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Urbanisation in China: Challenges and the Way Ahead

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Introduction

Metropolitan areas have been the drivers of growth in China. Nevertheless, the extent to which these areas can support the rapidly increasing urban population in the near future is questionable. Larger cities have grown beyond the boundaries of the “city proper” to encompass parts of suburban districts. Achieving acceptable standards of environment quality, provision of infrastructure needed by residents and firms, as also providing public services to all residents including migrants form major challenges for metropolitan regions. The urban population in China has been on a massive upward surge. It started increasing particularly since the policy of reform and opening up initiated by Deng Xiaoping in 1976. It led to greater mobility of people due to newly unleashed forces of marketisation. The processes of natural increase, migration and the change in the definition of 'urban' have been responsible for the increase.

This paper tries to understand the ongoing process of urbanisation, the impacts produced and the way that lies

ahead. For the purpose, data and statistics on the varying levels of industrialisation, urbanisation and migration from the different provinces/municipalities/autonomous regions have been collected and analysed. The data and figures used for the work in maps, tables and graphs do not include those from Hong Kong, Macao and Taiwan.

Urban Population Trends

The latest census of 2010 shows that the total population of China is 1.34 billion and the total urban population is 665.57 million. In the period between 2025- 2050, an urban increment of 1.7 billion people is projected globally, with India making a contribution of 352 million and China 186 million. By 2050, China is expected to still have the largest urban population, which will be about one billion; the urbanisation rate is expected to rise to 73.2 per cent. The proportion of urban population in China more than doubled in the period 1980- 2010, rising from 19 per cent to almost 50 per cent. This is expected to reach 59 per cent in 2025.

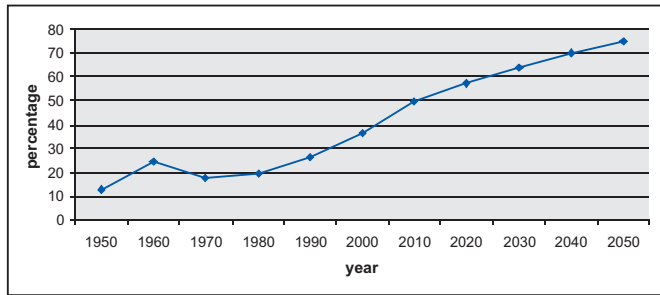


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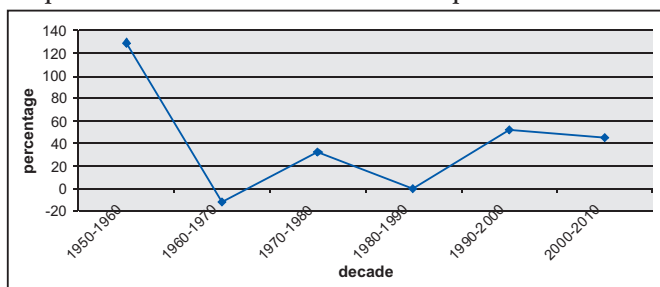
Graph 1: Growth of Urban Population



Source (s) of data used: Various (Statistical Yearbooks, National Bureau of Statistics, CIA World Fact book, World Bank statistics)

The average annual growth rate of urban population was 4.1 per cent between 1990- 2000, and 3.5 per cent between 2000- 09. Earlier, between 1980 and 1993, the urban population increased at an accelerated rate of 4.3 per cent per annum. This rate is more than three times the overall national population growth rate of 1.4 per cent in the same period and significantly higher than the corresponding world average of 2.6 per cent. The annual urban growth rate in 1991 was 3.5 per cent, 4.8 per cent in 1992 and 5.9 per cent in 1994. This increase occurred due to Deng Xiaoping's famous tour of South China in 1992 when the economy started to regain momentum and entered a period of rapid growth. However, the high annual urban growth rate dropped to 2.9 per cent in 1998 after the Asian financial crisis and the recession that followed. Also, reform of the state owned enterprises after the crisis and increasing pressures of urban unemployment led to more stringent pressures against migration of rural workers to major cities, resulting in lower levels of average annual urban growth¹. The following graph shows the decadal growth rate of urbanisation in the country:

Graph 2: Decadal Growth Rate of Urban Population in China



Note: The decadal growth rate is calculated by using the formula: $[(\text{Urban Population in year Y (ex. 2010)} - \text{Urban Population in year X (ex. 2000)}) / \text{Urban Population in year X (ex. 2000)}] * 100$
 Source (s) of data used: Various (Statistical Yearbooks, National Bureau of Statistics, CIA World Fact book, World Bank statistics)

The high growth rate of urban population in the 1950s can be attributed to the fact that during this period, a large population was viewed as an asset. Urban population experienced a massive increase during the

period of the Great Leap Forward, in conjunction with massive efforts at industrialisation. After realising the liabilities of a growing population, efforts were made for birth control, but it had little effect on fertility. This resulted in the leadership at that time concluding that rapid growth of population was an obstacle to development.

In 1964, birth control offices were set up and the campaign was successful in the cities where the birth rate was reduced to half during the 1963-1966 period. Also, after the Cultural Revolution started in 1966, urban youth were sent to rural areas to radically change the bourgeois mindset, as also to learn from workers and farmers in the rural areas. About 18 million urban youth moved to the countryside between 1962 and 1978. This explains the sharp drop and the negative growth of urbanisation in the decade.

However, after reforms were enunciated in 1978, urban population growth began to accelerate. Also, the inflow of foreign direct investment created massive employment opportunities that fostered urban population growth. Nevertheless, after the restructuring of the State Owned Enterprises (SOEs) that employed a major part of the urban population, a slower increase of employment growth was witnessed in the 1990s. In the decade of 2000-2010, the urban population growth has been steady, as efforts on relaxing migratory controls began. The pace of urbanization from the 1950s to 1980 was relatively slow due to two factors:

- a) Rapid growth of rural population
- b) Tight restrictions on rural- urban migration.

The effect of these factors has gradually decreased in the period between 2000-10. Nevertheless, the growth rate of the period is less than that of the previous decade. This can be attributed to the massive unemployment that followed the global financial crisis. As a result of the recession that emerged out of the financial crisis, more jobs were lost in China than anywhere else, as 67,000 small and medium enterprises (SMEs) went bankrupt and more than 20 million workers were forced to return home when coastal factories were forced to shut down due to reduced demands from overseas markets².

The latest census covered 31 provinces, autonomous regions and municipalities in 2010. Map 1 (Please see Annexure 1) shows the level of urbanisation in the various provinces of China.

The map clearly shows a concentration of urban population in the provinces and municipalities on the eastern side of the country. The eastern region is the most developed region and has economic powerhouses wherein manufacturing enterprises are concentrated. Guangdong and Shandong have the highest percentages of urban population at 9.8 per cent and 7.3 per cent, respectively. The urban population percentage of Beijing, the capital of the country stands at 2.398 per cent, while that of Shanghai, which has the largest population in China is 2.730 per cent. This is because most of the population of these two cities are migrants who are registered at their places of origin and, therefore, are not a part of the count on urban population. The statistics for the calculations in the map are based on 2009 figures. It was only in 2010 that the attempt to count migrant workers and tracking unregistered children was carried out.

The lowest percentages of urban population are to be found in provinces/municipalities/autonomous regions in the western part of the country. Tibet has the lowest rates in the country at 0.110 per cent, closely followed by Xinjiang (0.138 per cent), Qinghai (0.374 per cent) and Ningxia (0.463 per cent).

The urban population has been increasing in places which have industrial bases and better standards of living compared to other parts of the country. The map on the number of cities in each province/ municipality/ autonomous region (Please see Annexure Map 2) presents a clearer understanding as to why urban population concentration as a result of better standards of living are found in the eastern part of China.

The map of the cities clearly shows that the provinces with the most number of cities are found in the eastern and north eastern parts of the country. The size of cities (at the prefecture* level and above) is categorised into populations of:

- a) 4 million and above
- b) 2 million- 4 million
- c) 1 million- 2 million
- d) 0.5 million- 1 million
- e) 0.2 million- 0.5 million
- f) Under 0.2 million

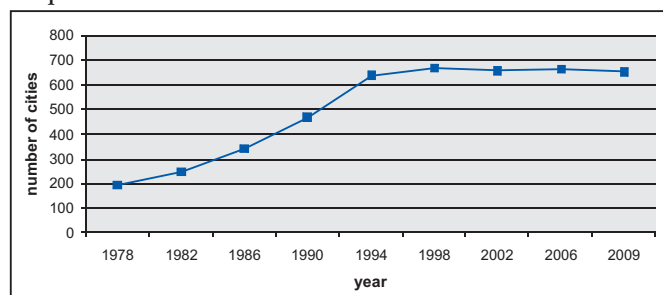
The total number of cities in the six categories in 2009 was 14, 28, 82, 110, 51 and 2, respectively. Beijing and Shanghai are municipalities but are comprised of just one city each with populations more than one million. There are 14 such cities in all in the country. Guangdong province has three such cities, besides having cities of population sizes between 1-2 million, 0.5-1 million, 0.2-0.5 million, respectively. Similarly, Zhejiang has cities with population sizes above 4 million, between 2-4 million, 1-2 million, 0.5-1 million, 0.2-0.5 million, respectively.

Xinjiang autonomous region has cities only with population sizes between 2-4 million and 0.2-0.5 million, while Tibet autonomous region fares the worst with a city having a population of 0.2-0.5 million. Qinghai has only one city which has a population between 1-2 million. Ningxia province and Inner Mongolia autonomous region do not fare well either.

The report on World Urbanization Prospects, 2009³, stated that out of all the cities across the globe, China alone has 25 per cent of the cities with at least half a million inhabitants in each city. Because of greater mobility, the number of cities increased from 467 in 1990 to 654 in 2009. During certain years the number of cities declined, while in others the numbers either remained constant or increased. For example, there were 663 cities in 2000, this figure came down to 662 in 2001. This further declined by two cities in 2002, and remained constant the next year. Similarly, between 2005-07, the number of cities decreased by five⁴. The decline is attributable to the oft changing definition of the word 'urban' in China.

The above graph shows the pattern of growth in the number of cities in the country beginning from 1978, when the reforms started.

*Prefecture is an administrative branch office. A prefectural level city means a regional level city. Technically, a prefecture is an administrative division ranking below a province and above a county in China's administrative structure.

Graph 3: Growth in the Number of Cities

Source (s): Author's calculations based on statistics from National Bureau of Statistics (various years)

Shanghai's population, the largest in the country, stands at 23.02 million as of 2010, while that of the capital Beijing stands at 19.6 million. Guangzhou and Shenzhen in Guangdong province have populations of 15 million and 14 million respectively. The province registered the fastest increase in population in the past decade, at the rate of about 37.5 per cent.

Definition Changes of 'Urban'

There have been six national population censuses in the country since 1953, when the first count took place, followed by ones in 1964, 1982, 1990, 2000 and 2010. In these censuses, the counting of urban areas or populations has been impacted by a series of changes in how the term 'urban' was defined. In 1953, a place was considered urban if it was a seat for a people's committee at the level of xian (county), had a permanent population of 2000 or more, of which about 50 per cent had to be 'urban non-agricultural population' (UNAP).

The alternative for being taken as urban was to have a permanent population between 1000-2000, of which 75 per cent was UNAP and, concurrently, had to be an industrial base. If the population was less than 2000 and there were no seats of people's committees, then it was a town. The city population criterion was changed in 1964 to 100,000 and the share of agricultural population (AP) in the city's total could not exceed 20 per cent. Town criterion was changed to 3000 permanent population, of which 70 per cent had to be UNAP. In 1984, new criteria were used to define urban population. It included all persons who lived for one year or more in the city/town. This implied all the population with urban registration (Urban Hukou) plus those with rural registration (Rural Hukou), but living within the official boundary for a year or more.

Official redefinition of a town and town population were made in 1984, under which UNAP share in the population of a town could be as small as ten per cent. Again in 1986, a redefinition of city and city population took place, in which a town could be upgraded to a city if it had a population of 60,000 which was engaged in non agricultural activities and its annual GDP was more than 200 million Yuan.

In the 1990 census, so as to be considered urban, the resident population had to be composed of local Hukou and the non Hukou populace that had been in the locality for at least one year prior to the Census. All districts under the provincial level and prefectural level cities were classified as urban. In 2000, definition of the word was changed to focus on urban areas at various geographic levels. The changes basically were regarding whether or not an area had an average population density of 1500/ sq. km, whether or not the local government was located in the area, as also whether the locality was contiguous to an area with a local government. In 2006, the revised definitions were adopted.

Smallest population accounting units were used to differentiate between rural and urban areas and greater emphasis was given to the physical aspects of the area, such as the extent of built up areas and its contiguities, than on administrative geography. In the 2010 census, different counting methods were used, and an attempt has been made to count with precision the number of migrants along with the number of unregistered children⁵.

Basically, urban places with a clustered population of more than 100,000 can be established as "designated cities". Also, urban places with a population of less than 100,000 may acquire the same status provided there are important mining and industrial bases, seats of province level state government agencies, relatively large centres for distribution and collection of goods, or cities in important areas such as in border regions. Urban places with county level seats (or above), or where state government agencies are located, as also locales with a clustered population of 3,000, of which 70 per cent or more are from the non agricultural population, were considered as "designated towns"⁶.

Migration and Urbanisation

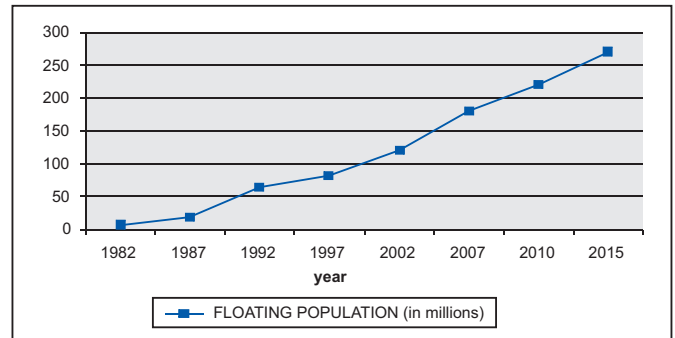
Migration plays an important role in Chinese economic growth and urbanisation. In fact it is one of the most important reasons for urbanisation, with the natural increase in population and change in definition of urban places playing less important roles than that played by migration. Most of the migrating population (interprovincial and intra-provincial) seeks employment in manufacturing and industrial hubs located in special economic zones and industrial bases in the eastern part of the country. In terms of net migrants to urban areas, the percentage for Beijing was 6.22—the highest in the country in 1990, followed by Shanghai with 4.55 per cent⁷.

It becomes essential in this context to distinguish between floating population, permanent migrants and local urban residents in China. While floating population refers to those who had left their place of household registration more than half a year before the time of population census counting, permanent migrants refer to those who had moved to a new place and had changed their official household registration in the past five years. Local urban residents refer to those people who did not move away from their place of household registration in the past five years. It is relatively easier to track permanent migrants than to count the floating population.

Since the mid 1980s, China's floating population experienced a rapid growth after the State Council released a document titled “Notice on the Issue of Farmers' Entry and Settlement in Towns”. As a result, the floating population soared to 18.1 million in 1987. China's floating population in 2005 made up 11.27 per cent of the total population, while in some cities it reaches up to 20 per cent or even 30 per cent. The percentage of floating population in the total populations of Shanghai, Guangdong, Beijing and Zhejiang and Fujian was 34 per cent, 26 per cent, 23 per cent, 20 per cent and 19 per cent, respectively, in 2005⁸.

The floating population increased from an estimated 6.57 million in 1982 to 221 million in 2010 and, according to some predictions, it may increase to about 270 million by 2015.

Graph 4: Increase in floating population



Source (s): Various⁹

The eastern region, which is the most developed region, receives the highest numbers of migrants, including the floating population. In 2000 the eastern region received a floating population of 16.4 million from the inland region, while it sent a floating population of 1.4 million to the inland region¹⁰. The following table shows the percentages of the total interprovincial migrants' population migrating to the eastern, central and western provinces.

Table 2: Percentages of the Total Interprovincial Migrants

DESTINATION REGION	1995	2000	2005
Eastern	57.0	75.9	85.4
Central	26.1	10.9	6.9
Western	17.0	13.3	7.8

Source: Taylor, 2011¹¹

Thus, it is clear from the statistics that migration in all the three regions has been growing over the years. However, the eastern region receives the highest number of migrants, owing to its level of industrialisation and infrastructure, while the western region receives the lowest number of migrants.

Conclusion

Estimates made by the McKinsey Global Institute project that some 400 million people will move from rural areas to cities over the next 15 years. There is serious fear that cities such as Beijing, Shanghai and Chongqing would fail to cope with greater inflow of migrants. In order to deal with the rapidly increasing levels of urbanisation, the country needs a clearer focus on the issue and to accordingly chart out a way ahead. As evident from all the indicators, the western region is the least developed and urbanised.

The region covers 12 provinces, cities and autonomous regions—Sichuan, Chongqing, Guizhou, Yunnan,

Gansu, Shaanxi, Qinghai, Ningxia, Xinjiang, Tibet, Guangxi and Inner Mongolia. With the exception of Chongqing, which was made into a municipality in 1997, all the other mentioned above have very few numbers of cities above the prefecture levels and have lower urbanisation percentages. Also, the populations in the existing cities are not very large and no large cities have emerged in these provinces/autonomous regions.

The central and western regions together account for nearly 90 per cent of the country's territory, but percentages of urbanisation in the western regions in particular is well behind that of eastern China's. Scattered population and large swathes of land with a low urbanisation rate have impeded development in the central and western regions. The already developed areas of eastern China are expanding and modernising their megapolises to carry development forward. For homogenised development, there is a need to focus on the western region as well. Currently, in comparison with the economy of the coastal region, the western region is characterised by:

- a) Small production scale, and low incomes of residents;
- b) Low stage in the evolution of the industrial structure;
- c) Low productivity of labour and weak market competitiveness;
- d) Low level of opening up to the outside world which, in turn, leads to limited scope to attract foreign direct investment (FDI).

Keeping the prevailing conditions in mind, the government initiated the Western Development Strategy (XiBu Da Kaifa) in 2000. The plan was focused on boosting economic growth, raising people's living standards and enhancing environmental conservation. Due to the strategy, the combined GDP of the western region reached 6.69 trillion Yuan in 2009, four times more than the 1.67 trillion Yuan in 2000¹². In 2010, the National Development and Reform Council (NDRC) stated that 23 new infrastructure projects would be unveiled in the western region with a total investment of 682.2 billion Yuan.

Right from 1978, coastal regions have been the beneficiaries of preferential government policies.

Additionally, the first choice for investors is the east coast not just because of preferential policies, but also due to favourable investment environment and convenient location. Most of the investors since the reform and opening up of the economy were from Hong Kong, Macao and Taiwan and other overseas Chinese communities who had ancestral roots in southern and eastern China. Quite naturally, these regions were their first choices for investment. Foreign investors find conditions in the western region still very difficult. The region is promoted as labour intensive. Nevertheless, low cost manufacturing bases, transportation and logistics costs increase production costs¹³. Focus is needed on increasing new industries and environment friendly techniques, along with experienced management and workers with updated skills. The challenge for local governments in the region lies in developing a good investment environment and sound policies and regulations to attract foreign investors. Local governments and enterprises in the western region are in want of policy planning capability and know little about market economy and open door policy.

Due to the Western Development Strategy, the last ten years have witnessed steady growth of China's West. A package of socialist assistance for minority areas has also been undertaken¹⁴. The Communist Party of China (CPC) Central Committee has three policies for the less urbanised Western region. These are¹⁵:

- a) Making use of financial transfer payments and reallocation of tax paid from eastern China to support the relatively underdeveloped areas;
- b) Western Development Strategy;
- c) Urging local leaders in the eastern provinces to extend support to the underdeveloped areas in the western regions.

Nevertheless, these need to be thoroughly implemented and other development initiatives taken, such as agricultural development and industrialisation that are still at a low level.

The next ten years will be crucial for further development of the Western region. Developing more cities in the region is one way of correcting the imbalance between this region and the developed

eastern and southern regions. As the areas of eastern China are expanding and modernising their megapolises to further carry forward development, the western region will have to focus on its cities for development.

In the 2001 household survey by the Ministry of Agriculture, it was estimated that there were 88 million rural migrants, of which almost 34 per cent came from the western region¹⁶. The country has a surplus labour population of about 240 million and most of them live in the western and central regions. The problem is that the number of cities in the region is relatively small and the cities' population is not very large. The urbanisation process has been slow and no new large cities have come up¹⁷. Their development has just begun and can absorb only a small number of surplus labour.

Besides agricultural development, focus needs to be laid on small and medium cities. Medium size cities are those that have populations ranging between 200,000-500,000, while small cities are those with populations fewer than 200,000. The official urban policy has been to "strictly control the growth of the large cities, to rationally develop the medium sized cities and vigorously promoting growth of small cities and towns"¹⁸. But in the case of the provinces in the western region, the absence of large cities is clearly visible in map 2 when one looks at the number of cities above the level of prefecture. The creation of better facilities and industrialisation is needed for increasing the number of large cities in the region.

The key is to build basic infrastructure and provide job opportunities locally to ease the traffic pressure from workers moving between areas and regions. Also, a rewriting or abolition of household registration rules in cities with populations between 500,000 and one million is required. If the lopsided urban structure is not managed properly, the cities of Beijing, Shanghai, Chengdu, Chongqing, Guangzhou, Shenzhen and Tianjin and Wuhan may have populations of more than 10 million. Some of these megacities are already in a chaotic state. Another solution is to create a new generation of cities, many of them as satellites to existing cities¹⁹.

The level of urbanisation in the country is increasing at a rapid pace and there is need to devise newer policies to substitute the ones already existing in the country. Only then can the development of the country take place in a homogenised manner. Also, there is need to evaluate the manner in which the urbanisation process is represented. The process of urbanisation has spatial consequences as well. The growth of urban places is unavoidably central to the task of making the country into a modern state²⁰. Cities are perceived as institutional engines that facilitate increase in productivity and national and international competitiveness. Cities are also important because of the potential they carry to increase consumption levels, which in turn plays a crucial role in the development of the national consumption market. Thus the country needs to address the issues that accompany the process of urbanisation in a more thorough manner.

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Ends Note:

1. Kam Wing Chan and Ying Hu, "Urbanization in China in the 1990s: New Definition, Different Series and Revised Trends", *The China Review*, Vol.3, No.2, Fall 2003, pp 49- 71.
2. Sriparna Pathak, 2010 "China and the Global Financial Crisis: Impact on the Manufacturing Sector", M.Phil dissertation submitted to Jawaharlal Nehru University in 2010.
3. United Nations, "World Urbanization Prospects", 2009, URL: http://esa.un.org/unpd/wup/Documents/WUP2009_Press-Release_Final_Rev1.pdf. Accessed on July1, 2011
4. China Statistical Yearbooks 2005 and 2007, National Bureau of Statistics, 2007, CIA World Fact book, 2007, World Bank statistics, 2005, 2006, 2007.
5. For further reading on the confusion regarding definition changes and census, references can be made to Kam Wing Chan and Xu Xueqiang, 1985, "Urban Population Growth and Urbanization in China since 1949: Renstructing a Baseline", *China Quarterly* . Vol. 104, pp 583-613; Ma, L. and Gongchao Cui, 1987, "Administrative Changes and Urban Population in China", *Annals of the Association of American Geographers*, Vol. 77, No. 3, pp 373-395; Sidney Goldstein, 1990, "Urbanization in China, 1982-87: Effects of Migration and Reclassification", *Population and Development Review*, Vol. 16, No. 4, pp 673-701.
6. Kam Wing Chan and Ying Hu, "Urbanization in China in the 1990s: New Definition, Different Series and Revised Trends", *The China Review*, Vol. 3, No.2, Fall 2003, pp 49-71.
7. Shenghe Liu, Xiubin Li and Ming Zhang, 2003, "Scenario Analysis on Urbanization and Rural- Urban Migration in the 4th census", Interim Report, IR-03-03, URL: <http://www.iiasa.ac.at/Admin/PUB/Documents/IR-03-036.pdf>. Accessed on June 10, 2011

8. National Population and Family Planning Commission of China, <http://www.npfpc.gov.cn/en/publications/detail.aspx?publicationsid=09051110706328092>, Accessed on June 13, 2011
9. Zai Liang and Zhongdong Ma, 2004, "China's Floating Population: New Evidence from the 2000 Census", *Population and Development Review*, Vol. 30, No.3, pp 47-488; "Nine Trends of Changes of China's Floating Population Since the Adoption of the Reform and Opening-up Policy", 2008, National Population and Family Commission of China, URL <http://www.npfpc.gov.cn/en/publications/pdetail.aspx?publicationsid=090511101706328092>. Accessed on June 22, 2011; Joseph C.H. Chai, B. Karin Chai, 1997 "China's floating population and Its Implications", *International Journal of Social Economics*, Vol. 24, pp.1038 - 1051
10. "The Floating Population's Household Strategies and the Role of Migration in China's Regional Development and Integration", Yu Zhu, *International Journal of Public Geography*, 2003, Vol.9, pp 485- 502.
11. Guy Taylor, 2011, "China's Floating Migrants", LSE Migration Studies Unit, Working Paper No. 2011/ 07.
12. Embassy of the People's Republic of China, "China's Western Region Development Plan: A Dual Strategy", July 9, 2010, URL: http://news.xinhuanet.com/english2010/china/2010-07/08/c_13390789.htm. Accessed on June 18, 2011
13. "China's Western Development Strategy and Its Impact on Qinghai Province", Anja Lahtinen, September 2005, Ministry of Trade and Industry, Finland, URL: [http://julkaisurekisteri.ktm.fi/ktm_jur/ktmjur.nsf/All/E12F973DFB939C26C225707700279C01/\\$file/ratu7mos_eng_2005.pdf](http://julkaisurekisteri.ktm.fi/ktm_jur/ktmjur.nsf/All/E12F973DFB939C26C225707700279C01/$file/ratu7mos_eng_2005.pdf). Accessed on June 16, 2011.
14. "White Paper on China's Rural Poverty Reduction", March 5, 2010, Beijing Review, URL http://www.bjreview.com.cn/Cover_Story_Series_2010/2010-03/05/content_251615_3.htm Accessed on June 21 2011.
15. Chen Jin, Discussion at ORF, New Delhi, July 11, 2011.
16. Huang Ping, and Frank N. Pieke, 2003, "China Migration Country Study", URL: http://www.sociology.cass.cn/shxs/s09_shx/zlk/huangping/DFID_Web_Paper_3.pdf Accessed on June 10, 2011
17. "Urbanisation Level Still Low in Western China", Xinhua News Agency, March 27, 2007
18. Laurence J.C. Ma, and Chusheng Lin, 1993, "Development of Towns in China: A Case Study of Guangdong Province", *Population and Development Review*, Vol. 19, No.3, Sept. 1993, pp 583- 606.
19. "The Challenge of Millions on the Move", Andrew Moody, China Daily, Beijing, 18 October 2010.
20. T.G. McGee, George C.S. Lin, Andrew M. Marton, Mark Y.L. Wang and Jiaping Wu, "China's Urban Space: Development Under Market Socialism", 2007, Routledge Taylor and Francis, New York.

Annexure

Map1: Urbanisation in the various provinces/municipalities and autonomous regions in China



Note: Formula used for calculating urban population in provinces/municipalities/autonomous regions: $(TUPP/TUPC) * 100$. TUPP signifies Total Urban Population of Province or Municipality or Autonomous Region in 2009, while TUPC signifies Total Urban Population of China in 2009. Source(s) of data used for calculations for the map: China Statistical Yearbook, Population Reference Bureau

Map 2: Various categories and number of cities in various provinces/municipalities and autonomous regions of China



Source(s) of data used for calculations for the map: Number of Cities at the Prefecture Level and Above (2009), National Bureau of Statistics



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