On the Topic of Urbanization in Socialist China” (Wu and Xia, 1979). This article is considered the first work on the history of urbanization research in New China (He, 2006).

The 1980s saw a return of economic growth and urbanization—particularly in small-sized cities. Academic research and theorizing about Chinese urbanization returned. Initially Chinese scholars focused on two questions: what propelled urbanization development and how the pulling force of jobs and higher wages was attracting urban migrants and impacting urbanization.

With industrial development in rural areas and urban expansion proceeding simultaneously, most Chinese scholars believed two types of urbanization were occurring in China (Shen, 2002): top-down urbanization and bottom-up urbanization. Top-down urbanization involves the central government investing in infrastructure, economic development zones, and urban construction—including the construction of new cities—according to plans. The motivation for this type of urbanization comes from industrialization initiated by the central government. Top-down

urbanization was the dominant form of urbanization from 1949 to 1978 (Chan, 1992, 1994; Wang, X., 2002; Zhang, 2004), and is still important today (Dai et al., 2014).

Bottom-up urbanization, wherein rural collectives, firms, or individuals were the investors started in the late 1970s and was identifiable as a distinct form of urbanization with Chinese characteristics in the early 1980s (Gu, 1998; Ning, 1998; Cui and Ma, 1999; Zhu, 1999; Friedmann, 2005). Rural urbanization is realized through rural industrialization, and was motivated by reform of the rural economic system (Feng, 2004).

The motivations for urbanization become more complex with the deepening of the transition of China's economic system. As more studies are conducted over the motivation mechanism of urbanization, attention has shifted from internal factors to sources of capital. Yuemin Ning, a professor at East China Normal University, argues that the motivation mechanisms for urbanization in China have become diversified since the 1990s (Ning, 1998). On the one hand, remnants of the planned economy system still exists; on the other hand, as the market economy system is being constantly extended, diversified actors are involved in the economic and urbanization development, including government (fiscal decentralization, delegation of decision-making rights, loosening of institutional constraints), enterprises (state-owned and foreign-invested), and individuals (private sector, rural sector, and economic development zones). This body of scholarship describes and seeks to explain the diverse motivations that have come into play to replace the single- or dual-sector motivations of the past. The centralized urbanization model has now given way to a decentralized model of rural enterprise development (Ning, 1998).

In the context of global economic integration, foreign capital has had a great impact on the landscape, process, and mechanism of China's urbanization. Foreign capital constituted the third force besides the pulling force of urban development and the pushing force of rural development (Xue and Yang, 1997). Since China's rapid urbanization has occurred at the same time as greatly increased globalization of the world economy and an influx of a large amount of Foreign Direct Investment (FDI) in China an important question is to what extent have these exogenous forces driven Chinese urbanization. Sassen (1998, 2001) points out that globalization and informationalization are the main drivers of urbanization in the twenty-first century. Many Chinese and Western scholars uncritically assume this to be true. On the contrary, American urban planning professor John Friedmann takes the position in his pioneering book *China's Urban Transition* (Friedmann, 2005) that China's urbanization is predominantly fueled by endogenous, bottom-up, grassroots urbanization rather than the massive inflow of global capital as generally believed.

Liya Wu (2005) argues that the impact of globalization on China's urbanization consists of three parts: the construction of a production factor market, the industrial foundation created by both globalization and localization, and the boost international trade provides.

An anthology edited by professor Fulong Wu, Bartlett Professor of Planning at the Bartlett School of Planning, University College London titled *Globalization and the Chinese City* (Wu, 2006) provides the most scholarly and balanced review of this debate. Wu clarifies the close connections between China's urbanization and globalization. In the anthology and in a subsequent article co-authored with Laurence Ma, Wu concludes that spatial production, urban consumption, and the circulation of capital as well as population and technology have indeed had a considerable impact on China's urbanization (Ma and Wu, 2007). In Chapter 5 on globalization and urbanization we discuss these debates in detail and describe the conclusions we have reached based on our macro-level analysis and fieldwork.

China's Urbanization Path

There has been an ongoing debate about the relative importance of promoting small, medium, and large-sized cities in China and national and provincial policy with respect to this issue has changed from time to time since the founding of the PRC. Before 1978 most of the net growth of urban areas in China occurred because of rural migration to small and medium-sized cities, but not large cities (He, 2006). Since then China's urbanization is primarily a result of the movement of the rural population to towns and small and medium-sized cities (He, 2006). After reform and opening up, prioritizing development of small-sized cities and towns became scholars' and policymakers' predominant view of the best path for China's urbanization.

Based on his research on China's modernization, Princeton University sociologist Gilbert Rozman (1989) concluded that a network in China favorable for the development of small-sized cities had been formed after the implementation of urban development policies in the 1960s to 1970s. To the contrary, Nanjing University professor Gonghao Cui argues that prioritizing the development of small-sized cities fails to capitalize on scale effects (Cui, 1989). Arguably because of specialization and agglomeration economies, large cities have greater economies of scale than small-sized cities and the development of large cities is necessary for modernization, industrialization, and the development of tertiary industry. Cui draws on comparative research to conclude that the growth of large cities as development proceeds is an objective law. Western economists at the University

of California, Berkeley (Quigley, 2009) and Brown University (Au and Henderson, 2006) reach similar conclusions.

Some academics have taken a middle ground arguing that development of medium-sized cities should be China's top priority (Wu and Xia, 1979; Liu, 1988; Shen, 1999; Jin et al., 2014). We explore these issues in Chapter 7 on "China's evolving city system and large city clusters" and Chapter 8 on "Towns and rural urbanization."

The idea of exploiting the scale effect of urbanization also has critics and some scholars question whether or not the entire debate about city size makes sense. Peking University professor Yixing Zhou has criticized the unreasonable use of scale as the criterion to determine whether a city should be developed or restrained (Zhou and Yu, 1988). He (2006) contended that no other country besides China has resorted to a certain model of urbanization. Rather, market forces determine the size and distribution of cities. In He's view, defining the optimum size of cities in China is in the same vein as favoring a planned economy system, and hinders reflection on what factors may make a city of one size or another preferable in a given place and time or utilizing the market mechanism to regulate the growth of cities (He, 2006). The urban system is composed of cities of varying sizes, and no uniform standard has been determined as to the optimal city size. The development of cities of any size may be reasonable depending on circumstances (Cui, 1989; Zhang, 2010).

Rather than debate the question of city size and a unified urbanization policy, a number of Chinese scholars have proposed regional urbanization as the best path for China's urbanization (Wang, 1988; Cui, 1989; Liu et al., 2003; Ma, 2005; Han, 2015). They argue that cities of all sizes are important and all should be considered and managed in a regional way. In a given region, all cities have connections and they influence each other.

On the legislative level, China's 2008 Town and Country Planning Act eliminates the stated policy of the previous (1988) Act of "strictly controlling the size of large cities and developing medium and small-sized cities." However other Chinese government policy documents—including the 2014 National New-style urbanization plan retain the policy of strictly controlling megacities with populations of more than 5 million and eliminate restrictions to migrants gaining hukou immediately when they migrate to small cities and towns.

In the debate over China's urbanization policy, we believe that the key is to enhance institutions to facilitate and humanize population migration and settlement. Urbanization is a social phenomenon that goes hand in hand with social and economic progress and structural transition. Urbanization has close connections with institutional arrangements and their evolution. So, policymaking and deep institution reform are key

points for China's healthy urbanization in the near future, as described in the concluding chapter.

Research on Transitions in China's Urbanization

In the first two decades after the beginning of reform and opening up, Western scholars uniformly argued that China's urbanization has distinct socialist features that differentiate China's urbanization pattern from capitalist urbanization in the West (Kirkby, 1985; Chan, 1996; Fan, 1995; Chan and Zhang, 1999; Wei, 2000). More recent studies repeat this view for the early period and state that the legacy of the planned economy continues to influence more recent urbanization (Ma, 2002; Wu, 2002, 2015; Friedmann, 2005; Wu and Gaubatz, 2012; Zhang, F., 2014). Studies generally conclude that China's national policies continue to have a profound impact on urbanization processes.

Urbanization of a large and rapidly changing country such as China is complex and there is a rich literature seeking to explain China's unique urbanization path. Western scholars have attributed the historically low level of urbanization in China to a number of causes. Dwight H. Perkins, a professor at Harvard's Kennedy School of government and expert on the history of China's economic development, concluded that throughout history China's low agricultural productivity hindered the urbanization process (Perkins, 2013). William Kirkby a professor of China Studies at the Harvard Business School argues that China's emphasis on industrialization, especially on heavy industry, limited urbanization (Kirkby, 1985). Geographer Terry Cannon, currently a research fellow at the Institute for Development Studies in Brighton, UK, and Alan Jenkins a professor emeritus of geography at Oxford Brookes University attribute the low level of China's urbanization during the 1960s and 1970s primarily to China's heavy investment in defense-related industry in geographically remote areas of China under the so-called "third line" policy (Cannon and Jenkins, 1990) discussed in Chapter 4 on regional policies and regional urbanization.

Two leading experts on China's hukou system, University of Washington Geography professor Kam Wing Chan (Chan, 2013) and Fei-Ling Wang, a professor of International Affairs at Georgia Institute of Technology (Wang, 2005), consider hukou the principal drag on China's urbanization. Many other Chinese and Western scholars agree.

Chinese scholars have contributed additional possible explanations. Zhao, Bao and Hou (1998) argue that reform of China's land use system stimulated China's urban-rural development. Zhu (2002) feels that obscurely defined property rights have played an important role in slowing China's urbanization.

Some of the most recent literature as this book goes to press in 2015 provide an updated account of the status of urbanization in China and emphasize recent change and prospects for the future.

University of Michigan sociology professor Xuefei Ren (2013) summarizes recent developments in Chinese governance and migration and concludes that the urban–rural dichotomy that was constructed under socialism is rapidly disappearing and Chinese cities have become strategic sites for reassembling citizenship rights for both urban residents and rural migrants.

China at present is in the midst of two transitions. These are the transition from a rural agricultural society to an urban industrial society and from a planned economy towards a market socialist economy. A number of scholars describe China's unique form of urbanization in the context of these great economic and social transitions (Wu, 1995; Pannell, 2002; Wu, 2002; Friedmann, 2005; Wu and Gu, 2005; Wu and Gaubatz, 2012). Parts of some recent anthologies such as *Restructuring The Chinese City: Changing Society, Economy and Space* edited by Laurence Ma and Fulong Wu (2004) help illuminate aspects of Chinese urbanization. You-Tian Hsing, a professor of Geography at the University of California at Berkeley who studies changing land and property rights in China considers Chinese urbanization is the urbanization of the local state and that local government leaders are now pursuing urban modernity, rather than industrial modernity (Hsing, 2012: 6). Yumin Ye and Richard LeGates (2013) in their study of coordinated urban–rural development in Chengdu, the capital of Sichuan province in the west of China, describe Chengdu's ambitious pilot projects to regularize use rights in rural land, modernize agriculture, and do physical and social planning on a metropolitan basis. A new book by Fulong Wu, *Planning for Growth: Urban and Regional Planning in China* (Wu, 2015) argues that planning is not necessarily an “enemy of growth”, but contributes much in Chinese urbanization and economic development.

Yasheng Huang (2008) argues that China is a balance of two Chinas—the entrepreneurial market-driven China and the state-led urban China. Fan Zhang (2014), a professor at Peking University, analyzes the relationship between urbanization and economic growth driven by the global economy and argues that urbanization is an engine of domestic demand for future economic growth of China. He argues that Chinese urbanization would speed up if existing institutional obstacles are removed.

Given the complexity of China's urban development, much of the existing scholarly literature in journal articles and anthologies provides fragmented descriptions of the history of China's urbanization, case studies, or detailed analysis of specific issues, but does not attempt systematic elaboration. Some overall descriptions of China's urbanization process

have been published in recent years that describe the relationship between social and cultural evolution of Chinese cities and economic development and urban growth. In addition to providing up-to-date factual descriptions of aspects of China's urbanization Weiping Wu and Piper Gaubatz *The Chinese City* (2012), Xuefei Ren's *Urban China* (2013), and John Friedman's *China's Urban Transition* (2005) provide integrated syntheses of Chinese urbanization.

OUR RESEARCH METHODOLOGY

Research Background

Until 1978 China's national government dominated development and urbanization through a highly centralized planned economy. Today decision-making in China is much more decentralized to the provincial and sub-provincial level, much ownership is private or takes the form of public-private partnerships, and decisions are increasingly subject to market forces. But, in addition to the legacy from the planned economy, Chinese development and urbanization are still heavily influenced by government intervention and regulation. The Chinese government guides and places constraints on urbanization through national level infrastructure and economic zone decisions and a variety of laws, regulations, and policies implemented by ministries and bureaus at different levels (Gu and Gu, 2006).

Between 1949 and 1978 China's urbanization was a product of the planned economy. The central government controlled urban household registration (hukou), employment, and food supply. Major project-specific decisions were made in Beijing for all of China, and the national government provided direct funding for construction and virtually all enterprises were state-owned enterprises (SOEs).

The Third Plenary Session of the 11th Central Committee of the Chinese Communist Party held in 1978 marked the shift of focus from class struggle to the development of productivity, and explicitly declared China's main target to be economic construction. The long and hard reform towards a market economy began soon afterwards. In the late 1970s and early 1980s China's urbanization was still greatly influenced by national policies despite deep structural changes to institutions and public policies taking place. The impact of the changes on urbanization became much clearer after 1984. Ma and Wu (2007) conclude that multiple transitions occurred simultaneously, the most important of which were from a state-controlled economy to a state-regulated market economy,

from top-down distribution of resources to resources more controlled by local governments, from national industrialization to industrialization largely driven by global market forces, from unprofitable land use to more profitable land use, and from free housing supplied by working units to commodity housing provided by private markets.

China's unique urbanization and transition are shaped both by its internal institutional structure and its place in the international environment. As institutions were adjusted, the changes impacted urbanization. The most important of these institutional changes included changes to the household registration system governing rural population migration, the fiscal and taxation system governing the distribution of finances to different levels of government, spatial policy governing regional development, urban development policy associated with the evolution of regional urban space structure, and changes in administrative divisions influencing the distribution of government power.

The changes in China's position in a rapidly globalizing international environment led to the emergence of a new economic order and international division of labor during the process of economic globalization. China made good use of opportunities and industrial restructuring mobilized its regional development potential. A useful metaphor is to envisage China's regional development like a ladder. Policy decisions prioritize more advanced development at the top rungs of a development ladder in the Eastern coastal provinces descending to more basic development moving west through central and western China. The influx of Foreign Direct Investment (FDI)—initially mainly from Hong Kong, and Macao—and the deepening of China's involvement in international trade altered the regional landscape of China's urbanization. International competition in the new era provided much of the impetus for China's urbanization and transition. As a consequence, regional urbanization patterns changed (discussed in Chapter 4) and large-scale regional population flows occurred (discussed in Chapter 6).

In addition to changes in institutions, laws, policy and planning, China has gone through tremendous economic and social changes during the 30-plus years of reform and opening up. The influence on China's urbanization by rational decision-making by individuals—or as we argue throughout the book more often by households—and market forces have greatly increased. Empirical studies have shown that the barriers created by the household registration (*hukou*) system and a problematic labor market partially account for some of the features of China's urbanization since reform and opening up, particularly in the early period. In addition to analyzing the macro-level structural factors that impact Chinese urbanization, the present study also advances the importance of individual and

household choice. While the importance of choice is fundamental in many studies of behavior in the West it is less frequently included in studies of China. This is particularly relevant to the fundamental issues of population migration and regional disparities in development.

Data Sources and Levels of Analysis

In addition to our own field research this book relies on many different data sources and different levels of analysis at the national, three great regions, provincial, municipal, and county levels.

China is a large and diverse country and scholarship on the history of Chinese urbanization emphasizes regional differences that have existed for millennia (Skinner, 1977). Contemporary scholarship emphasize that in addition to an understanding of China's overall urbanization processes at the national level since 1978, understanding the large differences in regional urbanization is also essential (Ma, 2002; Zhang, 2004; Friedmann, 2005).

Two ways of dividing China's territory for sub-national analysis are useful: by provinces and according to the three great regions of eastern, central, and western China. The "three great regions" concept was first introduced in 1986 in China's seventh Five-Year Plan. Subsequent research has often classified China into the three great regions in order to illustrate differences within China (Fan, 1995, 2005; Chan, 2008; Fan et al., 2008).

China has 22 provinces, 5 autonomous regions, and 4 municipalities directly under the central government at the same rank as provinces, excluding Taiwan and the Special Administrative Regions (SARs) of Hong Kong and Macau. Figure 1.4 shows China's provinces and the three great regions. Western, central, and eastern China have 10, 9, and 12 provincial level districts, respectively. In order to avoid the cumbersome re-statement of these different types of administrative divisions we will refer to the 31 provinces, autonomous regions, and municipalities directly under the central government, excluding Taiwan, Hong Kong, and Macau as provinces or provincial level units for the purpose of the book unless specially noted.

Generally, unless otherwise noted, we limit our analysis to the People's Republic of China (PRC) excluding Taiwan, Hong Kong, and Macau. For consistency we include data on Hainan province (which was a part of Guangdong province until 1988 when it became separate) and Chongqing municipality (which was established in 1997) into Guangdong and Sichuan provinces respectively for data consistency in longitudinal analyses.

Accurate data are key to the research of China's urbanization. The Chinese government now devotes a great deal of time and attention to collecting data on urbanization, classifying it, and issuing reports.



Note: The bottom left is the outline of China's boundary. Given space limits, the other figures showing China's great regions and provinces will only include the mainland of China.

Source: Drawn by Li Zhang.

Figure 1.4 China's three great regions

Nonetheless in China itself and to an even greater extent in the West, the nature of Chinese urbanization, is widely misunderstood.

Chinese urbanization is a complex moving target. While every Chinese citizen has a defined resident status (*hukou*) and is officially classified as an "urban" or "rural" resident and administrative boundaries are fixed and there is a large amount of data for different geographical areas in China, reality continues to outpace efforts to capture and describe it. Throughout this book we attempt to provide an accurate and up-to-date description of how different measures of urbanization were derived at different times, how they have been misunderstood, and what they really mean.

A key data source we use throughout this book is Chinese census data from the 1953, 1964, 1982, 1990, 2000, and 2010 population censuses

and China's 1987, 1995, and 2005 1 percent population sample surveys. Other important data sources we use include China's annual *Statistical Yearbooks*, the *Urban Statistical Yearbook of China*, *Population and Employment Statistical Yearbooks*, *China Township Statistics* and annual reports and statistical data from the national ministries most directly concerned with land and resources, family planning, migration, and other activities that impact urbanization.

For provincial and sub-provincial level analysis since 2000 we rely primarily on City and County Statistical Yearbooks. The Chinese government began publishing provincial-level data on urbanization based on population surveys only after 2000. Before 2000, official sources of reliable continuous and comparable provincial data on urbanization do not exist. Yixing Zhou has reconstructed early data (Zhou and Tian, 2006) and we use his data in this book.

Where data were unavailable from official data sources we have drawn from media reports that we deem reliable and many reputable scholarly studies (in Chinese and English) reported in books, journal articles, conference papers, and unpublished sources. A major goal of this book is to make available to Western readers a great body of Chinese scholarship currently unavailable in English.

Data from different sources in China frequently differ for many reasons. Older data from the initial period after reform and opening is often less reliable than more recent data because institutions were less well equipped to collect it and they tended to present data in ways that were most favorable to them. High quality recent data often differs because of legitimate differences in definitions and methodology. Throughout we have attempted to use the most appropriate data source for Chinese data based on Professors Zhang and Zhao's longer professional experience. We provide caveats about the validity and reliability of different sources.

In order to place the Chinese experience in context we rely primarily on data from the two best international sources. The United Nations *World Urbanization Prospects: The 2014 Revision* (UN, 2014), and data from the Population Division of the United Nations contain much useful data on world urbanization that helps put China's urbanization in global perspective. The UN makes available more than fifty years of longitudinal data, current cross-sectional data, and a variety of projections. The World Bank's *World Development Indicators* (World Bank, 2014b) is another reliable source of longitudinal and cross-sectional data on world urbanization that we use throughout the book.

Aggregate population statistics describe what is actually happening only in the most general terms. People do not fall neatly into census categories that try to describe them. Two hundred and twenty million

members of China's floating population (excluding the population relocated between their urban districts) do not live at their residential address for some or all of the time (NBSC-census, 2012). Many of these people are also members of China's amphibious population who move from one place to another depending on the time of year, life cycle, state of the economy, or for other reasons. Some people live in their village of origin during planting and harvest time, the New Year festival, or to take care of family members, but work in a town or city within the province or another province the rest of the year. Young people often move where there are abundant jobs and relatively high salaries even for people with limited education. Most of these jobs are in coastal China, provincial capitals, or large cities, but increasingly as we describe in Chapter 4 on regional policies and regional urbanization and Chapter 8 on towns, villages, and rural urbanization they are also in the core areas of small and medium-sized cities, towns, and the peri-urban areas surrounding them. More and more migrants, especially elders, are now returning home to rural areas to retire, work in new industries, marry, or start a business. When the economy is strong people tend to migrate to job centers and when China's economy weakens they may fall back on agricultural work in their rural areas of origin.

The rigid hukou classification of China's population between "urban" and "rural" no longer makes sense as many—perhaps the majority—of all employed people work in multiple jobs in both the rural and urban economy.

Administrative boundaries in China are constantly changed to try to keep pace with urbanization. This makes it extremely difficult to compare longitudinal data for administrative divisions over time. As a result of this great complexity, simple population statistics on the percentage of the population that is "urban" or "rural" don't capture reality. The more they are aggregated, the more deceptive they are. Urbanization varies from region to region and within regions.

Therefore, the official data is not enough to study China's urbanization. Data from field surveys in rural regions conducted by our research team in recent years provide a more nuanced view of China's urbanization. The integration of macro-level analysis based on quantitative "big data" and micro-level data on cities, counties, towns and individual behavior based on our surveys and interviews work together to provide the best possible explanation of urbanization. Following is an introduction to our field research. In the following chapters we refer frequently to these data by noting the site and time surveys were conducted.

Supplementing Macro-level Data With Field Data

This book is based on multiple quantitative and qualitative social science research methods, including the results of literature searches of Chinese and English books, articles, conference papers and other materials, secondary data analysis of data from the most reputable international and Chinese sources described above, analysis of difficult-to-find and unpublished local data, statistical and spatial modeling using SPSS and ArcGIS, observation, survey research, and interviews.

The core of our field research is studies in five areas of eastern, central, and western China conducted by Tongji University teams between 2010 and 2015. All of the investigations involved a combination of survey research, interviews, observation, and review of local secondary data, including unpublished local data. A description of the five field research projects follows. For the rest of the book we refer to this research using the location and year in which it was conducted. Detailed information on the fieldwork is in the Appendix at the end of the book.

Fifty-five towns in Hubei province, May 2010

The first field investigation was a study of Hubei's urbanization strategy conducted for the Hubei Provincial Government in May 2010. This research sheds light on the rationale for the urbanization policy of one of central China's most important provinces and empirical evidence of its impact on residents.

Yuelai and Zhengyu towns, Haimen city, Jiangsu province, March 2013

The second field investigation was conducted in Haimen city in Jiangsu province. The focus of this research was on the impact of industrialization on nearby rural areas.

Seventeen towns in Huaiyuan county, Anhui province, August 2013

Another field investigation was conducted in Huaiyuan county, Anhui province in August, 2013. Anhui is a relatively poor province in central China. Nearly one quarter of Huaiyuan county's population with local hukou have migrated. The main focus of this research was to understand the migrants' motivations for migrating.

Gaoming district, Foshan city, Guangdong province, March 2014

The fourth research site was in a district within Foshan city in Guangdong province in southeastern China. The main purpose of this research was to understand the impact of development on urban and rural areas near rapidly developing urban areas.

Quzhou city and nearby towns and villages

Between March 13 and 29 a Tongji research team investigated 27 towns and 5 urban streets in Quzhou city—a prefecture-level city in southwestern Zhejiang province. In the first week the team visited each town and street and then selected 14 towns for in-depth investigations. Team members interviewed government leaders of the town and respected people in some selected villages. Four hundred and sixty-seven questionnaires were completed in this fieldwork, covering 14 selected towns. Between April 17 and 22, 2015 an international team including Professors Li Zhang, Min Zhao, Richard LeGates, Lee Inhee and Yoo Jaewoo from Busan University in South Korea, Yuka Himeno from Oita University in Japan and graduate students from Tongji, Busan and Oita Universities visited Quzhou. The team studied the relationship between villages, towns, peri-urban areas and urban development to gain a deeper understanding of Chinese urbanization by communicating with professors from other countries (see Figure 1.5).

In addition to the above field surveys, Tongji research teams investigated many additional cities and rural areas. Professors Min Zhao and Li Zhang obtained additional information from consulting projects over the past decade. Richard LeGates did field research in Chengdu in southwestern China during 2011 and 2012.



Source: Photos by Li Zhang.

Figure 1.5 Tongji team research methods

BOOK CONTENTS

This book is divided into ten chapters.

This first chapter is this introduction providing background on China and Chinese urbanization, a discussion of the most important topics and debates about urbanization, urban planning and policy in China, background on our research, background on the book's data sources and methodology, a description of our fieldwork in China, and an overview of the book contents.

The second chapter reviews the history of hukou and describes the dramatic changes in hukou that have occurred during successive waves of hukou reform. Chapter 2 argues that changes in hukou have not been able to keep pace with the rapid socio-economic development of China. Our analysis emphasizes the social structure hukou has helped create. We argue that even if hukou is entirely abolished its effects will continue to affect China, including Chinese urbanization for many years.

The third chapter reviews China's system of governance and administration at different levels and elaborates on the evolution of Chinese taxation, land use rights and other policies that affect urbanization. Administrative restructures have provided an essential institutional basis for changes in Chinese urbanization and economic and social development that has gone along with the rapid industrialization and urbanization processes. These changes have also affected statistics on China's urbanization level, including regional urbanization levels.

The fourth chapter reviews the evolution of regional urbanization policies and describes the characteristics of regional urbanization. We employ the Theil index to measure the change of regional urbanization disparities. Our research concludes that there is a close relationship between regional economic development and urbanization, but that market inertia often makes it impossible for policy transitions to keep pace, and sometimes policy transition does not occur at all.

The fifth chapter analyzes globalization and its influence on regional urbanization and regional migration. It describes growth of FDI and economic zones over time and the relationship between global and domestic capital flows and urbanization in different regions of China. While FDI and China's entry into the global economic system have had a large impact on urbanization, our analysis differs from most others. We emphasize different origins of FDI—mainly from Hong Kong, Macau, Taiwan and other countries of “Greater China” initially and only later from other parts of the world. Our quantitative study shows that the dependency theory does not explain China's fast urbanization and economic growth. Our analysis also describes the recent slowdown in FDI growth of and

the growing importance of domestic capital and consumption and the implications of this trend for urbanization.

Chapter 6 established a framework to explain Chinese population flows from origins to destinations based both on macro-level institutional and economic forces and household choices. Using nationwide population census data and our own sample surveys we explore migration in different regions. Chapter 6 argues that economic considerations have become more important than social considerations as the main reason formal migrants migrate. Chapter 6 also discusses the new trends of migration redistribution and reverse migration.

Chapter 7 explores large city clusters, megalopolises, and China's evolving city system. While clearly the Beijing–Tianjin and Yangtze and Pearl River Delta regions are notable as the locations of the most advanced urbanization in China and make a disproportionate contribution to China's economy, we depart from most analyses that focus on megacities and megaregions to the exclusion of small, medium, and large-sized cities, towns, villages and rural urbanization. We depict China's urban system as a network of different-sized urban nodes connected by a variety of paths in the space of flows. We argue that large city clusters (LCCs) are already the main core of Chinese urbanization and will likely be even more important in the future. We review processes shaping Chinese urban systems and measure Chinese LCCs structure by analyzing population, cargo, information, and capital flows among regions, provinces, LCCs, and cities. Chapter 7 concludes that a diamond-shaped LCC system is developing China. We argue that LCCs are becoming the main units for China to strengthen global competition.

The eighth chapter describes the role of towns, villages, and urbanization in China's urbanization process. Towns perform an important function as service centers for rural areas, reservoirs for potential urban migrants, and the connectors of countryside and cities. A significant amount of China's urbanization is endogenous, bottom-up urbanization resulting from town and village residents. Town and village enterprise make a major contribution to China's economy.

The ninth chapter on China's double dual transformation discusses important topics related to Chinese modern urbanization such as the shrinking population dividend, Lewis turning point, and the middle-income trap. It argues that China's population dividend—a vast supply of cheap labor—has passed its peak and the unlimited supply of rural surplus labor is beginning to run out. While the turning point from an unlimited to a limited supply of surplus rural labor to a period of balance or shortage is coming, our macro-level analysis and field research suggests that labor surpluses and shortages in China are very uneven and a large additional pool of rural labor may be released as a result of agricultural modernization.

Many theorists believe that the most critical issue for countries such as China which have achieved a middle-level of development is how to break out of “the middle-income trap.” We argue that a middle level urbanization trap may be coming and the central government should pay attention to it. We use Professor Li Zhang’s double dual track theory, described in Chapter 9, as a framework to explain China’s complex urban transition. The first dual track is state control and market orientation affected by indigenous institutional reforms and exogenous globalization. The second dual track is a change from simply increasing the quantity of cities, factories and urban population to the physical and social quality of cities to produce more livable, humane, equitable, ecological and sustainable cities to better serve the people of China and provide a model for other countries. This second transition is also affected by endogenous institutional reforms and exogenous global competition which are driving China’s industry restructuring.

China’s recent development is unparalleled in the history of world urbanization. China’s cities and towns have absorbed several hundred million surplus rural laborers since the beginning of reform and opening up in 1978. But more than 200 million people who are considered urban in national population statistics are still floating between urban and rural areas. Their living standards and social welfare have lagged behind the urban population recognized as full citizens with rights stemming from hukou where they reside.

If we consider the urban transformation from government planning to market-oriented planning as the first great transition in China’s urbanization, we argue that appropriate urbanization should be the second urban transition in China. Shifting the focus to the quality of urbanization should be the key objective in the coming urbanization process during the next great wave of Chinese urbanization as urban areas are projected to absorb another two hundred million migrants from rural China in the next decades.

In Chapter 10, the concluding chapter, we project that the pressure to increase urbanization levels will become less intense. This upcoming smooth period for Chinese urbanization presents policymakers with a strategic opportunity to re-orient Chinese urbanization from an emphasis on increasing quantity to an emphasis on improving the quality of urbanization. This period provides a window of opportunity during China’s upcoming next urban transition. The conclusion offers some of our policy recommendations based on the findings in the book.

To sum up, one of this book’s contributions is to fully outline the transitional process of Chinese urbanization since reform and opening up at the regional level by reviewing existing materials and analyzing available

statistical data. It analyzes the effects of globalization on urbanization in different regions and the evolution of policies about Chinese urbanization, such as the household registration system, regional policies, and administrative regionalization. The book shows how China's urban processes have evolved from simple state-oriented guidance towards a combination of state-oriented and market-oriented guidance. There is a close relation between urban transformation and regional disparities. Urban transformation is restructuring the time and space arrangement of regional urbanization disparities.

Most importantly, this book divides Chinese urban transformation into two phases. The first transition (from state-oriented to market-oriented) has outstanding achievements, but to solve the social problems it has created requires grasping the opportunity now, during a narrow time window of opportunity, to direct China's next urbanization transition from a concern just with quantity to a concern with the quality of urban areas, economic, social and spatial equity, environmental quality, livability and integrated development of urban and rural China. This book's findings provide a basis for state policymaking to carry forward appropriate urbanization.