

Beginning a Conversation on Chinese Urbanization

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INTRODUCTION

The scale and variety of Chinese urbanization can overwhelm attempts at analysis. This paper is an exploratory attempt to relate broader patterns of economic transformation in India and China. It addresses specific issues related to various aspects of urbanization, responding largely to issues raised by Zongyong Wen (chapter 5 in this volume). It then situates the specific model of urban transformation described by Zuojun Yang (chapter 6 in this volume) in an Indian comparative context before concluding with an agenda for future conversations, drawing on Brian McGrath (chapter 7 in this volume), which emphasizes the importance of the specificity of the Indian and Chinese urban experience.

INDIA AND CHINA

One of the greater misfortunes of history is the breakdown in familiarity between two large Asian civilizations, India and China.

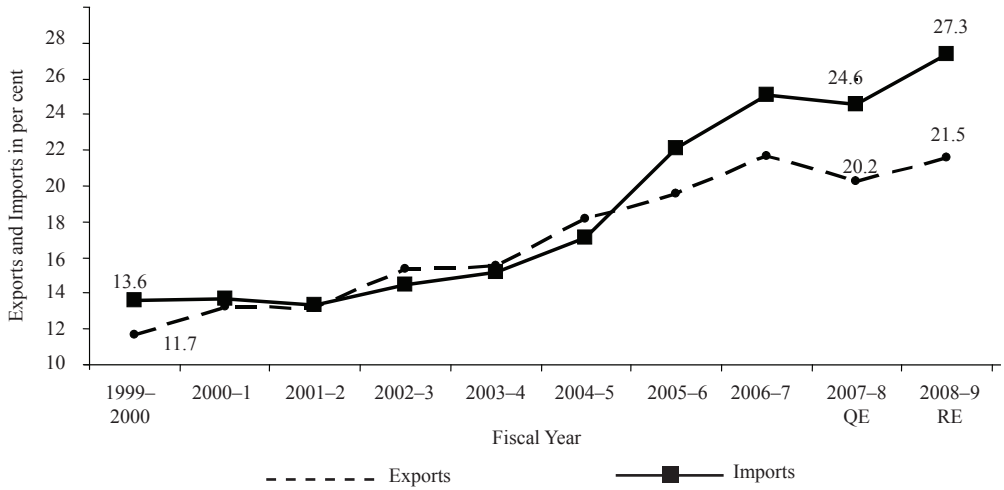
Zongyong Wen (chapter 5 in this volume) describes the Indian character as follows:

It seems that India is self-contained, slow-paced, self-contented, mysterious, tolerant and contradictory, all at the same time... Most Indians seem to have a resigned and passive outlook towards life. They believe in karma and are usually at peace. From Agra to New Delhi to Mumbai, you would see smiling faces everywhere, including the slums. This is a testament to the optimistic attitude of the citizens of this nation. The peace-loving character of Indians was witnessed during the non-violent independence struggle led by Gandhi... Usually, Indians are active thinkers, who think more than they act, whereas the Chinese ... cross the river by feeling the stones. This difference in people's character is closely related with the cultural traditions of the two countries.

It is true that some Indians would be fatalistic and content with their fate, but the non-violent character of the Indian independence movement should not be conflated with mildness.

^a Though it has been four years since I received the India China Fellowship from the New School University, I am still hesitant to write on Chinese urbanization. This paper is written on the premise that it is necessary to articulate one's views if one has to learn how mistaken they are. Its genesis is a series of responses motivated by discussions with my three good friends and partners in inquiry, Zongyong Wen, Zuojun Yang, and Brian McGrath, who are completely absolved of responsibility for my limited understanding of the Chinese situation. I am also indebted to the other Fellows of my cohort, Ashok Gurung and others then at ICI, specially Arjun Appadurai and Anita Patil-Deshmukh for their support.

FIGURE 1: INDIA’S EXPORTS AND IMPORTS AS A SHARE OF GDP



Source: Author’s calculations from Government of India (2009)

Its strength was in the same levels of mass mobilization as seen in China and a determination that is evident today in the intense participation in our electoral processes. Indeed, for all its flaws, the Indian election process has created a degree of democratic plurality in the past sixty years that is truly more representative of the population. The question is how this change affects the progress of democracy. On this there are many views.

As for the ‘smile’ on the faces of the underprivileged, it is easy to romanticize. There is however a kernel of truth in that romance, which has much to do with, the heightened levels of agency that these people enjoy, as compared to their previous situation. The poor of the city have seen an expansion of opportunities as Indian cities have become the hub of growth. Migrants coming into the city experience greater degree of control over their lives, as compared to villagers, especially, in terms of social relationships such as caste (Prasad 2009).

Those who doubt that Indians experiment actively, only need to observe the extent of *jugaad*¹ that permeates the private and especially informal sectors in India. However, in the public sector, there is no incentive to experiment. The culture of process accountability implies heavy-handed oversight by bodies such as the Comptroller and Auditor General, the Central Vigilance Commission and the Central Bureau of Investigation. If innovations fail, the innovators are castigated. If they succeed, there are no significant benefits in a bureaucracy where out-of-turn promotions are not prevalent. The incentives for innovation in the public sector are therefore very limited. In China, by contrast, the re-engagement with the market economy since 1980s has been through scaling up of a series of experiments, beginning with the household responsibility system and the Special Economic Zones (SEZs) to the current attempt to evolve political liberalization without democratization (Zhao 2003).²

The remarks about the ‘big elephant that is India’ by Zongyong Wen (chapter 5 in this

¹ Jugaad is a colloquial Hindi word that can mean an innovative solution to a problem, either technical or institutional (e.g., solutions that bend rules). It is used in the context of street-smart mechanics and reflects locally devised solutions and lateral thinking.

² See also the work of Qin Hui, outlined by Cheng (2008) and the work of Yu Jianrong on social conflict, e.g., Yu (2007)

volume) are indeed spot-on, given that one of the common metaphors for India is often that of seven blindfolded persons trying to describe an elephant, each from experiencing only a part of the pachyderm, such as the trunk, the tail or the feet. It is no less or more mysterious than the Chinese are to the non-Chinese. India's diversity of languages, cultures, ethnicities and religions compels it to be tolerant—indeed, that is perhaps a core principle of its existence, regardless of the various intolerant tendencies that occasionally rise to the surface, a full discussion of which needs to be deferred. It is perhaps just as contradictory as China, which on the surface has the appearance, perhaps cultivated by the leadership, of a homogenous monolith, but is composed of heterogeneous tendencies that are now beginning to emerge, both economically, culturally and to some extent, even politically. This is seen in the different paces at which representation in village government was adopted in China, and the nascent efforts to take such experiments to other levels of government.

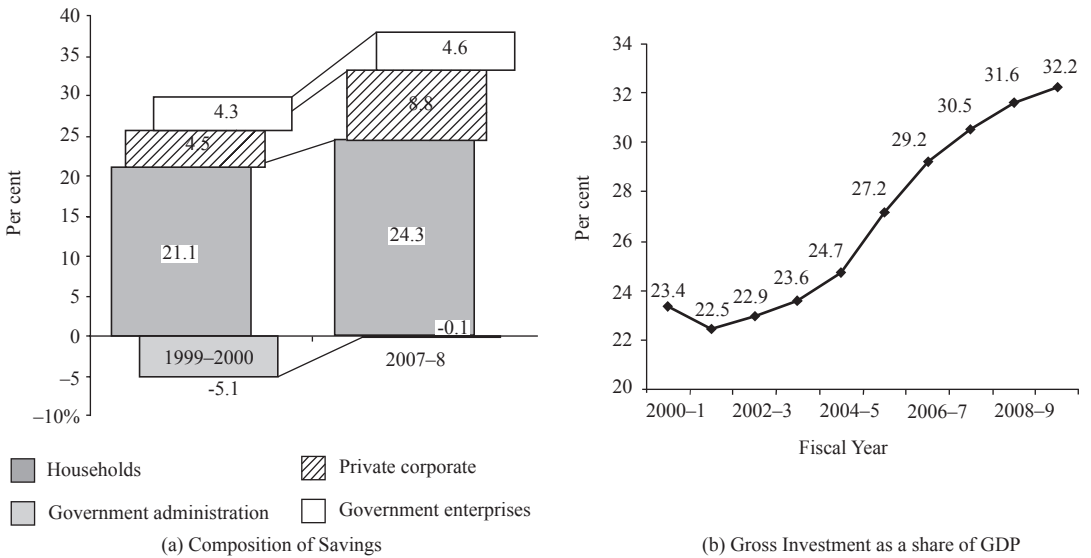
India may appear self-contained from the viewpoint of China today, which, especially in the coastal regions, appears deeply integrated with the outside world. One wonders whether the Chinese appreciate exactly how exceptional their experience of international (re)integration really is. While not as dramatic as China's, in relation to its recent past, India is remarkably more open. As Figure 1 shows, the trade ratio has doubled, with the share of exports and imports in total income rising from 11.7–21.5 per cent³ from 13.6–27.3 per cent, respectively, in 2008–9. This is concomitant with a quantum increase in the engagement of the Indian elite (in terms of their personal international interactions in matters of travel and education) and the economy with the outside world.

In terms of pace, India's growth is second only to China and increasingly, consumer surveys in India show that the urban consumer is no longer contented but is instead voracious. The Indian 'world office', while common as a metaphor, is overlaid. Growth in the service sector in China may actually be faster than in India! By one estimate, over 1980–2000, China's share of value added from services rose by 12 percentage points, about the same as India's but China's share of employment in services rose by 18 percentage points, much more than India's, which rose by only 4 percentage points (Kochhar et al. 2006). Also, exports from both India and China focus more on manufacturing than services. Most of the Indian manufactured exports consists of engineering and chemicals, besides textiles and garments, gems and jewellery and leather. Services exports are however growing more rapidly than manufactured exports.

On savings, both Indian and Chinese households save almost similar proportions of their income, the Chinese about a quarter and the Indians slightly less, but more than one-fifth of their income. The key difference in investments arises from the extent of government saving, and private corporate saving, both of which are higher in China. The extent of government saving in China has a negative flip side, namely under-investment in social services such as health and education, though this has changed in recent times. As far as private corporate saving is concerned, some of it may be related to the differences in market structure, where Chinese firms may be able to maintain higher margins. This, however, comes at the cost of reduced competition and higher prices for consumers. Over time, there has been convergence in India and China on this score. India is saving more; up to 33.5 per cent of income from 22.8 per cent in 1999–2000 (GoI 2009). As Figure 2 shows, while household savings have risen, and corporate savings as a share of output have doubled, the really big news is the reduction of dis-saving by government. Government, which saved -5.1 per cent of output in 1999–2000, has stopped doing so completely. This rise in savings has been matched by a concomitant rise in investment. Gross fixed capital formation has risen to 32.2 per

³ This is driven in part by oil refining for export, a recent entrant to the Indian export basket.

FIGURE 2: GROWING SAVINGS AND INVESTMENT IN INDIA



Source: Author's calculations from GoI (2009)

cent from 23.4 per cent of output ten years ago (GoI 2009). Over three-fourths of this increase is from the private corporate sector, half from machinery and equipment, and a quarter from construction. The share of investment by manufacturing has jumped from 31.7 to 39.5 per cent, with over two-thirds of the increase coming from the registered segment (GoI 2009).

The Indian growth rate has been achieved with proportionately lower investment than China's, that is, India uses its capital more efficiently. However, this may also be because it is still taking advantage of its excess capacity. In some areas, Chinese build capacity, especially infrastructure, ahead of their needs, whereas India barely manages to keep up with the pace of growth in demand for its infrastructure.

The other key difference between India and China is that of implementation capacity which may also be reducing. As the Indian system has numerous institutional and political checks and balances, the executive does not have unrestrained power to implement policies. Such constraints are also becoming evident in the waning power of the Chinese national government, especially its limited ability to influence governments at a subordinate level, in particular city governments.

URBAN GROWTH OF CHINA AND INDIA

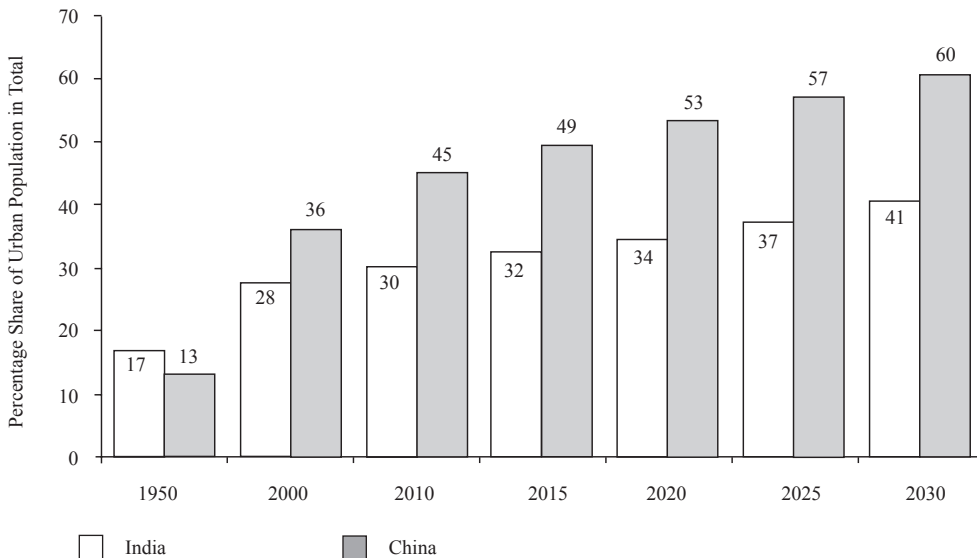
If we look at the world today and focus on the countries that are growing rapidly but still have relatively low urban shares of populations and large overall populations, China and India stand out, being in the bottom third in terms of share of population in urban areas (World Bank 2009). They are the only two large economies that have a low level of urbanization and high growth (more than 7 per cent) in the recent past. At this pace, these countries will move fast from being rural societies to being urban countries. Indeed, the question appears to be whether they will become urban before they become richer or vice versa. China, already a middle income country with urbanization over 40 per cent, is succeeding in doing both simultaneously and trying to do so harmoniously! In India, not only is the growth in incomes a more recent phenomenon, there is

also a much greater ambivalence about urbanization and until recently, there was almost a policy choice to restrict it to the extent possible. Even today, a number of policies including the flagship National Rural Employment Guarantee Scheme are touted as helping to restrict rural–urban migration and indeed it may help by altering the mix of people being pushed out of rural areas due to economic reasons and people being pulled into urban areas due to economic opportunities. However, historically, there is no example of a country becoming a high income nation without becoming urban, though many poor countries are largely urban.

Unlike the urban explosion in many regions of the world, especially in Latin America , and more recently in China, India's level of urbanization has increased gradually from 17.6 per cent in 1951 to 27.8 per cent in 2001. By comparison, over the same period, the urban share in Brazil grew from 36 to 81 per cent. Despite this low level of urbanization, India's urban population is more than the total population of the United States. The increase in the last decade, of about 70 million, is itself larger than the urban population of all but five countries.⁴

Figure 3 presents the standard projections of population for India and China. The projections assume that the growth rate of Indian urban population will rise only slightly from its historical levels of a little over 2 per cent per decade. If, however, it approaches anything like the Chinese experience of almost 5 per cent per decade or peak rates in the past decade of nearly 10 per cent, then the share of Indian urban population may change significantly. To the extent that the Indian GDP growth rate is now much higher than before and closer to China's, this is not an implausible scenario. However, some commentators like Kundu (2009) argue that the current pattern of urbanization is exclusivist and discourages people from moving to the cities. If so, the UN projections may well be overestimates. Zongyong Wen (chapter 5 in this volume) mentions that the share of urban population in China increased from 36.09 per cent in 2000 to 42.99 per cent in 2005, averaging 1.38 percentage points each year. While the Indian growth rate of

FIGURE 3: PROJECTIONS OF URBAN POPULATION SHARES IN CHINA AND INDIA



Source: United Nations (2008)

⁴ These are Brazil, China, Indonesia, Russia, and the United States. See UN (2008)

urbanization under similar conditions of high income growth will be known only after the next Census that is due in 2011, it is unlikely to be anywhere close to that level.

A better understanding of this would need an examination of the three broad sources of urbanization, namely: growth due to (i) natural increase, (ii) migration and (iii) redefinition. India and China differ on all these three dimensions. While the natural increase in India is higher since the one child policy in China is relatively well-accepted and enforced in urban areas, migration is higher in China especially, when the floating population of unregistered migrants is accounted for and redefinition of China's urban areas usually includes a much larger area than in India.⁵ Large sections of rural Chinese population are therefore becoming urban either through migration or by envelopment by nearby cities, as Zuojun Yang (chapter 6 in this volume) brings out.

THE EFFECT OF URBAN GROWTH ON NATURAL RESOURCES

The nature of urbanization in both India and China is leading to the growth of large existing agglomerations as well as a number of new urban areas. In China, there are now more than 100 million-plus agglomerations, while India has nearly 40 such cities, spread across the country. In that sense, the growth in urbanization is both deep and broad. This, of course, has implications for the kind of impact that urban centers have on natural resources.

At one level, the intensification of growth, that is, the increase in the size of existing large agglomerations that already strain the local natural resources may push the impact in some of these areas to a point where they become irreversible. On the other hand, these large cities are similar to gigantic point sources of environmental impact. If it were possible (and this is a BIG 'If') technologically and politically, to mitigate the impact in these areas, the benefits would be considerable. As such, they present significant opportunities as well as threats. Similarly, the spread of urbanization makes city-related impacts on resources much more dispersed and therefore requires attention to urban governance at a much wider scale than in other countries where the urban population is more geographically concentrated. To the extent that access to technical resources is limited in these newly urbanizing areas and the effects of urban growth on natural resources less evident because they have not yet passed a 'threshold of visibility', the broadening of urbanization poses significantly different challenges.

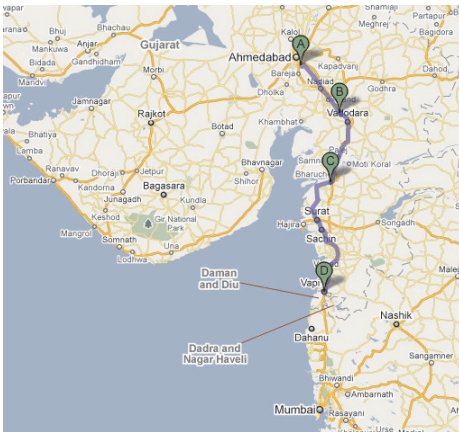
Zongyong Wen (chapter 5 in this volume) too laments the fact that the rapid Chinese urbanization is tapping natural resources without constraint, resulting in the deterioration of environment. Indeed, the environmental impacts of cities and industrialization, as exemplified by incidents such as the pollution of Lake Taihu in 2007 in Wuxi, Jiangsu and the Songhua River in 2005 in Harbin, Heilongjiang or more dramatically by the submergence of the Three Gorges are among the most discussed costs of rapid Chinese growth. This appears to seriously concern authorities.

In 2007, the State Environmental Protection Administration (SEPA), rated air and water pollution in the urban areas of 585 cities in China.⁶ Only 37.6 per cent met the goal of air quality, down 7.3 percentage points from 2005. On limited aspects, there seemed to be some progress. Fewer cities—thirty-nine, which was four less than in 2005—had severe air pollution. Of these, seven each were in China's coal belt in Shanxi and its heavy industry belt in Liaoning. While water quality had deteriorated, more water was being treated. Compared with 22.9 per cent in 2005, 42.5 per cent

⁵ Here it is important to distinguish between the core city and the total population of large municipalities like Chongqing, which have large rural populations within them.

⁶ Reported in http://www.chinadaily.com.cn/china/2007-06/12/content_891904..htm

BOX 1: GUJARAT'S INDUSTRIAL POLLUTION CORRIDOR



The 400 km industrial corridor in Gujarat stretches from Vatwa (A), just outside the state capital of Ahmedabad, to Vapi (D), near the Maharashtra border on the highway to Mumbai, with large industrial estates in Nandesari (B) and Ankleshwar (C). These industrial estates contain a large number of dye factories, textile, rubber, pesticide and paint manufacturers, pulp and paper producers, pharmaceutical, engineering and chemical companies. This area has seen growth at Chinese levels, with similar consequences on natural resources, with particularly extensive pollution of groundwater (SCMC 2004).

of urban sewage was being treated in these cities. Solid waste management had also improved. As against less than 20 per cent in 2005, in 2007, 59.5 per cent of household garbage was being handled properly. However, 200 cities still had no centralized sewage management system, and 187 cities had no garbage disposal plants.

There have been significant effects of urbanization on the environment in India also. Indeed, were Indian cities to grow at Chinese rates in terms of population and industrialization, its impact may be worse than China's (see Box 1). In this respect, it appears that the Indian democratic tradition has not been able to prevent an unsatisfactory inter-temporal trade-off and in Zongyong Wen's words, '...problems are being tackled temporarily within a myopic perspective at the expense of long-term objectives and overall interests...'. In this respect, China may be just an example of the problems that India is yet to face, as its industrial growth accelerates. The question is whether such forewarning will help India deal with these problems better.

Democratic mobilization has been somewhat more successful on inter-temporal trade-offs with respect to more visible natural and architectural heritage such as the Silent Valley Project in Kerala and the Taj Mahal in Agra. In the first, a dam project that would have submerged a pristine ecological area was halted in response to popular protests, while in the second, industrial and commercial development was not permitted to proceed in order to protect against possible damage to the Taj Mahal. Such reprieves may, however, be temporary. Recent attempts to build the Pathrakkadavu hydro-electric project in Kerala⁷ signal a revival of efforts to exploit natural resources in the Silent Valley area.

URBAN GROWTH AND LOCAL GOVERNMENT

The trade-off between growth and the environment is one of the key points of tension between the national and local governments in China. Much of the striking growth in urban China is owed to action by a large number of local governments. A key difference between China and India lies in the extent of agency that the city administrations have. In China, cities compete with each other and there is a discernible element of city-specificity in economic strategies developed

⁷ See http://beta.thehindu.com/news/states/kerala/article_13892.ece

by local governments in the larger municipalities. In India, however, this is lacking, as the city governments have limited agency. Little authority and financial capacity have been devolved to them, with significant differences in the treatment of land as a source of revenue, as elaborated later in the discussion of land redevelopment. Concomitantly, the capacity of the city to do damage is also limited. The locus of government action in India is at the level of the state (comparable to the province in China).

Along with the responsibility and authority for city officials in China comes accountability, not directly to the citizens as in an electoral democracy but vertically, through the administrative and party hierarchy, as in a large firm. Mayors of cities in China are assessed on a formal report card (Landry 2003) that includes a variety of factors, primarily focused on economic growth. Factors related to income levels, economic structure, trade orientation and urbanization account for 28 per cent of the score, while consumption and infrastructure-related indicators like electricity consumption and use of motor vehicles and availability of paved roads account for another 28 per cent. Public services like health, education and public security add up to another 32 per cent and the remaining 12 per cent is for waste treatment and air quality. Good performance in a particular position can be expected to lead to positions of higher responsibility in the administrative and party hierarchy though Landry (2003) does not find statistically significant evidence of this. This can have deleterious consequences, for example, the single-minded focus on growth is substantially responsible for the kind of environmental problems alluded to earlier.

In India, city politicians are accountable horizontally to the people, through local elections. However, in the absence of significant authority, the transfer of blame to other levels of government is a widely used route to mitigate accountability pressures. City politics in India has also not been a way of moving up the party ladder given the limited nature of inner party democracy in India across political parties. Consequently, the vertical accountability through the party hierarchy is also limited.

Two of the key challenges that China faces today in the context of urban growth are: (a) developing a model that reconciles economic growth with resource responsibility, and (b) ensuring the acceptance of such a model across various local governments, each with considerable independent agency.

Since a number of vested interests have developed around the existing growth-first model, not the least of which is its easy measurability discussed above, and consequent attraction for a meritocratic bureaucracy that the Chinese Communist Party (CCP) strives to be (see Li 1998), the momentum of the existing model is considerable. While there has been much discussion of environmental consequences, the incorporation of environmental factors in evaluating performance of party cadres remains an unfinished task and economic growth still dominates.

It remains to be seen whether, to evolve the new model, China adopts the same local experimental approach that served it so well in evolving the existing model of economic growth. A more experimental approach would permit different local governments to discover their own pace of acceptable growth and the extent of trade-off with competing goals. This discovery in developed countries is facilitated by democratic institutions that mediate between different interests. The limited extent of such mechanisms in China makes this task harder.

BUILDING THE CITY

A visible consequence of the growth-first model is the extensive physical redevelopment of Chinese cities. As Zongyong Wen (chapter 5 in this volume) notes:

It is almost certain that not much traditional architecture is left in Beijing. It is not that old houses are devoid of value, but that culture, when locked in competition with the economy, always tends to be the loser in the face of rapid growth of the latter.

But, there are limits to change in the urban fabric of even a place like Beijing that otherwise is relatively free from the constraints of civil society process. The pace and nature of change can be influenced by sensitive experts.

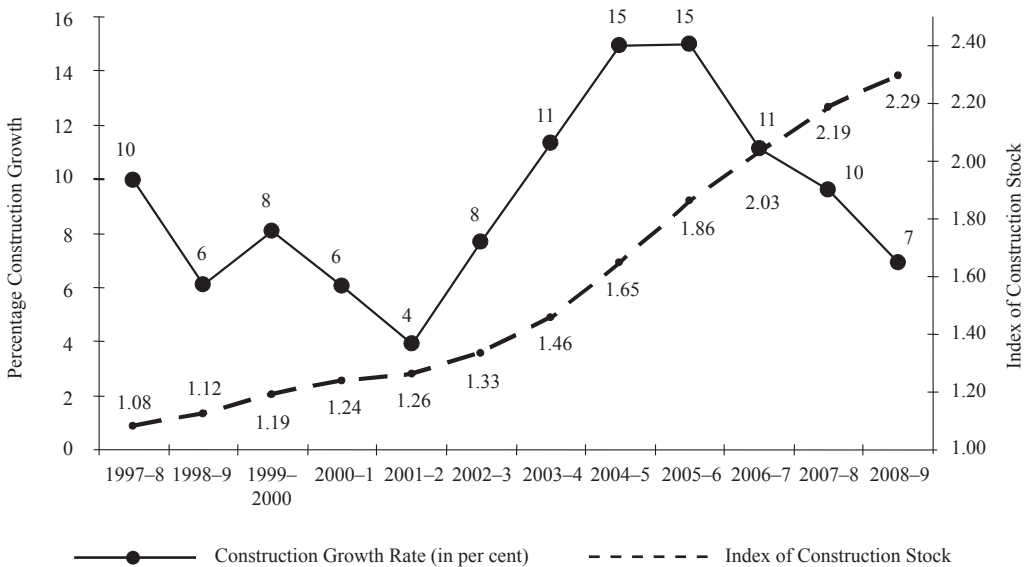
On 19 December 2007, 188 buildings built in Beijing within the past 160 years were given government protection.⁸ The buildings are split into two categories based on antiquity, namely from 1840–1949 and 1950–76 and include public buildings like the 50-year-old Great Hall of the People and the city’s first water works, which dates from 1908 as well as schools built by missionaries in the nineteenth century. Under the new ruling, the listed structures cannot be demolished, and any renovation work done on them must ensure their historical authenticity is preserved. The report quotes Zongyong Wen, in his capacity as Deputy Chief of Beijing’s Planning Commission, as saying:

Beijing is home to many spectacular modern buildings, but their protection had not been on the government’s agenda until very recently. [These] buildings reflect either the historical development of society or the evolution of the art of construction.

This is an instance of local governments discovering their own pace of acceptable growth and trade-offs with other goals.

For India, the question is, how much time does it have to evolve a more sensitive urbanization

FIGURE 4: CONSTRUCTION GROWTH RATES IN INDIA 1997-8 TO 2008-9



Source: Author’s calculations from GoI (2009)

⁸ Reported in http://www.chinadaily.com.cn/olympics/2007-12/21/content_6339080.htm. The buildings referred to are modern relative to the older heritage buildings/areas such as the Summer Palace and Forbidden City, which are already protected.

process? Evolving consensus is often confused with an attempt to block progress. The significant private benefits from continuing with the existing urbanization model generate strong pressures to continue on the well-trodden path. It is in this context that the relentlessness of development in Beijing shows how quickly the urban fabric can change. Figure 4 shows construction growth in India. Even at this pace, much slower than China's, almost 60 per cent of the stock in 2008–09 is less than ten years old! The concern is that, once we, in India start down that path, we might travel too far before there is consensus that we are traveling in the wrong direction. Even after the consensus, it would take time and effort to build the politics to overcome the vested interests that would have been developed as a result of investments on the traditional path.

THE LAW AND THE CITY

The management of construction is often the subject of rule making by city authorities, usually by local governments, but in India, this is often superseded by the state or federal government, as in the case of the Mumbai mill lands (D'Monte 2007) and the Delhi Master Plan. China is now in the process of instituting 'rule by law', in order to increase the transparency of administration. Even though the process of lawmaking appears simple in a single-party system, there is often substantial prior negotiation before laws are brought to the annual session of the National People's Congress (全国人民代表大会). While the existence of laws, in and of themselves, need not assure redress when the court system is not independent, it does appear that the recourse available to the Chinese citizens from arbitrary action by authorities is increasing. In India, conversely, authorities are often unable to prevent self-serving action by citizens.

The Indian experience indicates that the existence of laws need not imply that they will be enforced. The implementation of the law and the protection of the laws depend to some extent, possibly, on the political positioning of specific groups. For example, in many areas of Delhi, zoning laws have been ignored and mixed-use neighborhoods have evolved that combine residential with industrial and commercial use. In some instances, this allows hazardous industrial activities to grow without safeguards, but in many areas there have been broader benefits from such mixed use. Subsequently, acceding to the popular pressure created by such organic growth, the federal urban ministry (note where the locus of planning authority lies) modified the zoning laws, ex-post facto, when the Supreme Court insisted on enforcing the by-laws.⁹ Thus, laws themselves are a response to politics. India is in the process of passing a new law on land acquisition, rehabilitation and resettlement, the timing of which is partly in response to agitations over land acquisition for industrial purposes, specifically a large number of SEZs and the manner in which political parties have defined themselves as representative of particular interests, particularly that of the poor.

DEMOCRACY AND URBANIZATION

In this context of representation and the law, the relationship posited by Zongyong Wen (chapter 5 in this volume) between income and a quasi-Maslovian hierarchy of needs with respect to rights, is debatable. Taken literally, this characterization would mean that most countries would not be able to achieve 'harmony', since the USD 12,000 per capita is a very high bar to cross. Furthermore, if one uses purchasing power parity (PPP), then the numbers will be much closer, since the PPP

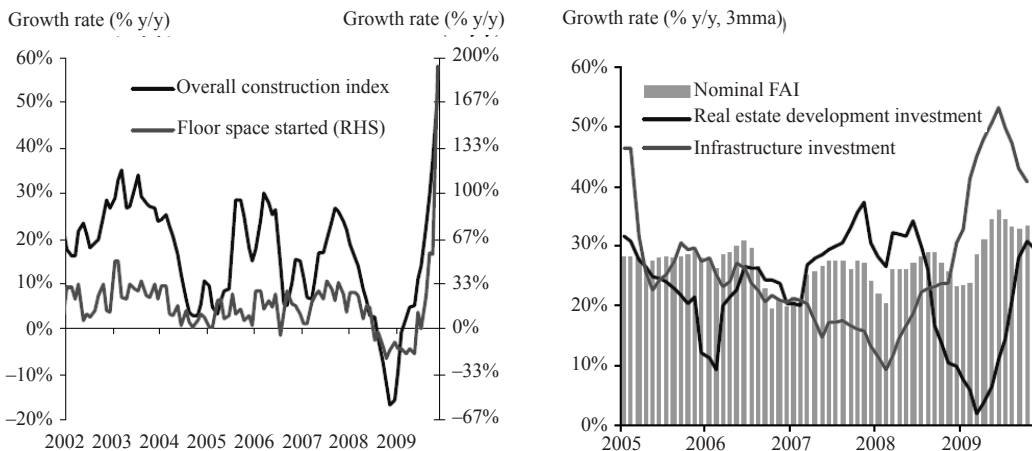
⁹ See 'Response to immediate concerns' in http://www.pib.nic.in/release/rel_print_page.asp?relid=24726

factor for China is about 2.27 (India is about 2.88), which means that Beijing city is already far beyond even the USD 12,000 level indicated here.¹⁰

Protests in response to perceived violations of rights are dependent on (a) extent of rights violation, (b) awareness of the violation and (c) benefits vis-a-vis costs of protest. These differ among the various groups. Is the awareness of rights greater in urban areas or is it the case that urban citizens feel more secure, relative to isolated rural citizens, in demanding their rights because government reaction is necessarily more in the glare of domestic and international media? Furthermore, the greater density in urban areas makes it possible for a larger group to be assembled to seek redress of grievances. So, is it harder to ignore a larger number of people, even though they may be a smaller proportion of the populace? These are unresolved questions in our discussions.

Democratic privileges of protest often come with NIMBY (not in my back yard) phenomenon for undesirable public facilities; a fact which is well documented elsewhere. This is often the reason why certain facilities are located in less politically influential locations in a city, such as the contentious nature of opening of diesel bus depots in Harlem in New York City (while closing similar depots in West Village) which allegedly increase the incidence of asthma among children in the area; an issue that we were made aware of during our visits to New York (see also Sheppard 2005 and Northridge et al. 1999). The resolution of such issues in India is supposed to occur through the political process where these competing claims are delineated and hopefully mediated, though, often, as in New York, politically powerful private or small group interests may override broader but less powerful interests. The existing situation in China is that the urban officials are supposed to internalize this mediation through discussions with the local community, but the extent to which it actually occurs varies widely. In the case of Hangzhou, as detailed by Zuojun Yang (chapter 6 in this volume), such engagement with the local community appears to be extensive. In many other areas, this can be perfunctory. However, the tolerance of such local variation, especially on the liberal side, by the national authorities is a positive sign.

FIGURE 5: GROWTH IN CHINA'S REAL ESTATE SECTOR



Source: NBS, CEIC and UBS estimates in Wang and Hu (2009).

¹⁰ In 2009, Beijing's GDP was expected to exceed USD 10,000 per capita. It was more than USD 9,075 in 2008 and USD 7,370 US dollars in 2007. This is partly due to the appreciation of the RMB. See the report on 8 January 2010 in <http://english.peopledaily.com.cn/90001/90778/90862/6862825.html>

THE CITY AND THE MARKET

The recent downturn has also cast doubt on the existing growth-first model and brought out the effects of misallocation of investment, for example, in larger housing units, as mentioned by Wen (chapter 5 in this volume). The market system assumes that these decisions will be corrected over time as entrepreneurs who make mistakes will lose money and exit the business. However, behind this story lie the costs of adjustment and the loss of unwanted investments. In an economy populated by market driven banks and real estate firms, the slowdown in real estate should see the prices of the larger individual units adjust so that they become affordable, as exemplified by the fall in housing prices in the United States. However, in China, many of the banks are state owned and many of the real estate companies have ties to local governments and state owned enterprises, which delays this adjustment. Even in India, we see that the adjustment has yet to occur. Of course, some of this can be explained by the fact that growth in these two economies has remained quite robust, though not as high as before. Figure 5 shows the rapid increase in construction in China with new construction of property rising almost 200 per cent year on year. The government's hand is seen in the surge in infrastructure investment to compensate for the fall in real estate investment, helping to keep nominal fixed asset investment (FAI) stable. The extent to which this rise in government-sponsored construction affects the urban fabric will be only known later. However, as part of the stimulus, construction of residential units below 90 square meters is being encouraged to redress the lopsidedness of investment mentioned earlier.¹¹

As Zongyong Wen (chapter 5 in this volume) underlines, a well functioning market economy needs effective competition regulation, sensible macroeconomic policies, transparency in reporting and accounting, and supportive public services including infrastructure. The common perception is that India has better regulatory environment and market transparency as compared to China, while Chinese infrastructure and macroeconomic policies (captured in an indicator such as their fiscal deficit) are in better shape. However, the truth may be somewhere in between. The new Indian competition regulator was hobbled since its inception in 2003, with a full commission being appointed only early in 2009. The recent accounting fraud in Satyam Computer Services, one of India's marquee software companies, has exposed the chinks in its market transparency. Though the response to the event was swift in terms of keeping the company alive, the prosecution of the management has lagged, compared to similar corporate frauds in the United States. Conversely, Chinese fiscal deficits have been kept low by inadequate investment in social services and unfunded mandates to local governments, leading to declining health and educational attainments in rural areas, lacunae that are only now being recognized and redressed partially (Wang 2008).

URBANIZATION AND SLUMS

The growth of the market economy has changed the urban landscape in India, along the peripheral ring road in Bangalore, in Gurgaon on the outskirts of Delhi, in Bandra-Kurla complex in the heart of Mumbai. One of the striking differences between India and China is the visible co-existence in India of these glittering glass and steel edifices with slums (some of which may be populated largely by specific communities, much like the province-specific *cuns* in Beijing). One reason for this is the difference that flows from a prior (though possibly eroding) culture of toleration and symbiotic

¹¹ By early 2009, sales of housing of less than 90 square meters a unit in Shenzhen were rising. By one estimate, it was 73.5 per cent of the total, compared to 50.56 per cent in 2007 and 68.13 per cent in 2008. See <http://www.chinastakes.com/2009/3/house-market-in-shanghai-shenzhen-rebounding-for-now.html>

relationship between the elite and providers of personal services, such as drivers, servants and cooks, coupled with a relatively disinterested government with strong pro-poor overtones.¹² One can also argue that electoral democracy in a poor country has automatic pro-poor mechanisms, due to political reluctance to act against the large number of people who live in slums. Both are no doubt true, but it is also true that until recently, there was no corresponding benefit to bearing the political cost of slum removal. With the rise of importance of real estate, the involvement of various political personages in the sector has also risen, for example in Hyderabad, Lagadapati Rajagopal, a member of national Parliament from the Congress Party is also a leading real estate developer. Similar instances abound elsewhere too across parties and cities. In China, such real estate benefits engendered by its high urban focused growth have provided a strong economic rationale for various relocation initiatives. Will this lead to lower tolerance for slums in India? It may very well be the case, as for example the relocation of the Yamuna Pushta slums in Delhi, documented by Menon-Sen and Bhan (2008). The residents of these slums were relocated to a remote location on the periphery of Delhi. We discuss this urban transformation below in more detail, in the context of the excellent granular account of the Che Cun Jian Ju (撤村建居) policy in Hangzhou by Zuojun Yang (chapter 6 in this volume).

However, the reasons why slums are invisible in China go beyond the nature of the government and the political tolerance of slums or the lack of it. These reasons are: (a) the existing extent of housing stock, (b) the gendered nature of migration and the associated provision of accommodation by employers and (c) limited extent of informality in manufacturing.

It is important to recognize that Chinese cities were strictly controlled areas in the past and that all residents who were in the city were provided housing by the work unit or danwei (单位). Thus, when the Deng reforms happened and the hukou (户口) restrictions were relaxed, the existing housing stock was substantial. Much of this housing stock of the old state owned enterprises (SOEs) was transferred to the employees as part of their severance package when large scale lay-offs began in the mid-1990s. As existing urban residents moved to newly built housing, these units became available for use by the incoming migrants (see Walker and Buck 2007). Their affordability was ensured by increasing density, that is, multiple tenants rented the spaces which were formerly used by a single family (Chan 2007). In Beijing, this is seen, for example, in the densification of the hutong (胡同) areas south of Tiananmen Square, as also in some of the older industrial work units.

In China many migrants also stay either at worksites (for example, male construction workers) or dormitories (for example, female factory workers). This has been the pattern for quite some time, as seen for example in Shanghai in the early 1990s (Roberts 2001), as also in other cities (Zhang 1995). Whether or not married women migrate with their husbands depends on the type of job available, else they may migrate independently, while their child is raised back home (Roberts et al. 2004). These workers work mostly in the formal sector. This pattern of migration has two implications, namely (a) housing needs can be met with much less space, for example, six construction workers may share a 12 square meters space and (b) residential locations are not required to function as workplaces. By contrast, slums in India are populated by family units that need places to stay together. Many of these slums are also thriving hubs of independent economic activity, like miniature urban versions of township and village enterprises (TVEs) in China.

The relative availability of infrastructure in rural China and the formal restrictions on migration to towns, through the hukou, made TVEs a rural phenomenon, albeit in proximity to larger towns.

¹² I do not use this in the sense defined by another of our partners in inquiry, Yang Yao (chapter 11 of this volume).

In India, on the other hand, supporting facilities for industrial activity are available only in the larger urban areas and there are no restrictions on migration. Consequently, low cost industrial enterprises in the informal sector tend to emerge in unregulated parts of the urban space, that is, the slums. Lately, however, the acceptance of slums has declined among the elite, seduced as they are by the glass and steel visions that emanate from the West and now China.¹³ Slum removal, until recently largely a practice in Delhi, is now spreading to other cities, without a full appreciation of the role they play in the economic and social life of the city. Policies for slum redevelopment in India such as the recent *Rajiv Awas Yojana* (RAY) or Rajiv Housing Scheme, named after the former Prime Minister, Rajiv Gandhi, and the schemes under the Jawaharlal Nehru Urban Renewal Mission (JNNURM) treat the slum solely as the manifestation of a housing problem and therefore fail to provide for economic activity that is an integral part of informal settlements in urban India.

In China, though there is now a substantial informal service sector, especially since the layoffs in the SOEs, most urban manufacturing is formal.¹⁴ Thus the need for informal housing locations to also function as production spaces is limited. The creation of mixed informal spaces that combine informality, housing and workspaces, a role that the slum provides in India, is much less of a requirement in China—that is, the demand for slums is less. Where needed, this role is fulfilled at the periphery, as in Beijing; or in urban villages, as in Shenzhen (Du 2008).

URBAN TRANSFORMATION

Zuojun Yang (chapter 6 in this volume) provides a rich description of urban relocation in Hangzhou through the implementation of Che Cun Jian Ju. As he puts it, the ‘process of urbanization mainly comprises two kind of changes: the first is that agricultural land is used for non-agricultural purposes; the other is that farmers become urban residents after losing most or all of their agricultural land’. This acceptance of transformation at two levels; that of the land and the people, is not so clear in India, where the need to prepare the ‘farmers [to] become urban residents’ is less recognized and agitation over compensation is often about providing alternate land for land acquired by authorities.

The process of expansion of Hangzhou is mirrored in many Indian cities. The limits of Hyderabad were expanded from 175 to 650 sq. kilometer, that of Bengaluru (Bangalore) from 226 to 696 sq. kilometer and now that of Chennai (Madras) from 174 to 426 sq. kilometer. It is instructive to compare the situation in Hangzhou with the canonical situation in India. First, urban villages in Zhejiang often include factories as in the Xintang village mentioned by Zuojun Yang (chapter 6 in this volume). Land in these villages is under the control of the local village government, unlike in India, where land is under the control of the state government. If secondary or tertiary industry activities bring more benefits than traditional agricultural activities, these agricultural collectives in China can establish factory buildings or commercial office buildings on their own land by attracting outside investment without any need to acquire land. In India, the development rules of the expanding city automatically extend to the new areas, though there are some exceptions. Just as in Hangzhou, in building Lutyen’s imperial Delhi, only the agricultural

¹³ For one such version in Mumbai see www.romf.org and <http://www.ctbuh.org/>

¹⁴ Huang (2009) estimates that workers who have no security of employment, receive few or no benefits, and are often unprotected by labor laws currently account for 168 million of the 283 million urban employed in China. See also Solinger (2005). Many of the informal workers are however former SOE employees who received their danwei accommodation as part of their severance and thus do not need housing, while others, like restaurant workers, often stay at the worksite.

lands were acquired and the residential areas were delimited by a red line or *lal dora* (钉子户). Over time, the process of urbanization has engulfed these *lal dora* villages. Residents of these areas are exempted from obtaining sanction of building plan for their residential units but not from the purview of building by laws, that is, they are supposed to self-regulate. These areas have evolved in much the same manner as urban villages in Hangzhou. However, while 70 per cent of the urban villages in Hangzhou have been assimilated within a decade, there is no such effort in Delhi as yet, though the latest Master Plan for Delhi suggests permitting commercial development in these *lal dora* areas—regularizing what the de facto situation is on the ground.

Indeed, the development that can be expected to follow would largely be privately initiated, sporadic and patchy. This is in contrast to the orderly transformation of Xintang that one sees in Hangzhou. In part, this is possible because of the higher (in?)voluntary acceptability of high rises for relocation in Hangzhou, perhaps because the extent of non-residential activity is limited in the urban villages. Such an acceptance may be limited in Delhi, given the variety of activity in *lal dora* areas. A more apt comparison may be with the urban villages of Shenzhen, described by Du (2008), given that the organic process of growth in Shenzhen is more akin to that of Delhi. There are other factors too. The control over land use in Delhi vests in the federal government, not the local government, as in Hangzhou or even Beijing. Most of the land conversion happening within the city boundaries of India is the transformation of defunct manufacturing land into real estate and commercial developments. Here, the issue is not one of ownership, which lies with the defunct corporate, but with permissions needed for the development, in particular, the change of land-use, often outside the ambit of local government.

But, similarities between Hangzhou and Delhi are deeper. Both India and China are struggling with the pressures that rapid economic transformation entails. In both countries, acquisition has to be for ‘public interest’, a term that gains meaning only in a political context. The provincial High Courts and now even the Supreme Court in India are consistently reinforcing the validity of acquiring land for ‘economic development’. On 5 September 2008, Justices C.K. Thakker and D.K. Jain of the Supreme Court, dismissed a complaint against the Andhra Pradesh government for acquiring land for Andhra Pradesh Infrastructure Investment Corporation saying that the Government as a ‘sovereign power can acquire land for public purpose’, which could include ‘industrial and other infrastructural developmental needs for the common good of the citizens.’ It also cites *Kelo v. City of New London*, 545 U.S. 469 (2005) of the US Supreme Court in support of its decision.¹⁵ The second is the decision by Chief Justice S.S. Nijjar and Justice P.C. Ghosh of the Calcutta High Court in the well-reported Singur case in the state of West Bengal in India, where the land acquired for the private Tata Motors, to establish the factory to build the world’s least expensive car, the Nano, was held to be in public interest. A vigorous local agitation against the acquisition of land ultimately led to the withdrawal of Tata Motors from Singur with significant political consequences in West Bengal, where the Communist Party of India (Marxist) had won six consecutive elections, ruling there since 1977. In acquiring land for economic development, the most striking difference between China and India is in the structure of the compensation package.

¹⁵ In her dissent from the majority opinion in this case Justice Sandra Day O’Connor quotes Justice Chase in *Calder v. Bull*, 3 Dall. 386, 388 (1798) ‘An act of the Legislature (for I cannot call it a law) contrary to the great first principles of the social compact, cannot be considered a rightful exercise of legislative authority... A few instances will suffice to explain what I mean... [A] law that takes property from A. and gives it to B: It is against all reason and justice, for a people to entrust a Legislature with such powers; and, therefore, it cannot be presumed that they have done it.’

Mukhopadhyay (2007) argues that compensation needs to fulfill three conditions, namely (a) provide financial security, (b) appear fair and (c) be future-ready. A first and basic level of compensation would allow the affected person to retain his current living standard for the foreseeable future. In India, implementing even this is a challenge, especially for farm laborers and sharecroppers, who ordinarily receive no compensation. Here, a severe problem is lack of information on farm laborers and sharecroppers, given that even the land records are flawed. This problem is much less significant in China. The second, fairness involves providing facilities to the affected persons to share in the gains. This would compensate for the psychological cost as well as the option value of the land, were the existing owner to retain it. This could contain the payback from successful projects, which could go into a community fund. Finally, future-readiness involves the provision of facilities to take advantage of the changes in economic structure; the transformation of the economy from agriculture to industry/services. It is about ensuring that the affected persons are given the full opportunity and resources to participate in the changing economy.

The components of compensation in the Hangzhou Che Cun Jian Ju model meet these three conditions to some extent. Hangzhou provides market compensation for the existing house, which Zuojun Yang (chapter 6 in this volume) says could reach one million RMB. It also provides 50 to 55 square meters per person, that is, about 200 square meters per nuclear family at 900 RMB per square meter. Not only does it enable each family to use one house for habitation and put the other one out on rent, it leaves a substantial portion of the compensation amount with the family. Recently, Hangzhou also permitted the sale of the allotted houses, enabling the family to raise more capital for investment in any enterprise that they may undertake. In contrast to the Indian compensation, which allows for 22 square meters per family, this is substantially more able to provide financial security.¹⁶

But, what about land transformed directly from agriculture for areas such as the Hangzhou Economic and Technological Development Zone?¹⁷ Can a hardworking farmer accept the transformation to an indolent landlord? An official in the development zone told us that he knew that while he could compensate the acquisition of land from the farmer to build the zone, he could not provide that person with work, since he was unsuited for the occupations generated in the zone. But he could offer the promise that the children of the farmer would have the same opportunities as his own children and it was this hope of a better future for his children that enabled the farmer to rationalize the sacrifice of his land and vocation.

This is in contrast to the Indian situation, as presented in a segment of the documentary *Abad Bhumi* by Dayabati Roy and Parthasarathi Banerjee on the Singur agitation¹⁸. In this segment, a local leader of the ruling communist party in Singur is patiently explaining to the interviewer that the farmers of Singur could become factory guards, and the women, many of whom now travel to find work, could become maids in the houses of the people who will work in the factory. In the

¹⁶ The Indian compensation is for slum dwellers and not necessarily urban villagers who own their land. However, similar schemes are also being proposed for places in Dharavi, like Koliwada, where residents do have title to the land.

¹⁷ Hangzhou Economic and Technological Development Zone is a state-level development zone that was approved by the State Council of China in 1993. The zone covers an area 104.7 sq. km. of which 34 sq. km. is currently, developed, with a population of 200,000, as of 2009. It includes an export processing zone, the Xiasha Higher Education Park with fourteen higher education institutions with 120,000 students and firms such as Allergan, Eastcom, Foxconn, Mitsubishi, Motorola, Panasonic and Toshiba. See <http://www.zhejiang.gov.cn/zjforeign/english/node577/node583/node585/userobject1ai5587.html>

¹⁸ <http://video.google.com/videoplay?docid=305226102342613853> 8

next scene, a farmer expresses doubt that he could find work in a factory in his mid-forties and questions the value of the project. There is little mention of the children of the farmer.¹⁹

One of my enduring puzzles is this ability of an unelected communist bureaucrat to recognize that land acquisition affects not just wealth, but livelihood and self-image and understand what would motivate the farmer, contrasted with the inability of an elected popular local representative, albeit also from a communist party, to understand his electorate.

Hangzhou also returns 10 per cent of the arable land acquired to the farmers' collective to be jointly owned and exploited. In the case of Xintang, given the limited extent of continuing arable use, this was a 4000 square meters plot that could be used for commercial development, with the profits accruing to all the farmers. In part, this is possible because of the nature of land ownership in Chinese villages. While Chinese urban villages have a collective identity, dating back to their Maoist origins, thus facilitating a comprehensive approach, in cities like Delhi in India, they are simply agglomerations of individual landowners. But this is also because some Chinese local governments recognize the need to share the profits of redevelopment with the original users of the land. This eases the land transformation process and increases the perception of fairness.

Finally, by enabling the urban villagers to officially access the urban services, in particular, health and education for their children, by giving them urban hukou, the Hangzhou compensation is future-ready. As the official in the development zone said, there is a clear promise for a better future for the children as full participants in the higher echelons of China's booming economy. This promise is backed up by prompt delivery on the compensation schemes, while in India, it is often the case that even resettlement promises take many years to be actually delivered. The village of Xintang has already been transformed and its people moved to their new houses. Only time will tell whether or not they will benefit from their new life.

Hangzhou is not necessarily the norm. Indeed it may be the exception. A frail old woman in Chengdu, Sichuan in western China was incarcerated for nine months because she protested the acquisition of her land was finally released on the intervention of a high-ranking military official. As such, both her oppression and reprieve depended on the caprice of officials²⁰. The Chinese state now appears to be engaged in transforming this caprice into rule by law, but at times, old habits die hard. This is especially so when the caprice itself is attributable to the presence of a single party system, without effective opposition. Zhang and Fang (2004) note that Beijing demolished 4.2 million square meters of housing over 1990 to 1998, while Shanghai demolished five times as much; 22.5 million square meters. By 1998, 1.5 million,²¹ i.e., one-sixth of Shanghai's urban residents had been relocated (Zhang 2002). Neither is the generosity of the compensation even across China. Nail houses²² in Chongqing and in many other cities are testimony to this. In most other localities, the families are allotted 15 square meters per person, rather than 50 square meters. In such cases, the family gets only one house instead of two and cannot enjoy rental income.

¹⁹ Tata Motors undertook an initiative to train some local Singur youth in ITIs, but the number involved was limited (see http://www.tatamotors.com/our_world/press_releases.php?ID=341&action=Pull).

²⁰ Personal interview, 2 June 2007

²¹ The number of residents was estimated as the product of the number of households and the average family size of the year. If the family size of those in low-quality shelters is larger than the city average, the number of those relocated may be even larger.

²² A nail house or dingzihù (钉子户) is a term used for homes of people who resist relocation, mostly unsuccessfully. For a report on the Chongqing nail house, see Ewing (2007). The house in question was finally demolished on the night of 2 April 2007.

FIGURE 6: NAIL HOUSE IN CHONGQING



Source: China Photos/Getty Images

The value of the urban hukou also depends on the quality of the services in the city. This is not universally good, as the variation in the scores reported in Landry (2003) shows.

But, what happens to the low rental opportunities that were available in the urban villages? In Hangzhou's and Delhi's urban villages, many erstwhile farmers had become landlords who were the suppliers of affordable housing. With *Che Cun Jian Ju*, this supply will fall and affect those who rented these places. Where will they go? In focusing on the owners of these areas, we often tend to forget the users, and this may have effects on the economy of the city. Brian McGrath (chapter 7 in this volume) finds part of the answer in the migrant settlements on the outskirts of Hangzhou. More broadly, there is a strong impression that the working poor are being peripheralized across Asia (Kundu 2009), but in India, this may be less of an issue. The data on slums in Delhi from NSSO (2004) indicates that over three-fourth of the slums are located in residential areas and not on the fringes and along the canals and railway lines and river beds, but this is changing.

In Hangzhou, a rather old but dignified building, much like the bungalows in Bandra, a neighborhood in Mumbai, stands on a small patch of land between two glittering high rises on one of the main thoroughfares. It survived because it was too expensive to compensate the owner, since the extent of development that could be undertaken on that patch would not justify the compensation. Its survival is both an affirmation of the rule by law and acknowledgement that cities in China can be allowed to be a little untidy. In our rush to beautify our cities, as with Delhi for the Commonwealth Games to be held in 2010, we often forget that works in progress are rarely neat, and Indian and Chinese cities are nothing if not works in progress.

HANGZHOU AND THE NEXT STEP

Hangzhou is connected to India in a special and deep way. As Tan Chung (1998) writes:

In Chinese historical and semi-historical documents: there are places called 'ShangTianzhu', 'ZhongTianzhu', and 'Xia Tianzhu' which literally mean, 'Upper India', 'Middle India', and 'Lower India'. These three names actually indicate just a few square kilometres in Hangzhou City in Zhejiang Province in eastern China. How has such a mix-up come about? It is because of a legend that was the making of an ancient Indian Buddhist monk-scholar 'Huili' (whose real identity is lost). In 326 AD, this monk from western India came to Hangzhou. After seeing a hill in this area (in the vicinity of the scenic West Lake), he authoritatively proclaimed that the hill had been flown to China from Magadha (Bihar)! The Chinese believed him and, henceforth, called the hill 'Tianzhushan' (the 'Indian Hill') and 'Feilailong' (the 'Peak that has flown here from India'). It was this legend that has contributed to the existence of 'Upper', 'Middle' and 'Lower' India on the Chinese map.²³

Tan Chung goes on to say that Rabindranath Tagore, who went to China in 1924, came to know of this legend when he visited Hangzhou and made a significant observation:

'[T]he real fact is that the hill which he [Huili] had known in his own country had a Sanskrit name meaning the Vulture Peak [*grdhrakuta*]. When he saw a hill here so like the one he had loved in India, he felt a great delight and gave it the same name'... 'This man [Huili] ... not only discovered a resemblance between the hills here and those of his own land, but found his unity of heart with the people of this country' (Tagore (1925) quoted in Chung 1998).

Today, even as it is firmly anchored in China's remarkable development, its future aspiration, as Brian McGrath (chapter 7 in this volume) describes it, is to become 'Silicon Valley in Paradise'²⁴—a civic imagination that corresponds more closely with the United States and California, even as a number of significant Indian and American software firms are now locating in Hangzhou. In Hangzhou's past, present and its conception of its future, it straddles India, China, and the United States.

As this conversation is carried forward, urbanists will need to explore how Indian and Chinese cities can address the use of scarce resources through the lens of cities such as Hangzhou and the manner in which such cities address issues relating to water, land and cultural heritage. The city matters for sustainability and Chinese and Indian cities will matter even more.²⁵

The first two elements, water and land, characterize the two critical resiliencies, environmental and political, essential to the sustainable development of cities. The issue of water is paramount in many studies of cities and there is considerable physical evidence of the centrality of water management in the design of cities in China, as evidenced by the analysis by Brian McGrath (chapter 7 in this volume), where he shows how in Hangzhou, they managed to kill and then resurrect the West Lake. Similarly, in India, it can be stated, with just a little exaggeration, that 'every large city has killed at least one river'. Indeed, India seems to have learnt little from history. According to Agrawal (2002), the Harappans of the Indus Valley civilization were forced to move eastward due to water shortages, first to present day Rajasthan by the end of the third millennium; and then, as increasing aridity succeeded the mid-Holocene warmth and turned the region's lakes

²³ According to Tan Chung, the archival source of the legend is *Fozu tongji* (History of Buddhist system compiled by monk Zhipan of the 13th century), *juan* 36. Huili is said to have founded the Lingyin Temple.

²⁴ See also <http://tradeinservices.mofcom.gov.cn/en/i/2008-08-19/53759.shtml>

²⁵ Urban areas consume about two-thirds (estimated at 7,900 Mtoe) of the world's energy in 2006, which the IEA projects, will increase to three-fourths (about 12,400 Mtoe) by 2030. About 80 per cent of this projected increase is expected to come from non-OECD countries. Already, Chinese cities consume 1424 Mtoe, i.e., 75 per cent of Chinese energy consumption (IEA 2008, Chapter 8)

saline, further east to the Gangetic *doab*, where they died out. Reurbanization of the *doab* region had to wait till the first millennium BC.

Along with water, land is as much of an issue. Here, the immediate effects on resource sustainability may be less visible (in terms of lower food production, destruction of green cover, etc.) and many of the effects may manifest themselves through the impact on other resources such as water (lower levels of recharge from built up areas, etc.). However, its effect on social and political sustainability is much more visible and direct. The transformation of land from existing use to urban use is an issue of major socio-political contention in both India and China and the manner in which this transformation is mediated has major consequences for the path of urbanization that these countries will take.

Even if China and India did manage to achieve a certain political coherence with respect to their cities, which direction would they take? The average urban American consumes more than twice as much energy as an urban European and even within the United States, it varies by a factor of three across cities (Brown et al. 2008). Cities like Hong Kong, Tokyo, Singapore and Amsterdam require less than a seventh of the energy of Houston, Phoenix, Detroit and Denver to meet their transportation needs (Newman and Kenworthy 1999). Already, in China, energy use varies by a factor of seven from Chongqing to Hohhot, depending on income, climate and energy intensity of industries (Dhaka 2009). Cities in China and India cannot travel the American or even the European way²⁶ if the planet is to survive.

Cultural heritage is, as Brian once put it, the locus of the human in the environment. But it is also important from two key instrumental perspectives. First, the manner in which these cities address their cultural heritage, whether or not they address it and if they do, whether they address only its manifestations or its deeper contexts, provides indicators as to the relative importance the city accords to inter-temporal trade-offs and current trade-offs—the key distinction between sustainable and unsustainable consumption. Second, both India and China face the choice between following the traditional path to urbanization or developing a *sui generis* approach essential for the planet's survival. Jiang (2009) posits two philosophies of building design and use, viz.: 天人合一 (Tian rén hé yì), that is, the oneness of man and nature vis-à-vis the 'high modernist' straw 人定胜天 (Rén dìng shèng tiān) i.e., the triumph of man over nature. But, will China and India think and build differently?²⁷ This decision, will be based in substantial measure on the self-image and self-confidence they have in their own traditions of urbanization and the heritage associated with it.

It is often remarked that if one set someone down blindfolded in a Chinese city and then opened the blindfold, it would be difficult to tell which city one was in since they all look the same. A mistaken conception about China is about its homogeneity, brought about by the external markers of a common language and ethnicity. In practice, however, different Chinese regions take pride in defining themselves distinctively in relation to other regions. As Chinese self-confidence grows, many cities, especially those with a long historical tradition, are likely to seek to project and protect their particular distinctive identity—like Hangzhou's privileging of the West Lake.

It is possible that the salvation of the planet may depend on this distinctiveness of China and India to counteract the consumptiveness that one has seen so far from the United States. It is in our collective interest to nurture it, even if and especially if such individuality is at risk of being

²⁶ See Nivola (1999) for a lucid account of the difference.

²⁷ At the Shanghai World Expo (whose theme is 'Better City, Better Life'), scheduled for May 2010, the centerpiece of the Indian pavilion is a 35 meter wide bamboo dome, powered by solar panels and windmills. See <http://www.hindu.com/2010/02/28/stories/2010022862341800.htm>.

rejected. It is towards this conversation, of three nations, one young and two ancient, and three elements—that of water, land and culture—that we need to take our next step.

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