

## The complexity of urban transformation in China: New trends in current transitional era

**Yuheng LI**

*Department of Urban Planning and Environment, (KTH) Royal Institute of Technology, SWEDEN*

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### **Abstract:**

The paper aims to analyze the complexity of urban transformation in China in the post-reform era and investigate the trends in the current transitional era. First, the paper reviews the urban transformation in the shift from centrally-planned economy to market economy: decentralization and urban autonomy; urbanization and urban physical development; globalization and urban economic restructuring. Then, the paper reveals the complexity of urban transformation through analyzing decentralization and urban governance; urban expansion and sustainable development; marginalized population and urban social management. The paper argues that the complexity of urban transformation lies in the mismatch between fast urban development and insufficient urban planning and management. In the facet of knowledge economy and enlarged urban-rural inequality, trends of urban transformation in this transitional era are analyzed and predicted: new urban economic restructuring toward knowledge economy; compact urban physical pattern and complementary development involving both urban and rural areas; comprehensive urban welfare that covers both urban citizens and rural immigrants.

**Keywords:** *Urban transformation, reform and opening-up, transitional era, knowledge economy, urban-rural linkages.*

### **Introduction**

China has experienced dramatic economic, social and environmental changes in the post-reform era when the state achieved fast economic growth and urbanization development. Basically, these changes are mainly attributed to the shift from centrally-planned economy to market economy which has triggered substantial reforms both in the political and economic fields. In this process, cities gained great transformation in their economic structure, physical development and social management.

Many studies have been done to analyze urban transformation in China, however most studies just focus on one aspect such as urban land development, urban economy and urban social problem. The fact is that urban transformation is such a complicated process which has seen the economic, social and environmental changes in the cities at the same time. Thus, the understanding of urban transformation should be based on a

comprehensive perspective involving various aspects of urban transformation and the driving forces behind it.

Currently, China has entered a new transitional era which is posing great challenges in terms of knowledge economy and urban-rural integration strategy. What are the challenges for urban development in China? How would cities transform in this new transitional era? Bearing these questions in mind, the paper is to investigate the new trends of urban transformation in the new transitional era of China. Before this investigation, the paper will analyze urban transformation and its complexity in the post-reform era. This analysis is expected to serve as the base for understanding this research topic and bring references for the further investigation.

The second section provides a comprehensive understanding of urban transformation in China in the shift from centrally-planned economy to market economy. In section three, the paper analyzes the complexity of urban transformation in terms of urban governance, environmental problems and urban social management. The fourth section investigates based on the findings in the previous two sections, the trends of urban transformation in China in the current transitional era.

### **Understanding urban transformation in China**

Many studies have focused on the urban transformation issues, however it is still unclear of what urban transformation really means. The concept of “transition” indicates a process of change toward a predetermined and conceived target (Ma, 2002). Nevertheless, it is not suitable to describe the changes in the cities which are induced by various un-artificial forces like globalization and rural-urban migration. The term “transformation” avoids the inevitability of transition and emphasizes the process of changes. In fact, the transformation of cities includes economic change, demographic change, urban physical and environmental change as well as the social change. All these changes were attributed to a cluster of artificial and un-artificial factors including the political reform, economic development and forces from the global context. Thus, the understanding and depiction of urban transformation should be based on the process in which changes of urban economy, society and environment take place due to both the internal and external forces. Urban transformation in China is deeply embedded in the shift from centrally-planned economy to market economy which has induced great changes in various aspects of urban development.

### **Rigid centrally-planned economy**

China has experienced centrally-planned economy and market economy since 1949. These two economic systems were adopted based on both the domestic and international situations. Before the reform and opening-up in 1978, centrally-planned economy was adopted by the state which installed the top-down controls of resources flows and distribution. In this system, use and allocation of resources were strictly determined by the central government. The central government collected revenues from local municipalities and reallocated to the localities in terms of the central plans. Consequently, local development were suppressed and limited due to the shortage of revenue and the influence from the central plans.

In the centrally-planned era, the state gave priority to the city-based heavy industries so as to pursue a quick recovery from years of war. A strategy was adopted to promote capital-intensive heavy industries and a system was established by which government, through distorting the prices of commodities and factors of production, created an environment disfavoring agriculture, farmers and rural areas to extract rural surplus to fuel industrialization (Schultz, 1978). Thus, high percent of national revenue was allocated to the productive sectors which include manufacturing and other industrial productions while less was invested in those so-called non-productive sectors like housing and infrastructure (Table 1).

**Table 1.** State investment in productive and non-productive sectors, 1953-1975 (in percentage)

Period sector	1953-1957	1958-1962	1963-1965	1966-1970	1971-1975
Productive sector	67.0	85.4	79.4.	83.8	82.5
Non-productive sector	33.0	14.6	20.6	16.2	17.5

Source: National Bureau of Statistics of China (1954-1980)

Land use in this era followed the collective land ownership and the transfer of land-use rights between individuals was prohibited. Price mechanism failed to work since land resources were allocated free of charge by the state according to the central planning (Zhang, 1997). Without a land market, urban land in China presented an inefficient structure in the years prior to the reform and opening-up. French and Hamilton (1979) even argued that the absolute state ownership of urban land under strict central-control led to a dramatically different structure of socialist cities.

The favorable policies had contributed to the heavy industrial development which induced large scale rural immigrants to the cities. It is estimated that around 20 million laborers moved into cities in 1959 and 1960 while the number of cities increased from 177 in 1957 to 199 in 1960. The urbanization level also increased greatly from 10.6% in 1949 to 19.7% in 1960 (National Bureau of Statistics, 1983). However, to reduce the urban burdens of providing housing and other public welfares, the state implemented the Household Registration System (*hukou* system) together with the rationing mechanisms during the late 1950s, which made rural-urban migration difficult (Chan, 1995).

Generally, the rigid centrally-planned economy was made since the state had to intentionally concentrate the resources on the leading industries which can help recover its strength. However, the development in the cities was oriented and dominated by the governmental policies which will definitely exert great impact on the urban development in the market economy.

#### **Urban transformation in the post-reform era**

The reform and opening-up since 1978 marked a significant shift from centrally-planned economy to market economy in China. As Ding Xiaoping

who initiated the reform remarked, China's reform is similar to "grouping for stones to cross the river" (*mozhe shitou guohe*). The declared goal of the reforms is simply "socialism with the Chinese characteristics". In this reform, centrally-planned resources distribution gradually shifted to market-oriented allocation (Aram and Wang, 1991). Local governments gained much autonomy for their own development while land use policy and the *hukou* system also gained reform in the market economy. Besides, the open-door policy and globalization brought China not only huge investment but also severe competition. All these changes contributed to the urban transformation in the post-reform era.

### **Decentralization and urban autonomy**

Decentralization of decision-making from the central government to local authorities has been regarded as one of the influential aspects of the reform in China (Carson, 1997). This reform induced a shift of local government in the China's political arena: from passive agent to the central government to an active actor responsible for local prosperity (Zhu, 2000). Local governments became very active in local development after they were granted much autonomy in fiscal operation, financing, investment and enterprises administration.

The most common measure to achieve local development is to have much urban land developed for commercial or residential use due to their high revenue returns. Land-use rights which are state-owned become tradable in the market by private treaty, negotiation and auction since 1988 and land sale and real estate sector became the important component for urban economy. Table 2 shows the total income that was generated from urban land sale and real estate market from 1988 to 1996 in China. Through calculation, it shows that the average annual growth of the revenue that was generated from urban land and real estate markets reached 32% per year since 1988. In the large cities such as Beijing, Shanghai and Tianjin, the sale of land contributed to a significant portion of local revenue. The portions were 32% and 21.2% of total local revenue in Beijing in 1995 and 1996 while the figures came to 29.4% and 19.3% in Shanghai, 21.2% and 9.97% in Tianjin during the same period (Li, 1999).

**Table 2.** Total revenue generated from urban land and real estate (million ¥)

Items Year	Total revenue	Transfer of land	Sale of commodity real estate	Rental income	others	Business taxes and charges
1988	16212.3	785.7	14721.6	88.3	616.7	--
1989	17951.1	746.8	16375.4	109.7	719.2	--
1990	21870.8	871.5	20182.6	226.1	590.6	--
1991	28403.3	1538.1	23786	392.2	2687	2055.5
1992	52855.7	4274.2	42659.4	596.2	5325.9	4144.4
1993	113590.7	8392.8	86371.4	1063.5	17763	9659.2
1994	128818.7	9593.6	101849.5	1728.2	15647.4	9510.3
1995	173166.2	19439.8	125828.2	2579.3	25319	9030.5
1996	196878.5	12033.8	153376.5	2999	28469.3	9277.8

Source: National Bureau of Statistics of China, 1995, 1996 and 1997

Decentralization is also embodied in the change of management of State owned enterprises (SOEs). Before the reform and opening-up, SOEs, as units of the state economy, were operated under central direct with little autonomy. The state determined the allocation and utilization of resources through directives, rather than by price mechanism. The administrative allocation of laborers and redundant industrial construction led to large amount of surplus workers in the SOEs (Steinfeld, 1998 and Blecher, 2002). After the reform, the SOEs began to command their own destiny in the market while the incentives that used to be political gradually became economic. The number of SOEs fell down from above 300000 in 1995 to below 150000 in 2005. Facing the competition and low efficiency, SOEs abandoned the egalitarian wage system and the administration-based job allocation. Particularly, enterprise reforms have revealed the redundant workers and hidden unemployment problems since the mid-1990s. According to China Labor Statistical Yearbook (2003), SOEs have cut off redundant jobs of 4.04 million every year from 1995 to 2002.

### **Urbanization and urban physical development**

China has experienced dramatic economic growth in the post-reform era. From 1978 to 2000, China's GDP increased 7.4 times with an average growth rate of 9.6%. The inherent economic advantages and autonomy have made cities especially those alongside the coastal line flourished in the post-reform era. Besides, as the front of connecting the international market, cities in coastal attracted great amount of foreign invested or joint invested enterprises which provided quite many job opportunities. It was estimated that over 300 million rural peasants moved from countryside to the cities from 1978 to 2004 (Dian, 2004). Basically, such rural immigrants contributed primarily to the urbanization development in China (Table 3).

**Table 3. Urbanization and rural-urban migration in China: 1978-1999**

		1978	1980	1985	1990	1995	1999
Urbanization	Urbanization level (%)	17.92	19.39	23.71	26.41	29.04	30.89
	Growth in person (million)	5.82	12.44	10.77	6.51	8.72	9.51
Natural growth	Growth in person (million)	1.44	1.44	2.47	3.06	2.61	2.89
	Share (%)	24.76	11.59	22.89	47.01	29.86	30.44
Rural-urban migration	Growth in person (million)	4.38	11	8.31	3.45	6.12	6.62
	Share (%)	75.24	88.41	77.11	52.99	70.14	69.56

Source: Zhang and Song (2003)

In the urbanization process, cities expanded a lot to accommodate the population and concentrate the economic activities. As Fan (1999) identified, Chinese cities have over the past several decades experienced dramatic expansion in two simultaneous dimensions. Vertically, existing cities of different size have expanded both in population and land area. Horizontally, a large number of newly designated cities have been added to the existing system of cities. This is actually in line with the recent Chinese urbanization strategy which has shifted to "strictly control the growth of large cities, rationally develop medium-sized cities, and vigorously promote the development of small cities and towns". In the period of 1978-2007, the number of cities of below 200 thousand people increased greatly from 49 to

267 (National Bureau of Statistics of China, 2007). Such urbanization strategy was marked as “urbanization from below” (Ma and Lin, 1993) which calls for the development of small towns and rural industries and encourages peasants to work in rural industries instead of migrating to big cities. Thus, rural industries (mainly from Township and Village Enterprises) boomed as a significant source of income and employment opportunities for villagers. From 1978 to 1994, the Township and Village Enterprises (TVEs) grew greatly when their share of the gross national industrial output increased from 9% to 42% while in the mid-1990s, it was estimated that TVEs employed over one quarter of the rural laborers (125 million population) (Kirkby et al. 2000).

### ***Globalization and urban economic restructuring***

The influence of globalization on China’s urban development has gained strength since China joined the World Trade Organization in the 1990s. With the advantages of huge domestic market, cheap labor force and favorable policy environment, China has attracted large amount of foreign investment and served as the “world factory”. Cities especially those large cities like Beijing, Tianjin, Shanghai and Guangzhou, etc. became the first choice for those foreign investment which take these cities as the base to enter Chinese market. From 1979 to 2000, China’s actual usage of foreign capital came to 506 billion U.S. \$ (National Bureau of Statistics, 2001) of which the majority flowed into four coastal provinces (Guangdong, Jiangsu, Fujian and Shanghai) and most of the rest were in other coastal provinces (Graham and Wada, 2001). Foreign-invested or Sino-foreign jointed enterprises boomed in the manufacturing industries which have enrolled huge amount of laborers. In consequence, urban development became much export-oriented which was also characterized as “exourbanization” (Sit and Yang, 1997) and “externally driven pattern” (Eng, 1997). This export-oriented urban development pattern is also seen in inland cities of which the economy has tight connection with the global market.

In the globalization context, cities in China have experienced intense economic restructuring. According to Lin (2004), urban economic restructuring embeds in the shift of urban function from being production bases to the regional and national centers of services and consumption. The ever increasing household income in cities and villages has generated huge demand for services and consumption activities in cities. Besides, the foreign invested enterprises and those joint corporations have created substantial demand for finance, training, logistics and other business-related services that are mainly supplied by cities. Table 4 shows the economic and employment changes in the six large cities in China from 1990 to 2000. It is clear that tertiary industry has increasingly become the major part in the economic structure in the large cities since the 1990s.

### **The complexity of urban transformation in China**

The above analysis has shown great changes taking place in cities in the shift from centrally-planned economy to market economy. However, these changes were also accompanied with many economic, social and environmental problems that emerged simultaneously, contributing to the complexity of urban transformation in China.

**Table 4. Economic and employment structure in six large cities of China, 1990-2000**

Items	Industries	Year	Beijing	Tianjin	Shanghai	Nanjing	Guangzhou	Xi'an
Economic structure (%)	Primary industry	1990	0.09	0.09	0.04	0.08	0.18	0.12
		2000	0.04	0.04	0.02	0.05	0.04	0.07
	Secondary industry	1990	0.52	0.58	0.64	0.75	0.67	0.43
		2000	0.38	0.49	0.48	0.48	0.44	0.48
	Tertiary industry	1990	0.39	0.33	0.32	0.17	0.15	0.45
		2000	0.58	0.46	0.50	0.46	0.52	0.45
Employment Structure (%)	Primary industry	1990	5.24	6.56	1.48	7.00	11.94	16.44
		2000	0.60	0.50	7.20	0.70	0.70	0.50
	Secondary industry	1990	49.15	57.55	61.27	56.67	42.41	47.16
		2000	35.10	53.40	42.30	48.40	40.80	47.30
	Tertiary industry	1990	45.62	35.89	37.26	36.33	45.65	36.40
		2000	64.30	46.20	50.50	50.90	58.50	52.30

Source: <Discourse Analysis on the Statistical Bulletins of the National Economic and Social Developments> in Beijing, Tianjin, Shanghai, Nanjing, Guangzhou and Xi'an, 1990 and 2000

### Decentralization vs urban governance

Many problems have emerged in the decentralization process though it has diversified Chinese economy. The construction of development zones (industrial parks and high-tech zones) became very popular in various cities of China since local authorities held the dream of attracting investments through these development zones. Besides, the construction of development zones is also serving as the political achievements for the local officials who want to get promoted by the higher governments. To some extent, whether the governor is to be promoted mainly depends on what they did during their office term. A sense of anxiety and urgency among local governors was caused since they are eager to deliver what are desired by the central government (Zhu, 2000). Thus, quite many development zones were built in a short time. By the end of 2003, there were 3837 industrial parks set up by local governments across the country, and the figure further jumped to 6015 by the end of 2006. Nevertheless, major development zones are of large land scale but of low usage efficiency. In 2001, the size of built-up area in the national development zones was 23.8% of the planned size while the ratio in the provincial development zones was only 10.8% (Tang and Zhao, 2002).

Despite the abandonment of central planning and the impacts of market forces in shaping the national and local economies, the power of the state is felt in every facet of China's transformation. The reason is that central government was concerned that local interests may overtake national goals due to the decentralization. Thus, political control over localities is retained as a main instrument for central government being relevant (The World Bank, 1988 and Huang, 1996). All important events have been determined politically by the state, such as the decisions to reform the economy, to favor the core regions, to decentralize fiscal and administrative powers. In local

areas, the invisible and visible “hands” of the state, sometimes wearing gloves to conceal its true identity, are everywhere (Oi and Walder, 1999 and Whiting, 1999). In fact, the state is not only the ultimate policymaker but is also the controller which evaluates and approves major project applications and oversees their implementation. The problem is that some large-scale promising projects at the local level should be firstly reported to the central government for permission. Only when the permission after several times of demonstration comes out can the project start. This process usually takes long time before the final decision was made.

### Urban expansion vs environmental sustainability

Due to the continuous human influx, cities in China are being substantially redeveloped and expanded. From 1998 to 2005, the constructed area of Chinese cities grew from 214 000 km<sup>2</sup> to 325 000 km<sup>2</sup>, an astonishing growth of over 50 percent. Meanwhile, urban problems like congestion and pollution have triggered the longing for a cozy life of much green space, low pollution and convenient traffic system. Thus, many residents moved from downtown to the suburbs which induced great suburbanization in many large cities of China (Table 5).

**Table 5.** Residents increase in downtown and suburbs of cities in China, 1982-1990 (%)

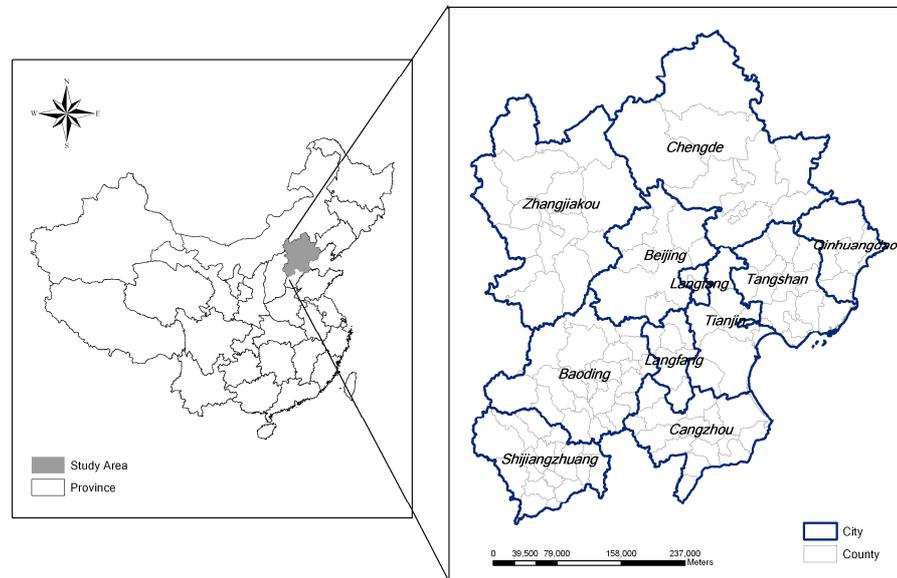
Cities Area	Beijing	Shanghai	Shenyang	Dalian
	1982-1990	1982-1993	1982-1990	1982-1990
Downtown	-3.38	-2.26	-6.73	-11.82
Suburbs	40.46	55.52	91.04	56.00

Source: Zhou and Meng (1998)

This way of urban physical development however, was questioned for its sustainability. Urban and peri-urban activities have taken over much arable land. Take the Beijing-Tianjin-Hebei Metropolitan Region for example (Figure1), urban expansion has induced large amount of arable land decrease. The size of built land in this region has increased from 11917.05 km<sup>2</sup> in the late 1980s to 14442.66 km<sup>2</sup> by 2000 with a growth of 21.2%. Meanwhile, the arable land decreased from 86342.64 km<sup>2</sup> to 84090.16 km<sup>2</sup> in the same period (Liu et al. 2005).

Large scale human influx and resource consumption have exceeded the environmental bearing capacity in many big cities. Take the water usage for example. About half of China’s 668 cities do not have reliable fresh water supply. 83% of these cities are in fresh water shortage and over half of them are located in the coastal regions. In Beijing-Tianjin-Hebei Metropolitan Region for instance, the water resource ownership per capita dropped from 300-400 m<sup>3</sup> in the early 1990s to less than 200 m<sup>3</sup> by 2000 (Feng and Liu, 2006). Beijing and Tianjin have been suffering water shortage for years (Table 6). Particularly in Beijing, the water resource ownership per capita (including those immigrants with other *hukou* registration beside Beijing *hukou*) was less than 300 m<sup>3</sup> in 2002 which was one-eighth of the national level and one-thirtieth of the world level. Meng and Wang (2004) argued that

the 13.67 million residents in Beijing by 2001 had far exceeded its maximum water bearing capacity (2.35million). This problem was mainly attributed to the ever increasing urban population, large-scale urban construction and industrial water usage.



**Figure 1.** Cities in Beijing-Tianjin-Hebei Metropolitan Region

**Table 6.** Water shortage changes in Beijing-Tianjin-Hebei Metropolitan Region ( $10^8 m^3$ )

Year Province	1997	1998	1999	2000	2001	2002	2003
Beijing	-18.01	-2.77	-27.49	-34.06	-19.7	-18.51	-16.6
Tianjin	-19.06	-7.92	-22.91	-19.5	-13.4	-16.29	-9.93

Source: Feng and Liu (2006)

### Marginalized population vs urban social management

The fast economic and social transformation have generated large amount of marginalized population in cities consisting of urban poverty and those “floating population” (rural immigrants who do not hold local cities’ *Hukou* registration). Economic reform has broken the comprehensive social welfare in the planned economy including full-employment system, highly egalitarian income distribution and accessible to basic living materials through rationing system. This reform has seen huge amount of laid-off laborers from the SOEs or collectively owned enterprises since 1995. It was estimated that a total of 27.15 million employees were laid off from the SOEs (Wu and Huang, 2007). They lost their secure employment (usually called “iron rice bowl”), related social welfare and became poor. The other poverty population mainly comes from the landless farmers due to the urban expansion and land requisition. Approximately 2.5 to 3 million farmers are

dispossessed because of the continuous urban expansion and shifting arable land for non-agricultural use (Cao et al. 2008). The fact is that land in China is owned either by the state or the rural collectives while peasants do not own the land but are entitled the right to use it. The governments can legally requisition the land and take back the land-use rights from peasants. The problem is that the requisition is not effectively supervised since the governments are both the owner and administer of the land. These passively-urbanized people who are actually not involved in the urban social security system would finally become the new urban poverty.

Comparing with the laid-off citizens and passively-urbanized peasants, rural immigrants are the type of people who came to cities for employment and would go back to their hometown in the future. Similarly, these people who mainly undertake informal jobs of low salary and intensive workload like security staff, restaurant servers and construction workers can't enjoy the urban social welfare either. By 2005, the number of rural immigrants had reached about 150 million, but they were still facing discrimination linked to their rural *hukou*, which deprived many entitlements like housing, access to education, healthcare, and social security (Zeng and Wang, 2007). The urban poverty and rural immigrants were gradually marginalized in cities due to their backward economic condition and rural *hukou* registration. These marginalized people are living bitter life in cities. They can't afford a house or even an apartment while they should take care of themselves for any life risks. Many migrant enclaves, low-cost places for urban poverty and those commonly-referred "villages within the city" (*Cheng Zhongcun*) exist both in the inner city and urban outskirts in quite many cities of China.

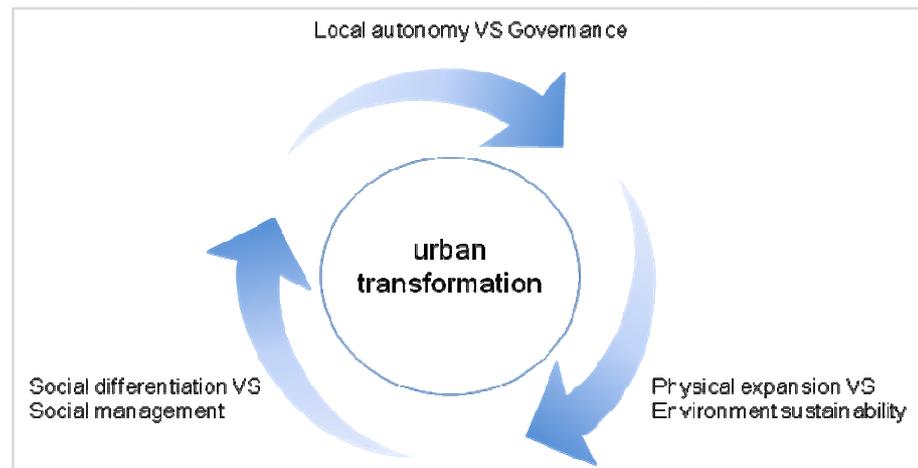
In short, both the internal and external forces contributed to the urban transformation in China in the post-reform era. The political reform granted much autonomy to the local municipalities which became self-reliant and active in local development. The shift from rigid centrally-planned economy to the market economy has greatly promoted urban economy and the physical development. Externally, globalization pushed Chinese economy further through bringing in huge investment and competition which induced the economic boom and restructuring in cities. In this process, cities in China have experienced great transformation in economic restructuring, physical expansion, social differentiation and environmental degradation. However, the complexity of urban transformation lies in the mismatch between fast urban development and insufficient urban planning and management. Figure 2 shows the three aspects of mismatch toward urban transformation in China.

### **New transitional era and future urban transformation**

Currently, China has entered a new transitional era in which the state has to face the challenges of the knowledge economy and the ever enlarging urban-rural inequality.

The global knowledge economy emerged as a progress involving education, sciences, culture and communication at one and the same time (Portella, 2003). It is featured by the growing importance of knowledge, changing competitiveness and industry composition, convergence of goods, services industries and the new manufacturing (Sheehan, 1999). Knowledge and information are thus becoming key drivers of international competitiveness and the global economy, making it crucial to respond rapidly and efficiently

to changes. The largest challenge for China is that in the knowledge economy, the global competitiveness mainly lies in a country's ability to create, disseminate and use of knowledge and technology. The importance of knowledge economy has also shown in the worldwide financial crisis since 2008. The sharp decrease of international market greatly shocked the export-oriented urban economy in China. The problem is that China's industrial activity is mainly based on the cheap labor price and its current export still relies heavily on less knowledge productions. Such economy is basically susceptible to any changes in the world market.



**Figure 2.** Complexity of urban transformation in China

The long time urban-rural dichotomy which is deeply related to the urban-biased policy in China has induced urban-rural inequality in various aspects of development. For instance, the annual household income gap between urban and rural areas increased from 182.7¥ in 1978 to 4027¥ in 2000 (National Bureau of Statistics of China, 2000). Basically, the enlarged urban-rural inequality has endangered Chinese economic and social development. The beginning of twenty-first century in China has seen a remarkable shift from urban-biased policy to “industry nurturing agriculture and cities supporting countryside”. A series of measures were taken such as rural tax and fee reduction, agricultural production subsidy, support of rural infrastructure construction and social development. The shift which aims to comprehensively support agriculture, villages and rural peasants is to promote urban-rural integration strategy in China. The core of this shift is to bring the urban and rural development into the same agenda. In this sense, urban transformation should not be dealt separately from the rural part instead, it should be based on the urban-rural linkages.

Considering the challenges in the current transitional era, the trends of urban transformation could be investigated in aspects of urban economy, physical development and social transformation. In the economic aspect, knowledge economy emphasizes raising knowledge and technology level in the economy and adding technological value to the production. Basically, being competitive in the knowledge economy does not imply that China must simply develop high technology. Instead, China must encourage its organizations, enterprises and people to acquire, disseminate and use knowledge more effectively for greater economic and social development. Thus, urban economic structure should shift from merely relying on industrial manufacturing to tertiary industries, especially the innovation, R&D and other

tech-services. The influence of urban economic restructuring is that those low-tech industries such as clothes manufacturing and spinning would be either upgraded to increase their knowledge intensity and competitiveness or transferred from cities to counties, towns or even rural areas. Thus, such industrial transfer contributes to the economic linkages between urban and rural areas.

The impact on the urban spatial transformation that relates much to the economic transformation in the knowledge economy is that knowledge input will replace the previous material, physical and labor force investment in the economy. Thus, urban spatial development would tend to be a more compact pattern in which the agglomeration effect such as labor pooling and knowledge spillovers will emerge so as to attract more high-tech industries and laborers. Besides, the global competition and urban-rural integration strategy emphasize the necessity of urban development in a larger context which includes cities and rural hinterland. Thus, urban physical development should be adjusted to make urban and rural areas act complementarily and synergistically in a larger context.

Urban social transformation in this transitional era focuses on the management of potential laid-off people due to the economic restructuring and the rural immigrants. Urban economic restructuring will increase the demand of laborers' skills and other techniques and will definitely lead to large amount of unemployed people because of their low skills. Thus, how the government should manage these people need to be properly dealt. The difference between these unemployed people and the rural immigrants is that these people have their property, family and strong social ties in cities. It is impossible for them to migrate to other sub-level cities to find a suitable job. Instead, they need training and more unemployed support from local government. Besides, rural immigrants that can't have the same urban social welfare will add to the social differentiation in the cities. In this sense, a comprehensive urban social welfare that covers both urban citizens and those rural immigrants should be established so as to prevent the increasing social differentiation in the cities.

### **Concluding remarks**

The paper provides a comprehensive understanding of urban transformation in China in the post-reform era. It reveals that urban transformation in China is a complex process which not only includes urban physical and economic transformation, but also involves the transformation of social development. The complexity of urban transformation in China under both internal and external forces requires a high-efficient, sustainable and society-equal trajectory of urban management. In the current transitional era, urban transformation in China should be dealt covering various aspects of urban development while strengthening its linkages with the rural areas. The implication for future urban transformation in China is that governments, planners, enterprises and the public should get involved in the urban transformation process.

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