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Cities as labor markets:
relevance to China city cluster development

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The efficiency of large labor markets is the main cause of ever-growing cities

- **Cities are primarily labor markets**

- Large labor markets are more productive than smaller ones

- The higher productivity of larger labor markets is driving the growth of cities,

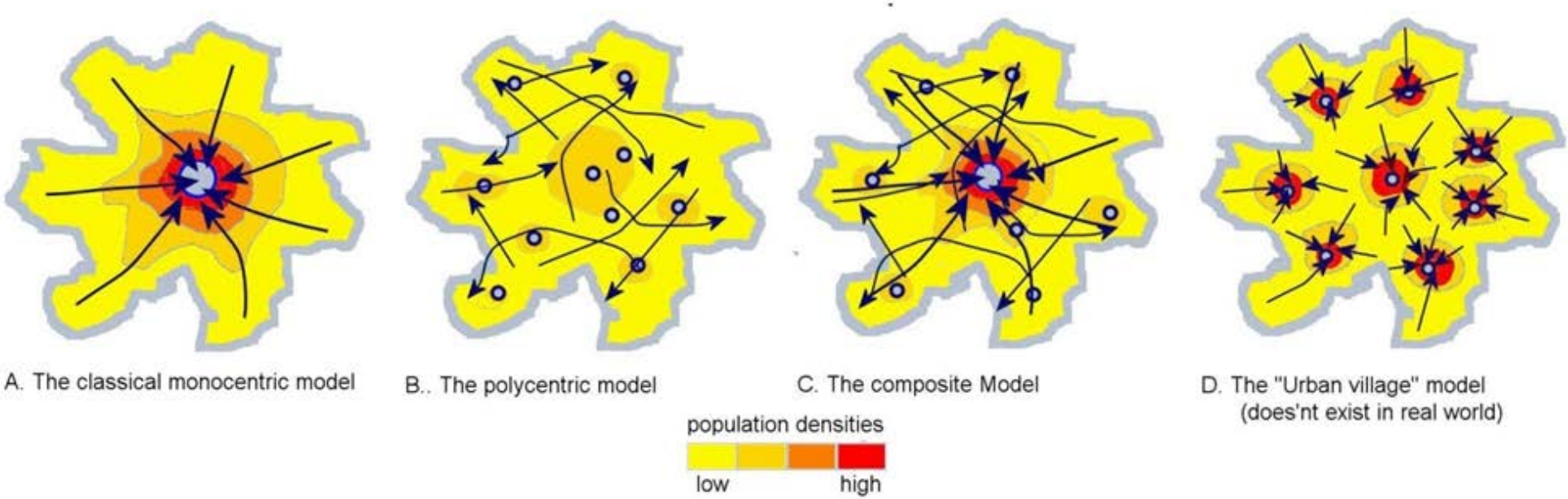
A city's productivity depends on its ability to maintain mobility as its built-up area is growing

- Commuting time and commuting cost are limiting the size of labor markets and therefore limiting urban productivity

- As Prud'homme writes in his paper (1-): "[…] *the benefits associated with city size are only potential, they are contingent upon the quality of management*." and I will add , to the speed of transport.

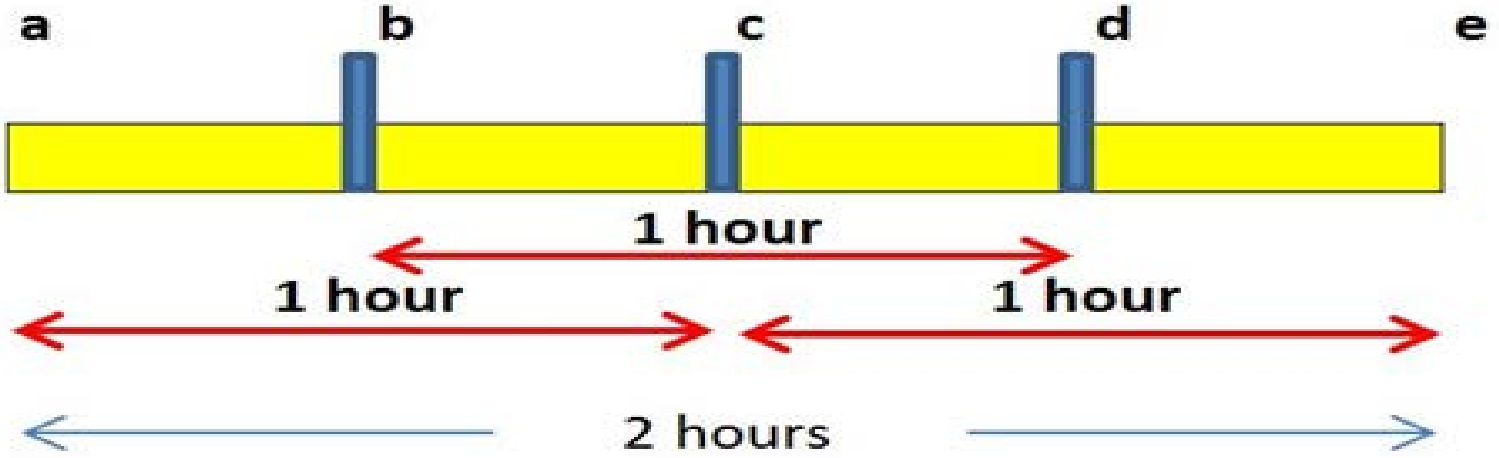
1- *Prud'homme and Lee, 1998, "Size, Sprawl, Speed and the Efficiency of Cities". L'OEIL, Observatoire de l'Économie et des Institutions Locales, IUP — Université de Paris XII*

The spatial pattern of labor mobility



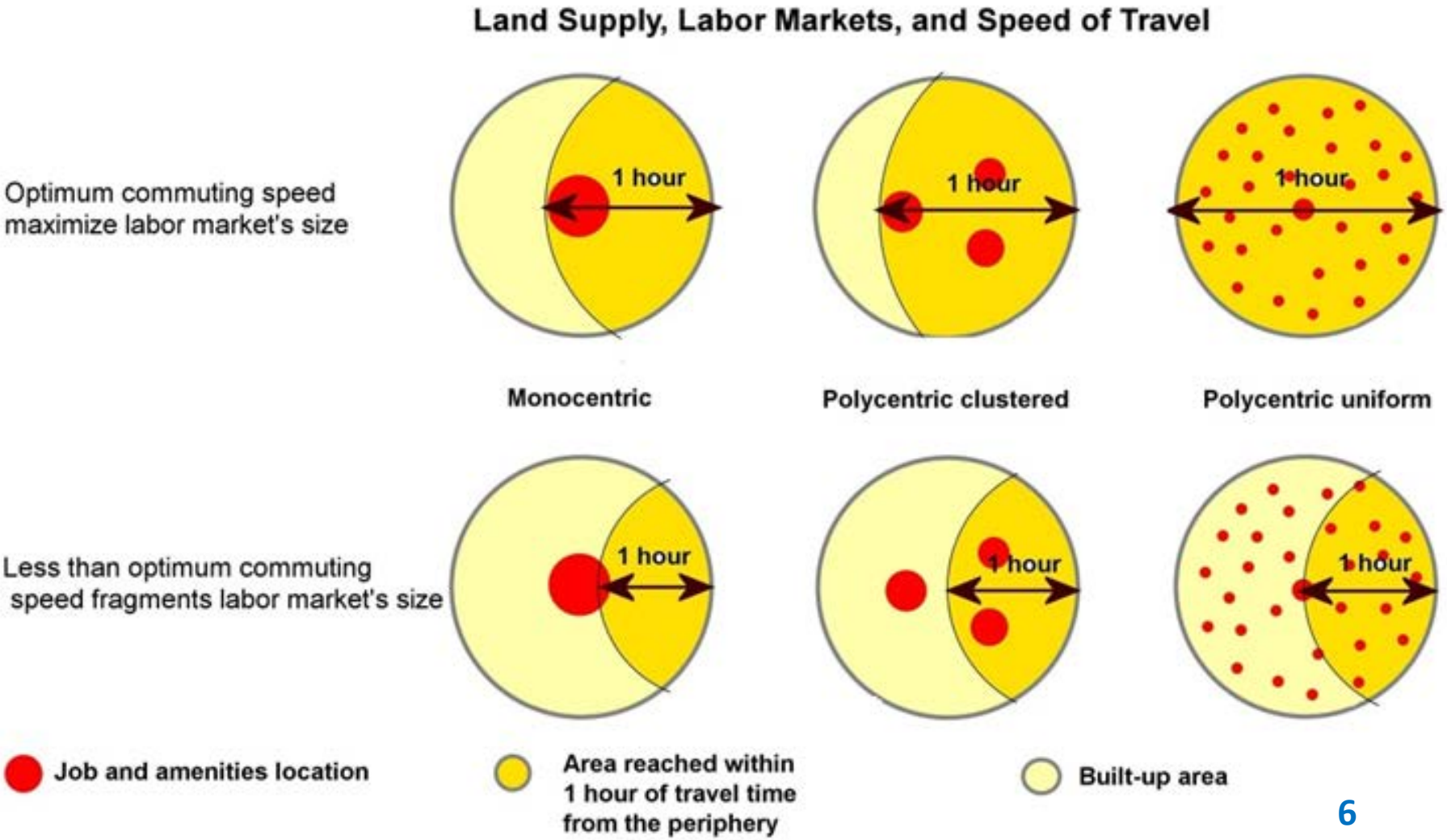
Most modern cities follow C. the composite model
Model D, exists only in the mind of planners

Schematic example of labor market fragmentation



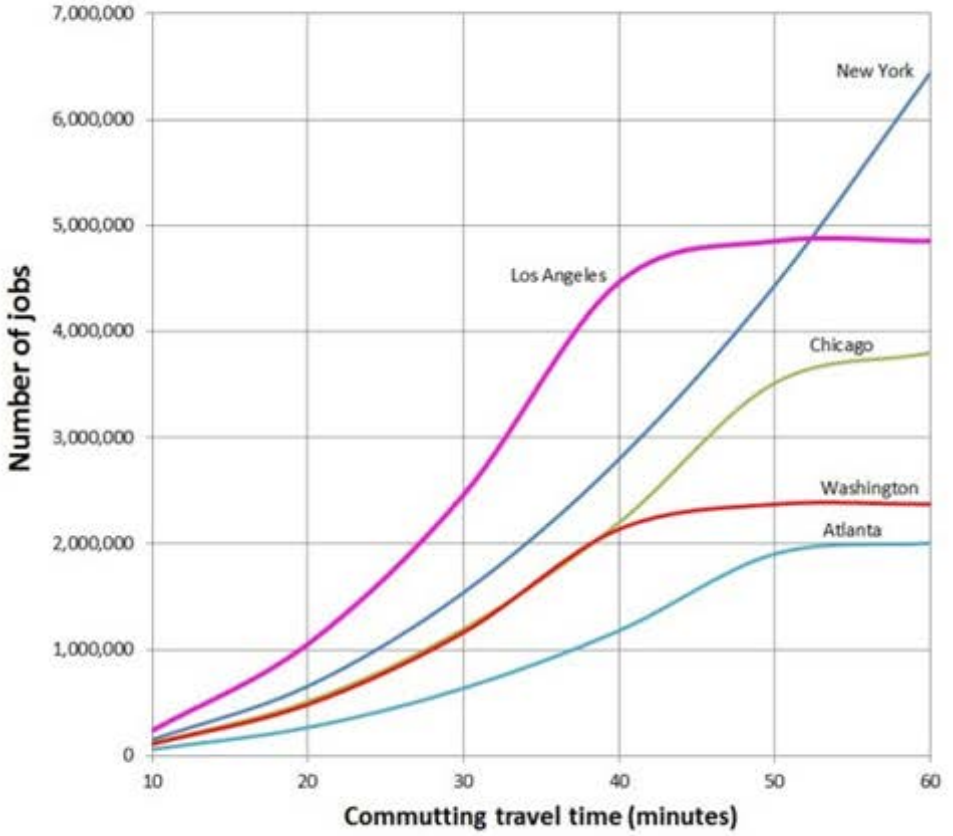
- All jobs are concentrated in **b, c** and **d ,**Each location contains 1/3 of all jobs
- Workers located between **b** and **d** can reach 100% of all the jobs in less than one hour
- workers located between **a** and **b** can reach only the jobs located in b and c in less than one hour
- workers living between **d** and **e** can reach only the jobs located in **c** and **d**
- 50% of the workers (between **b** and **d**) have access to 100% of the jobs in less than 1 hour
- while the other 50 % (between **a** and **b** and between **d** and **e**) have access to only 2/3 of the all the jobs.
- Therefore the effective size of the labor markets is only 83% of all the jobs available in the city. (50% of 100% + 50% of 2/3 = 83.3%).
- If the speed of transport could be increased so that one could travel from **a** to **d** in less than one hour , instead of the 1 hour 30 minutes as shown above , then the effective size of the job market would be 100% of **all** jobs available.

different commuting speeds have an impact on the effective size of the labor market depending on the spatial distribution of jobs.



The number of jobs accessible in a given time depends on the average speed of the transport system

Number of jobs accessed by commuting travel time by car in 2010 in some US metropolises



Number of jobs reached by minutes commute

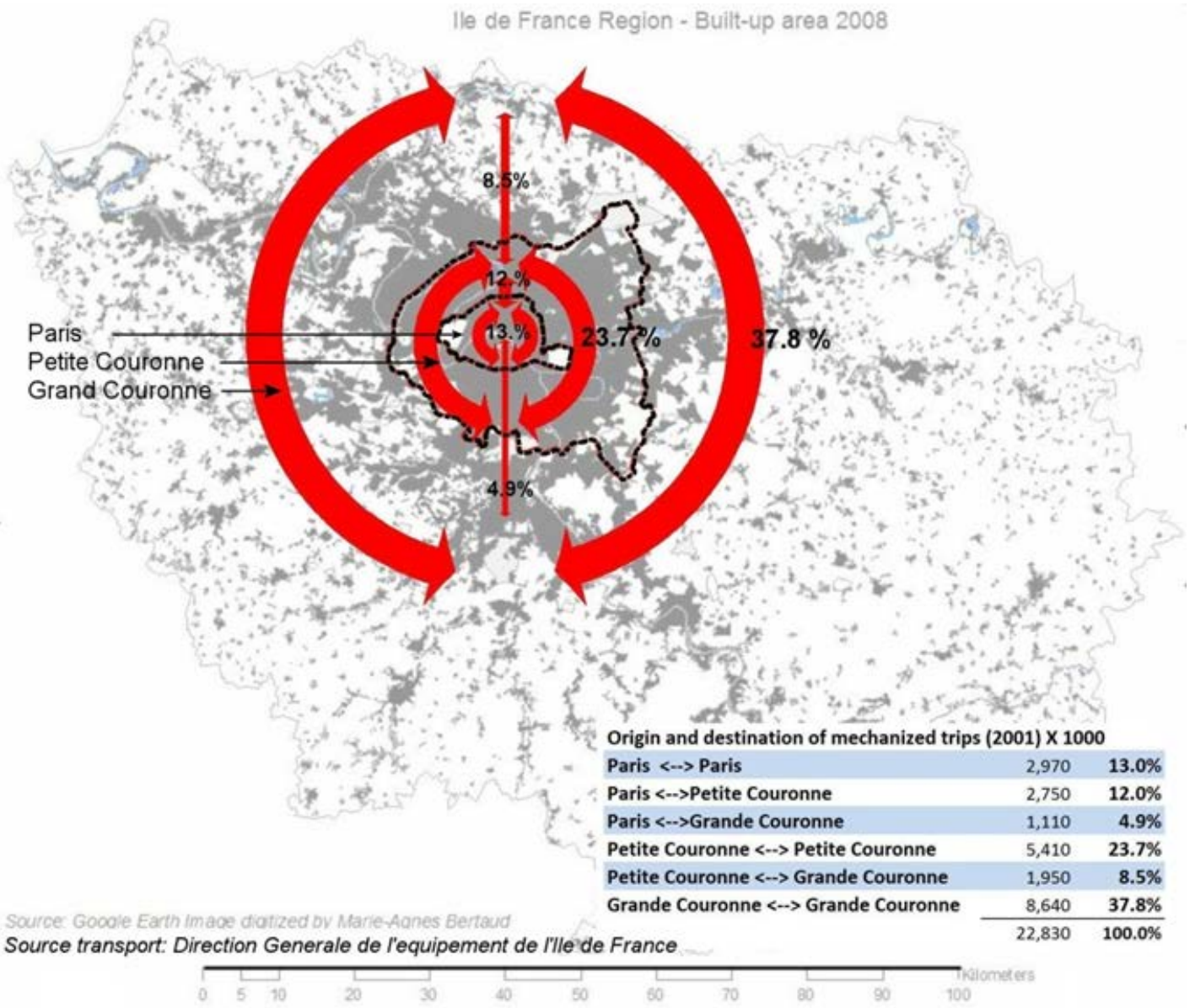
	10	20	30	40	50	60
New York	150,849	654,932	1,537,458	2,795,655	4,432,204	6,438,456
Los Angeles	237,203	1,052,716	2,458,111	4,467,004	4,852,354	4,852,354
Chicago	115,890	509,755	1,194,136	2,197,286	3,514,244	3,797,772
Washington	108,988	481,675	1,160,713	2,135,912	2,370,531	2,370,531
Atlanta	59,477	264,942	635,155	1,178,230	1,902,208	2,003,047

Percent of total number of jobs in the metropolitan area

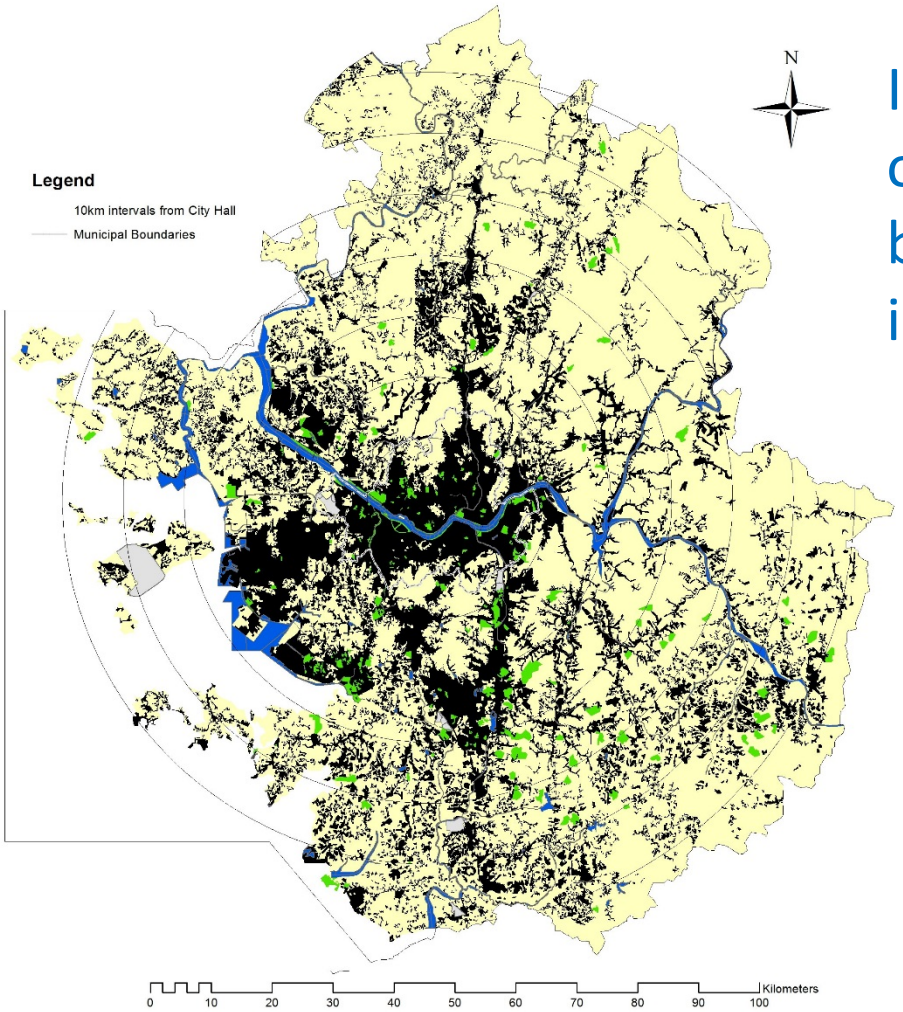
	10	20	30	40	50	60
New York	2%	9%	21%	38%	61%	89%
Los Angeles	5%	22%	51%	92%	100%	100%
Chicago	3%	13%	31%	58%	93%	100%
Washington	5%	20%	49%	90%	100%	100%
Atlanta	3%	13%	32%	59%	95%	100%

Sources: David Levinson, "Access Across America", 2013, Center for transportation studies, University of Minnesota

In large metropolitan areas, most trips are from suburb to suburb- Example of Paris metropolitan area



Seoul Metropolitan Area - 2009

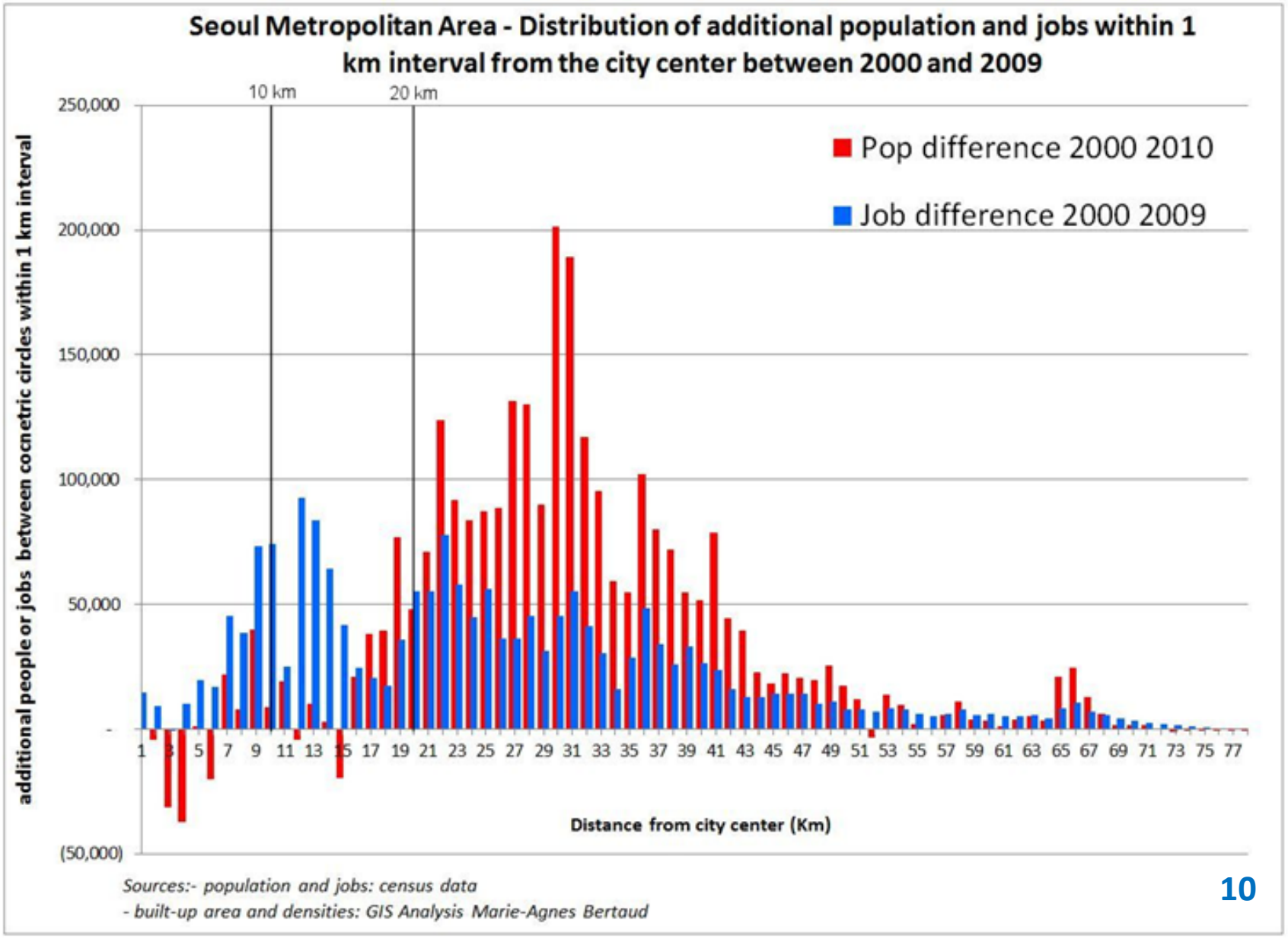


In Seoul Metropolitan areas, most of the jobs and population added between 2000 and 2010 have been in suburbs

Seoul - change in the spatial distribution of population and jobs between 2000 and 2010

	distance from city center	Census 2010				Increase between 2000 and 2010			
		Population	%	Jobs	%	Population	%	Jobs	%
Central city	0 to 10 km	5,409,428	22%	2,676,391	31%	(12,593)	**-0.5%**	302,558	**16.2%**
Inner suburbs	10 to 20 km	7,644,893	31%	2,219,956	26%	231,709	**8.8%**	460,789	**24.7%**
Outer suburbs	20 to 78km	11,654,883	47%	3,624,400	43%	2,423,859	**91.7%**	1,102,002	**59.1%**
		24,709,203	100%	8,520,747	100%	2,642,975	100.0%	1,865,349	100.0%

Most of the increase in population and jobs in Seoul Metropolitan areas between 2000 and 2010 has been in the suburbs



Affordability of land and floor space allows all income groups to participate in the labor market

- Housing affordability requires large differences in land and housing prices within a metropolitan area
- Large differences in land and housing prices are possible only with large density differences within a metropolitan area
- The ideal “Compact City” being often promoted by planners is incompatible with housing affordability
- Large city clusters cannot be “compact”, meaning having a uniform high density, although they may use land efficiently

Housing affordability is linked to efficient transport

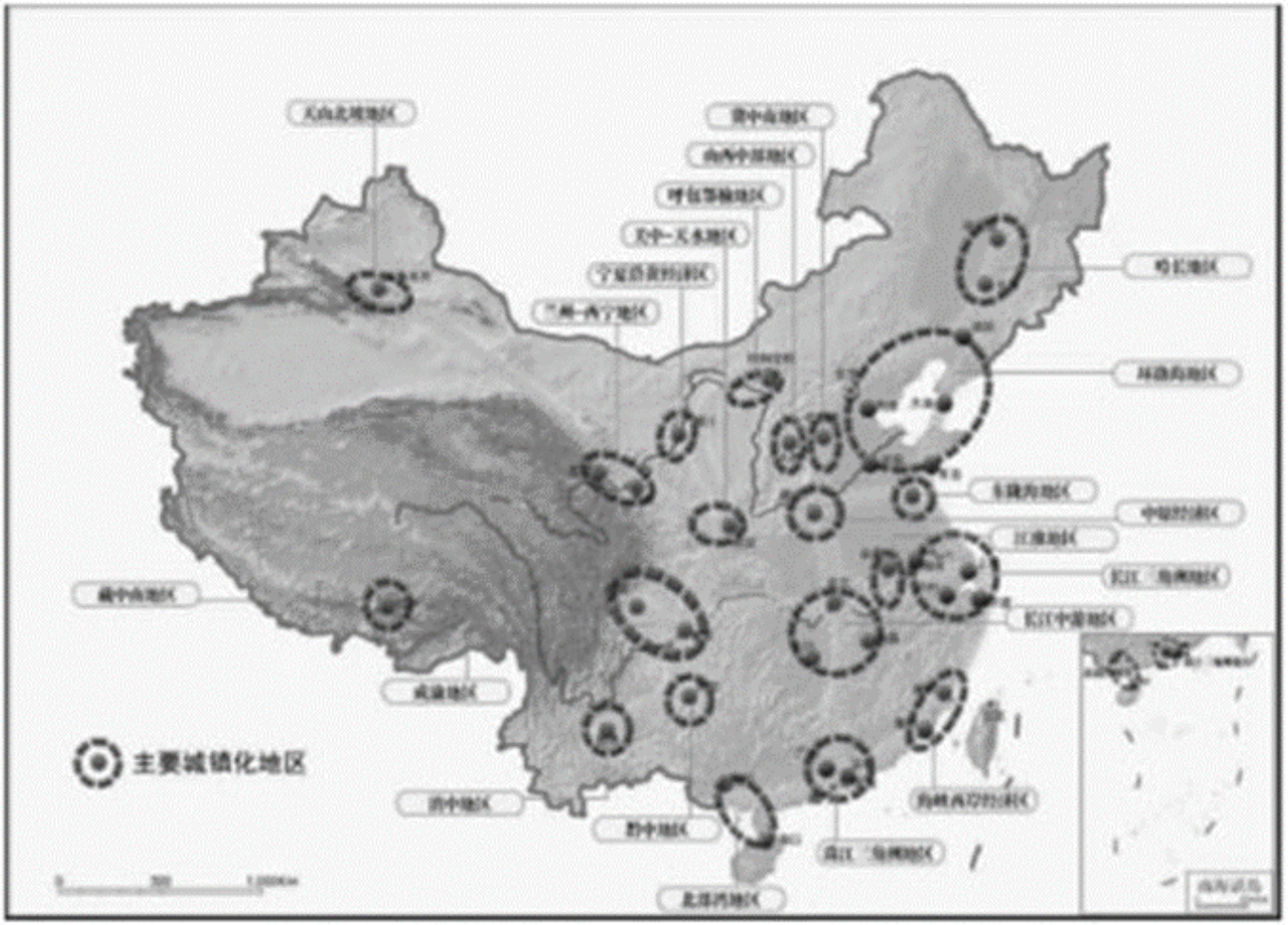
- Efficient transport increases the supply of land where worker can afford housing
- Efficient transport is therefore key to housing affordability
- Inefficient transport either force workers to live close to their workplace in exiguous dormitories or to spend long hour commuting at a high social cost

Cities viewed as labor markets: operational implications for large city clusters in China

- Diversity of transport modes and speed of transport is indispensable to the productivity of large city clusters
- If speed of transport can be achieved in large city clusters, their productivity will be higher than in any urban form existing today
- The planners objective should be to maximize the average number of job reachable within less than one hour commuting time (one way)

The development of existing large city clusters are part of China’ s National Plan on New Urbanization (2014-2020)

图3 《全国主体功能区规划》确定的城镇化战略格局示意图

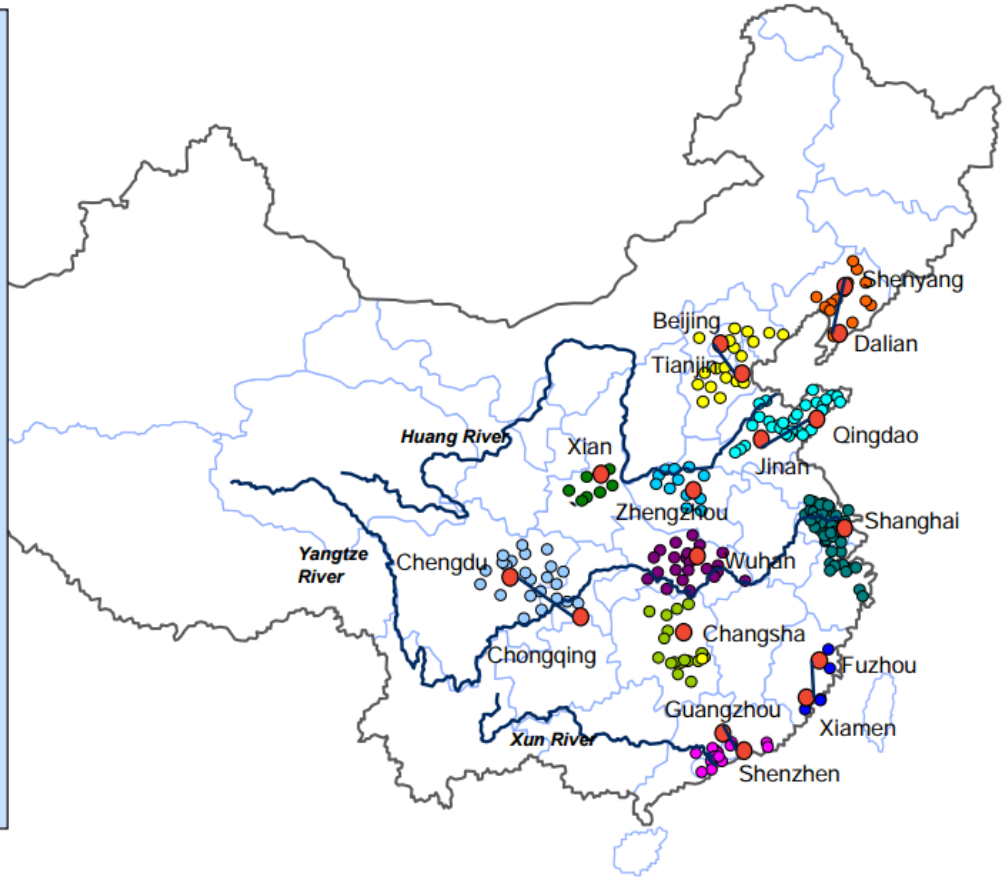


China' s National Plan on New Urbanization (2014-2020)

Hub and spoke would see China's 11 networks of cities integrating and growing rapidly

Economic regions

Regional hubs	Number of cities in region
Beijing/Tianjin	28
Shenyang/Dalian	22
Qingdao/Jinan	35
Xian	8
Zhengzhou	23
Shanghai*	58
Chengdu/ Chongqing	31
Wuhan	27
Changsha	20
Xiamen/Fuzhou	14
Guangzhou/ Shenzhen**	23

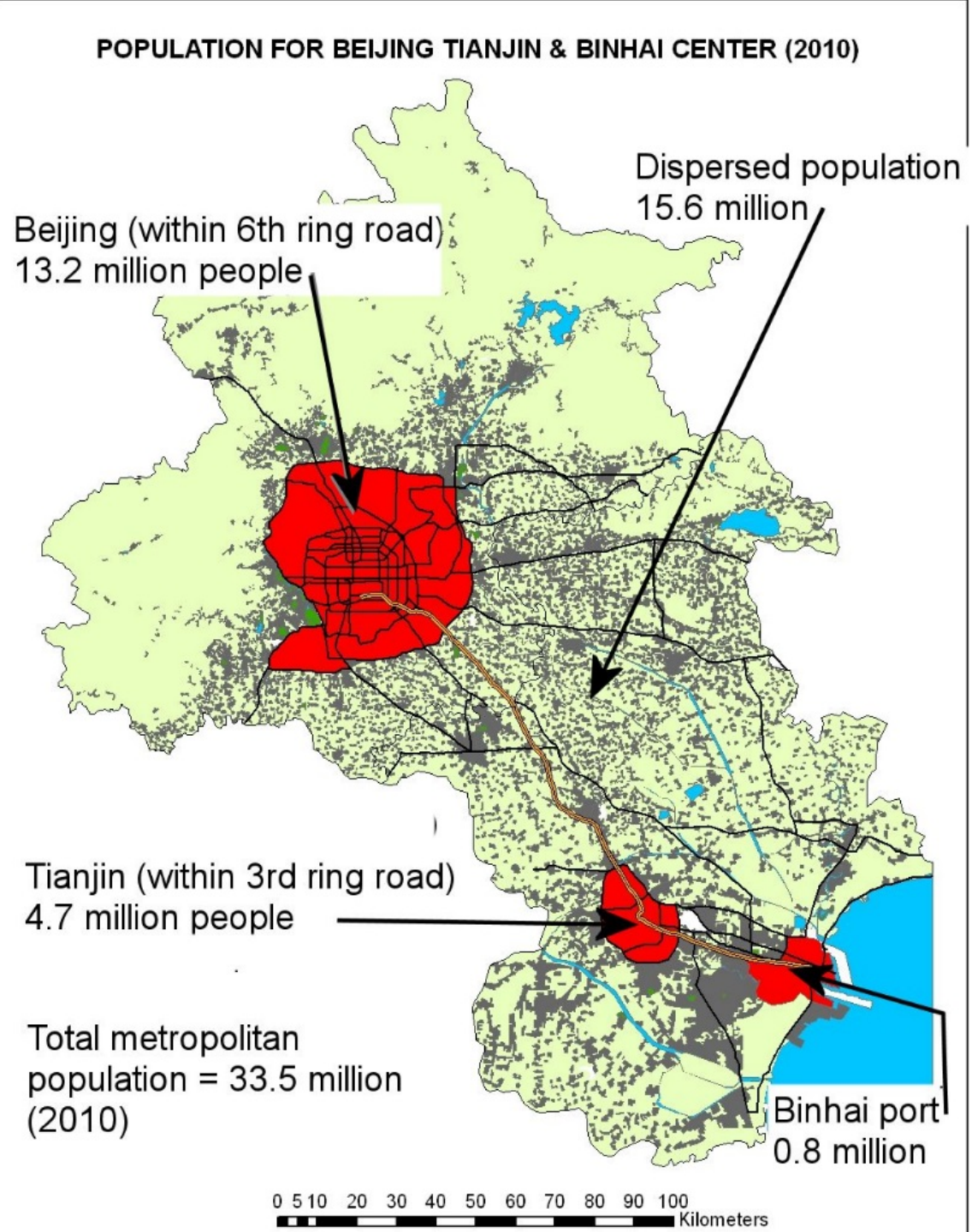


* Yangtze River Delta Cluster.

** Pearl River Delta Cluster, with strong linkages to Hong Kong.

Source: McKinsey Global Institute analysis

Beijing Tianjin Hebei
cluster (partial representation only on figure)



33.5 million people in 2010. Of which 15.6 million people dispersed in smaller towns.

Can a transport system be developed to integrate the population of Beijing-Tianjin-Hebei cluster in one labor market?