Land Transport Policy and Development in Singapore

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Highlight 1

- The primary objective of this presentation is to make a connection between the Singapore story of land transport development and the debate about sustainable transportation policies. In particular, the research project examines the relevance of the policies in the management of the two transportation models characterized by the dominance of private car (model 1) and public transport (model 2) respectively.

Highlight 2

- Is there a switch from model 1 to model 2 in Singapore? Why?
- How do Singapore planners manage the transportation issues in the city-state?
- What is the role that the government of Singapore has played in transportation policy making and development?

Highlight 3

- The importance of public transport in the city-state is clear, but whether there is a change of path from car dominated transport model is doubtful.
- Effective transport management needs a range of well coordinated policies including policies that reduce the number of cars in both ownership and usage, and at the same time policies that increase the availability and rider-ship of public transport facilities.
- A developmental state that emphasizes its political legitimacy and economic pragmatism is key for the success in Singapore.
- **An Asian model in transport policy making and development?**

Some conceptual thoughts

- Asian cities are in a critical intersection in transportation development
  - A special group of cities characterized by their less developed economy, high density of population, lack of infrastructure
  - Many Asian cities are experiencing rapid economic changes and urbanization; social and economic gaps between the rich and poor are increasing
  - There are enormous accumulation of wealth in both private and public sectors. These funds flow to the transportation sector

Some conceptual thoughts

- A private car dependent mode of transport is a popular choice because of
  - the symbolic power of status, wealth, freedom and privacy; the ideas of youth and athleticism, self-reliance, and personal pleasure; and the utility of the car, as a technology that allows for an unprecedented amount of mobility and provides the most efficient trip-chaining capability (Vasconcellos 1997).
  - The lack of capabilities in the public sector to invest on public transport infrastructure

Some conceptual thoughts

- Once a model is chosen, it is difficult to change path
  - Technological path dependence – Paul David (1985): technical interrelatedness, system scale economies, quasi-irreversibility of investment
  - Institutional path dependence – Douglass North (1990): choice set, decision-making in time, bargaining power of interest groups…
  - Transport path dependence?

Some conceptual thoughts

- An interventionist approach is widely used in political, economic management in Asian countries
  - The developmental state – Johnson (1982); Wade (1990)
  - Institutional complexity and management of models and model change
  - An Asian model in transport planning and development?

Some conceptual thoughts

- There are hints that models of transport can be managed
  - Theoretical and empirical findings about users' willingness to switch towards public transport – the anthropological, political, psychological and economic views, and the view of social reproduction (Vasconcellos 1997).
  - Demand for public transport services is shaped by many factors such as quality of the service, price level, waiting and walking time in a trip, etc. (Kirchhoff 1995; Bresson et al 2003; Walle and Steenberghen 2006)

Land transport in Singapore

- Model 1 indicators
  - Vehicle to population ratio –
    - 1:15 in 1980; 1:10 in 1996; 1:7 in 2010
  - From 1986 to 1996, road surface area increased 27%. $3 billion was planned for 1996-2000 to construct a further 300 lane-km road network. $570 million was planned for 2001-05 for road construction.
  - Car population increased 45% in the period 1986-1996. There were 341052 private cars in 1996, and 421904 in 2006 (LTA 2006)

Land transport in Singapore

- Model 2 indicators
  - Percentage of trips made by using public transport
    - 51% in 1996
    - 60% in 2004
    - 75% targeted in 2010 and beyond

Land transport in Singapore

- Change of path from Model 1 to Model 2?
  - Was Singapore ever car dependent in land transport?
  - Both private and public transport infrastructure improved in the past 20-30 years.
  - The increasing rider-ship of public transport is an important character of a successful transport planning and development in Singapore.

Integrated planning

- Integrate transportation planning and land use planning
- Integrate transport facilities and building development
- Integrate various modes of public transport to ensure efficiency and seamless inter-modal transfer
- Integrate various management policies and mechanisms

Model 1 management policy 1

- **Vehicle quota system**

- introduced in 1990
- Certificate of Entitlement (COE) is required to register a vehicle
- COE is valid for 10 years
- Open bidding system, twice a month

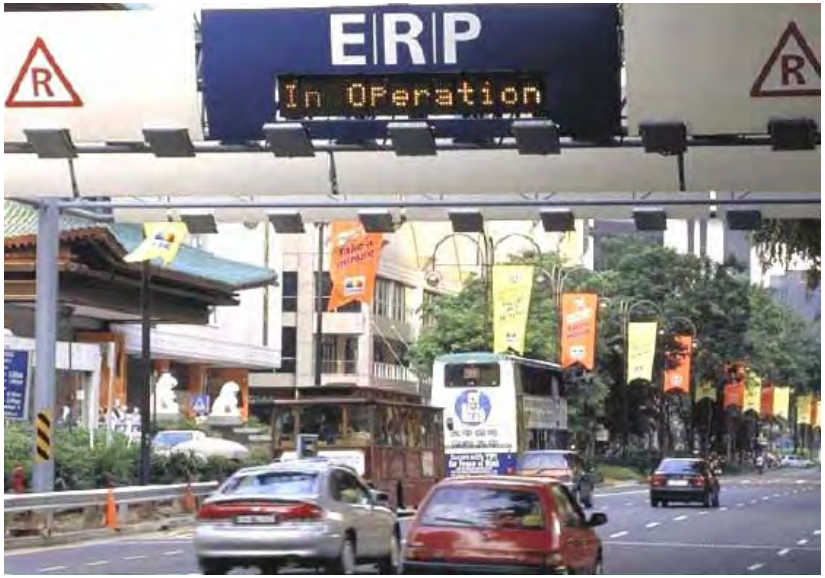
Results Of July 2007 Second Open Bidding Exercise For Certificates Of Entitlement

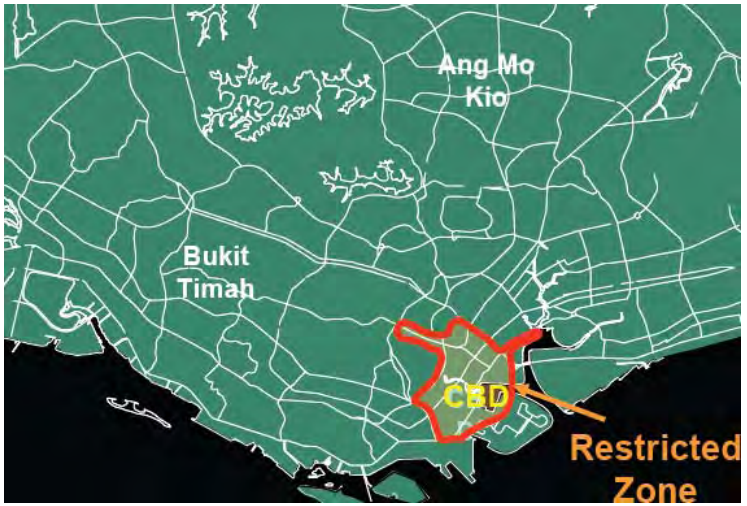
The Land Transport Authority (LTA) received 7,177 bids at the end of the July second open bidding exercise for Certificates of Entitlement (COEs). Of these, 5,370 were successful. Detailed results of the tender are as follows:

	Quota	Quota Premium	Total Bids Received	Number of Successful Bids	Unused Quota carried forward
NON-TRANSFERABLE CATEGORIES					
Category A (Cars 1,600cc and below, and taxis)	2,208	$16,000	2,678	2,177	31
Category B (Cars 1,601cc and above)	1,133	$17,602	1,393	1,133	0
Category D (Motorcycles)	480	$1,052	731	477	3
TRANSFERABLE CATEGORIES					
Category C (Goods vehicles and buses)	492	$3,889	746	484	8
Category E (Open)	1,105	$17,410	1,629	1,099	6

Model 1 management policy 2

- **Road Pricing**
- The Restricted Zone, about 720 ha, was implemented in 1975. With 34 gentries, its purpose was to discourage private car driving to the zone.
- ERP introduced in 1998
- Decreasing traffic volume by 20-24%
- Increase traffic speed from 30-35 km/hr under ALS to 40-45 km/hr under ERP



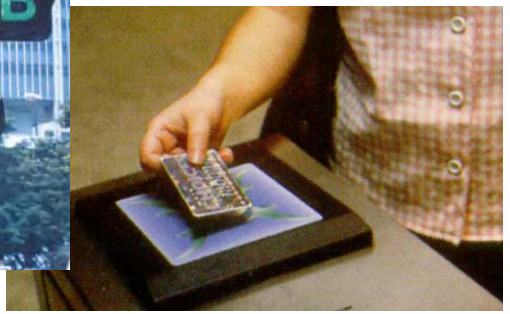


Model 2 management policy 1

- Taxies
- Low taxes on import duties, registration fees
- Low tax on diesel
- Daily trips: 0.87 million

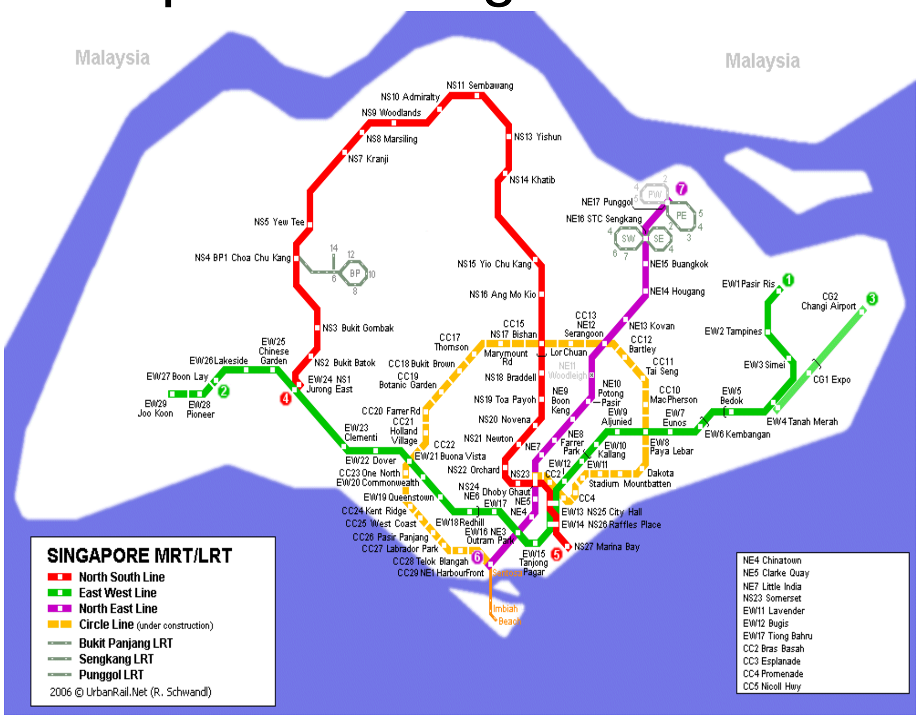
Model 2 management policy 2

- Buses
  - Step (stop) based fare calculation
  - Low fare
  - Fare increased 1.5% from 1986-1996; real wage increased 7-9% in the same period
  - Daily trips: 2.65 million



Model 2 management policy 3

- MRT and LRT
- Daily trips: 1.27 million
- Backbone of S'pore public transport system
- Operation began in 1987



The MRT decision-making

- The power of political leaders and the developmental state
- Quote from Lee Kuan Yew: We had to intervene. Take some of the major decisions we had made … the problem of resettling our population and trying to make a more cohesive society. We never took a vote. Had we asked people in Kampong Kembangan whether they wanted to be resettled, the answer must be no. If they had to be resettled, then they wanted to stay together in the same place. Go to Lorong Tai Seng and ask the Hainanese there: Would you like to have a Malay as your neighbour? The answer is no. We decided that we are going to make a nation, we can't have a riot every now and then … People talk about consultation, top-down and bottom-up. These are theories, yardsticks worked out by western political scientists who have never been presented the raw, unpleasant, unmanageable facts of making something out of nothing. If we took a poll, we would have never had National Service. I simply decided, 'Introduce it.' It was necessary. After a while, everybody understood it was necessary. (Han et al 1998: 133)

The MRT Decision-making

- A decision made after ten years deliberation
- Involved various parties in the decision-making process
- Three stages of feasibility studies
- Debates between leading transportation consultants
- Estimation of costs changed from $698 million in 1972 to $5 billion in 1982

The MRT Decision-making

- The parties involved – the state, the bank, consultants, contractors, the general public
- Dynamics of the state – departmental views and the debate

Concluding remarks

- An Asian model of transportation planning and development?
- Recognition of the importance of motorized private car and public transport in sustainable transportation development
- A range of coordinated policies in favour of public transportation development
- Strong government intervention