

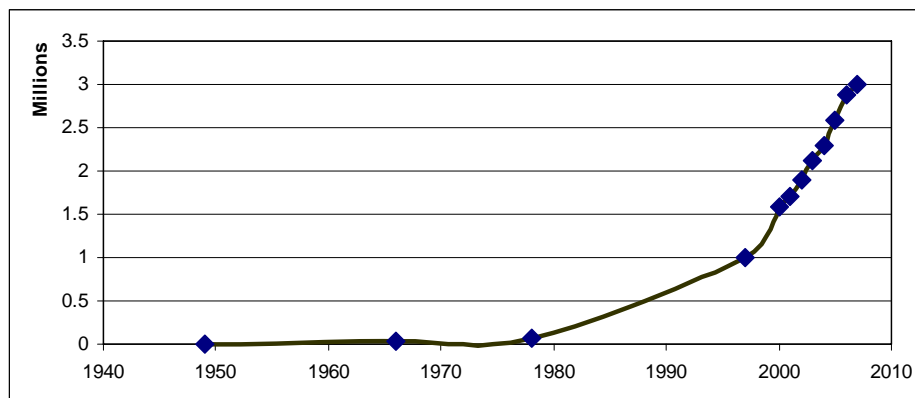
# Issues of Urban Transportation Planning in China

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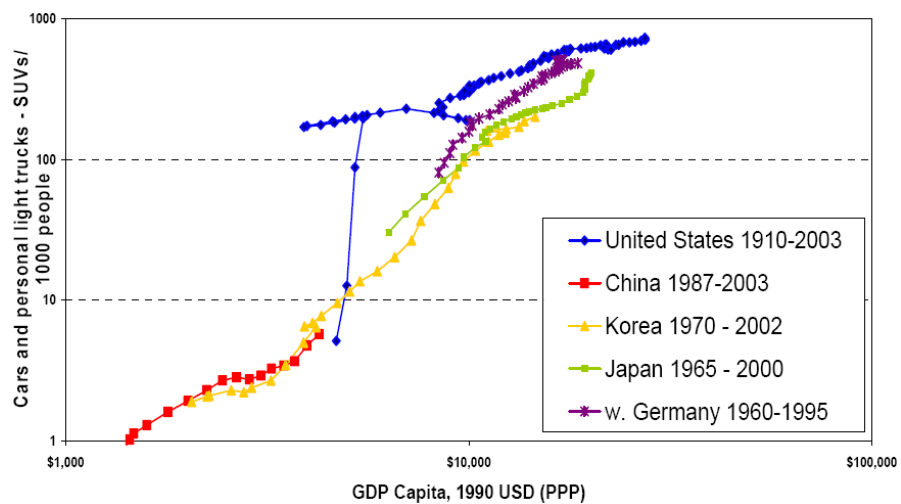
## Motor vehicles in Beijing



# Issues

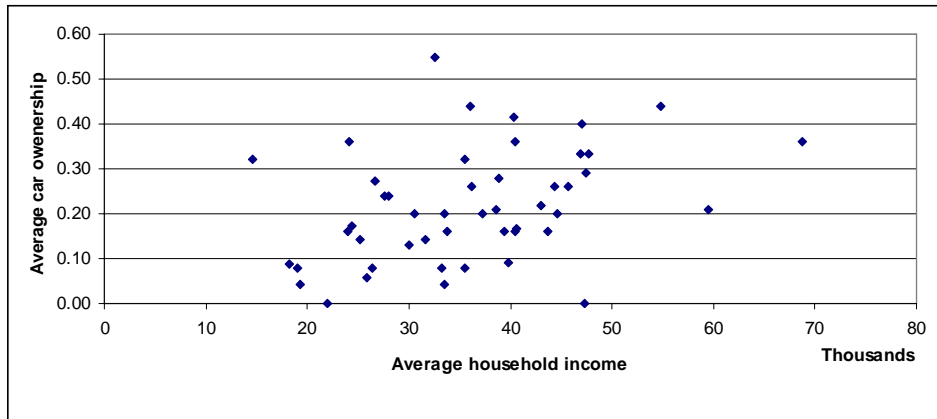
- Predicting motorization
- Analyzing demand
- How to deal with mixed traffic
- Evaluating spatial/land development
- Creating planning procedures

## Motorization in China and other nations

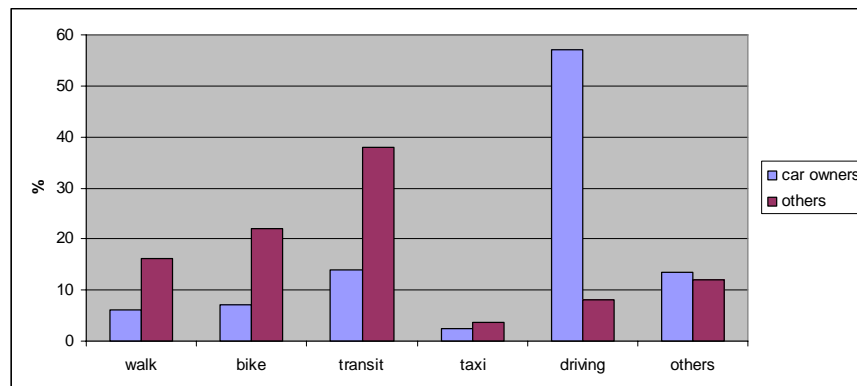


Source: Lee Schipper and Wei-Shiuen Ng, 2007

## Income vs. car ownership



## Mode split: car owners vs. others



Source: Jingxia Wang, 2006



## Mode competition

Correlation between different modes

	Walk	Bike	Transit	Exclusive Motorized Modes
Walk	1			
Bike	<b>-.378(**)</b>	1		
Transit	-0.110	<b>-.707(**)</b>	1	
Exclusive Motorized Modes	-0.149	<b>-.432(**)</b>	0.210	1

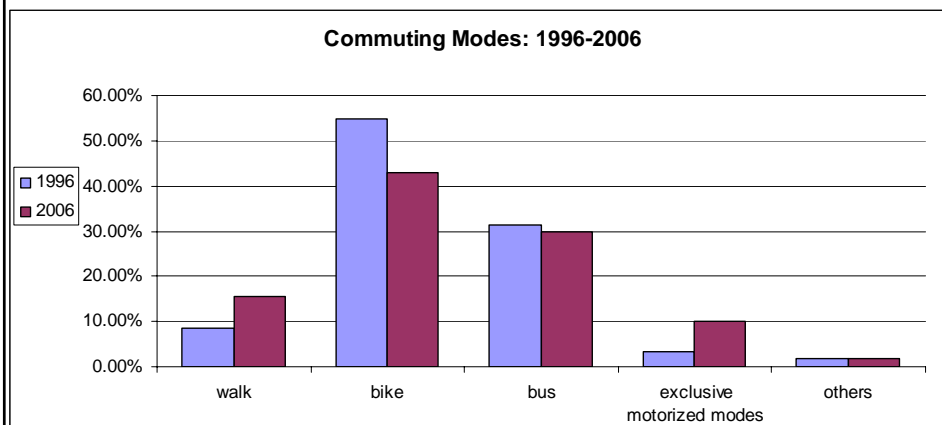
\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## Mode transition

Post- Pre-move	Walk	bike	Bus	exclusive modes	
Walk	5.9%	<b>3.2%</b>	1.3%	0.4%	10.7%
Bike	<b>4.6%</b>	31.5%	<b>5.7%</b>	<b>5.5%</b>	47.3%
Bus	2.1%	<b>5.3%</b>	11.1%	3.2%	21.6%
exclusive modes	1.3%	<b>1.5%</b>	2.1%	15.5%	20.4%
	13.9%	41.4%	20.2%	24.6%	

## Commuting mode change



# Examining strategies

## Transportation Facilities and Services in Urban Areas

Items	1990	1995	2000	2002	2003	Annual increase rate (%)
Urban Land Area (sq km)	12856	19264	22439	25973	28308	6.26
Floor Areas (billion sq meters)	3.98	5.73	7.7	13.18	14.09	10.21
Housing floor area (billion sq meters)	2.0	3.1	4.4	8.2	8.9	12.20
Road Length (thousand km)	95	130	160	191	208	6.21
Road Area (billion sq meter)	0.89	1.36	1.9	2.77	3.16	10.24
Vehicles for Public transportation (thousands)	62	137	226	246	264	11.79
Taxi (thousand)	111	504	825	884	903	17.50

Source: China Urban Development Statistics (2004)

## Urban rail

### Route Length of Urban Rail Transport in China (km)

	In Operation	Under construction	Listed in Transportation Improvement Plan	Total when Completed
Beijing	114	85	158	357
Shanghai	94	115	313	522
Tianjin	45	34	115	194
Guangzhou	57	50	146	253
Chongqing	14	5	103	122
Shenzhen	22	85	35	142
Changchun	15		34	49
Dalian	47			47
Wuhan	10		54	64
Nanjing	22		42	64
Hangzhou			83	83
Suzhou			47	47
Chengdu			54	54
Ha'erbing			46	46
Shenyang			41	41
Xi'an			50	50

Source: Jingxia Wang, Overview of China's Urban Transportation Strategies, 2006

## Spatial development: de-densification

- Will it work?
- Which one should lead: transportation or land?
  - Build transport to support land development or control land development to tolerate the mis-managed transport system?

## Planning procedure

- Who should participate?
- What should be the planning goal?
- What are the working themes?
  - Traffic management
  - Pricing policy
  - Project evaluation
  - Land use policy
  - Institutional arrangement