

A COMPARATIVE STUDY ON ACCEPTANCE AND IMPLEMENTATION OF PARKING POLICY AND LOCAL EARMARKED PARKING TAXES

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Outline

1. Parking policy in downtown
2. Objectives of the paper
3. Transport and parking policy in Perth
4. Transport and parking policy in Niigata
5. Acceptability of parking tax in Niigata
6. Conclusions

Parking policy in downtown/CBD

- Parking has a role in helping achieve broad urban policy objectives such as a strong and vibrant economy, better accessibility, a high quality urban environment, a safe and secure environment, and a more equitable society (Marsden, 2006).
- Best practice parking policy and management is now undergoing a paradigm shift from the concept of “predict and provide” to “optimality and sustainability” (Litman, 2006).
- Parking space levy and the set of related measures implemented in Perth, Australia is a parking TDM best practice since the purpose is not just raising revenue but to achieve a set of broader land use and transport objectives in relation to the CBD (Brown and McKellar, 2001).

Objectives

- A comparative study of parking policy and management; between
Perth, Australia and Niigata, Japan.
Perth: Best practice of parking policy
Niigata: same city size & CBD parking
- To investigate the social acceptability of introducing local earmarked parking taxes in Niigata in a hypothetical manner.

CASE STUDIES - Basic comparisons

	Perth, Australia	Niigata, Japan
Metro Region	1.4 million, 5423km ² 2.7 per ha	1 million, 730 km ² 15 per ha
Urban Area	1.26 million, 1035km ² 12 per ha	0.52 million, 231 km ² 23 per ha
CBD (Central)	10,500, 825 ha 13 per ha	49,000, 503 ha 97 per ha
Trips to CBD(%)	Car 62 – 76 % Public 33 -19 %, B/W 4 -3 %	Car 58%, Public 18% (Rail 10%, Bus 8%) B/W 24%
CBD parking	58,000 bays 69 bays per ha	41,000 bays 81 bays per ha



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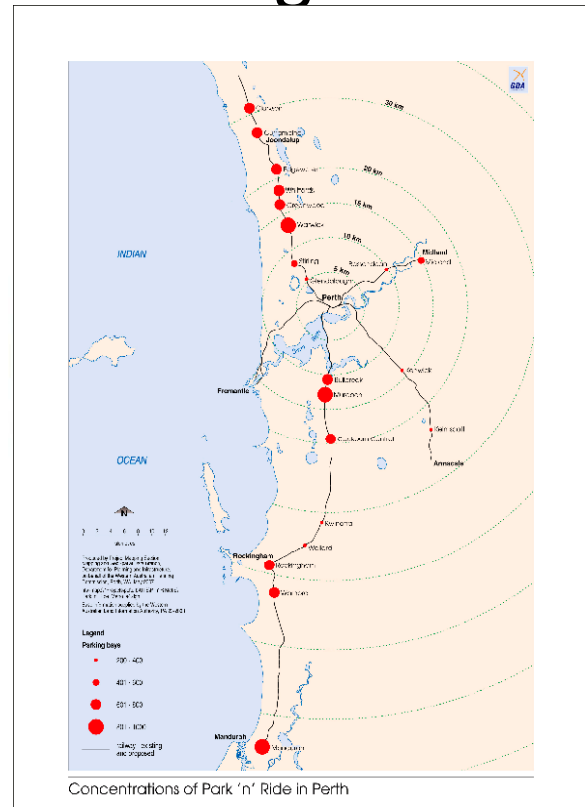
Parking in Central Perth

A strategic perspective



Perth Metropolitan Region

- Over 1.6 million people
- 1.2 million in Perth Urban Area.
- 1.2 million motor vehicles of all kinds including **750,000 private cars**
- 4.7 million trips per day
- Over next 20 years population growth estimated to be 1.3% to 1.5% and vehicle growth about 2% per year

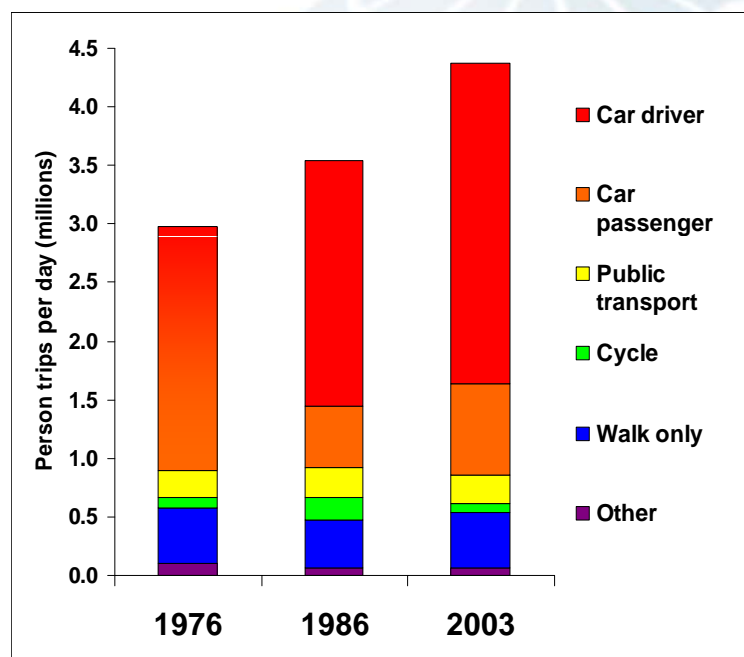


How people move in the Perth Metro Region

Note that growth has occurred in Car Driver & Car Passenger

	No. of trips per day	
	No. by car	% car
1976	2.9 million trips 2.1 million	72
1986	3.5 million trips 2.6 million	74
2003	4.4 million trips 3.5 million	80

Source – DPI, R. White





Strategic Policy Context

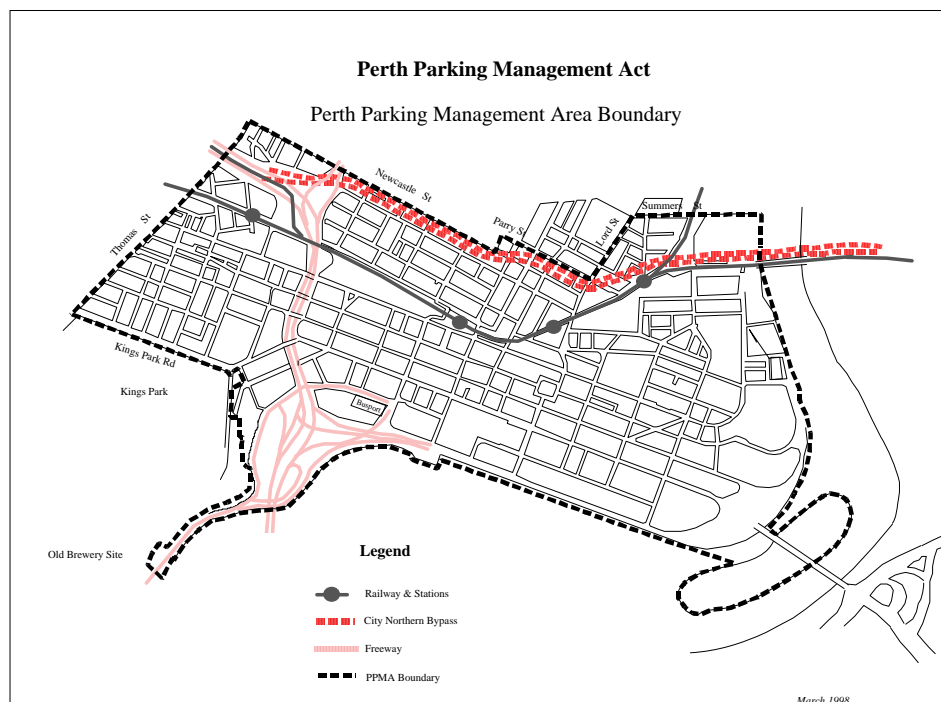
1950's to 1990's - Segregated land uses, at low density & private car based transport, predict & provide infrastructure

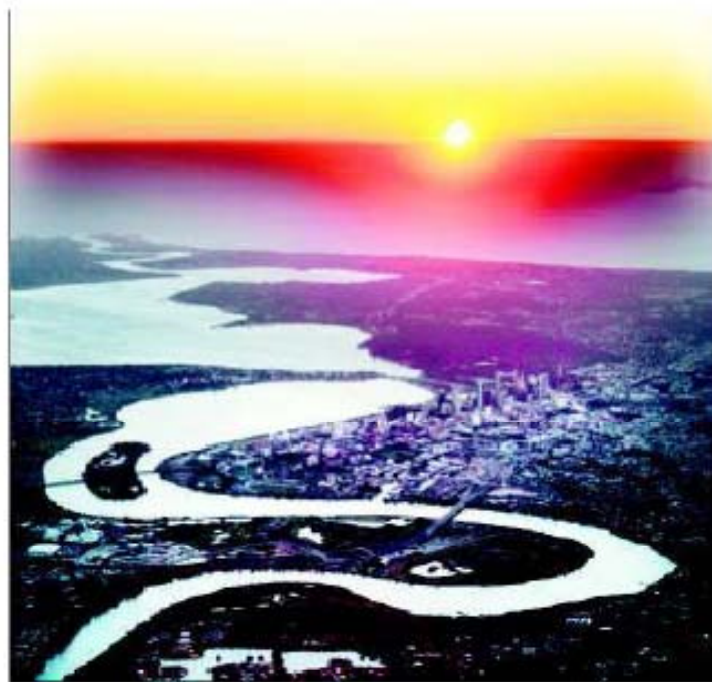
1990's on - Paradigm Shift – mixed land use, greater use of “green modes”, higher density, travel demand management

Metropolitan Transport Strategy	1995
Perth Parking Management Act & Policy	1999
TravelSmart TDM program	1999 ongoing
Air Quality Management Plan	2000
State Sustainability Strategy	2003
Network City	2003 ongoing
Capital City Perth (draft)	2005
New 80km commuter rail line	2007



Perth Parking Management Area



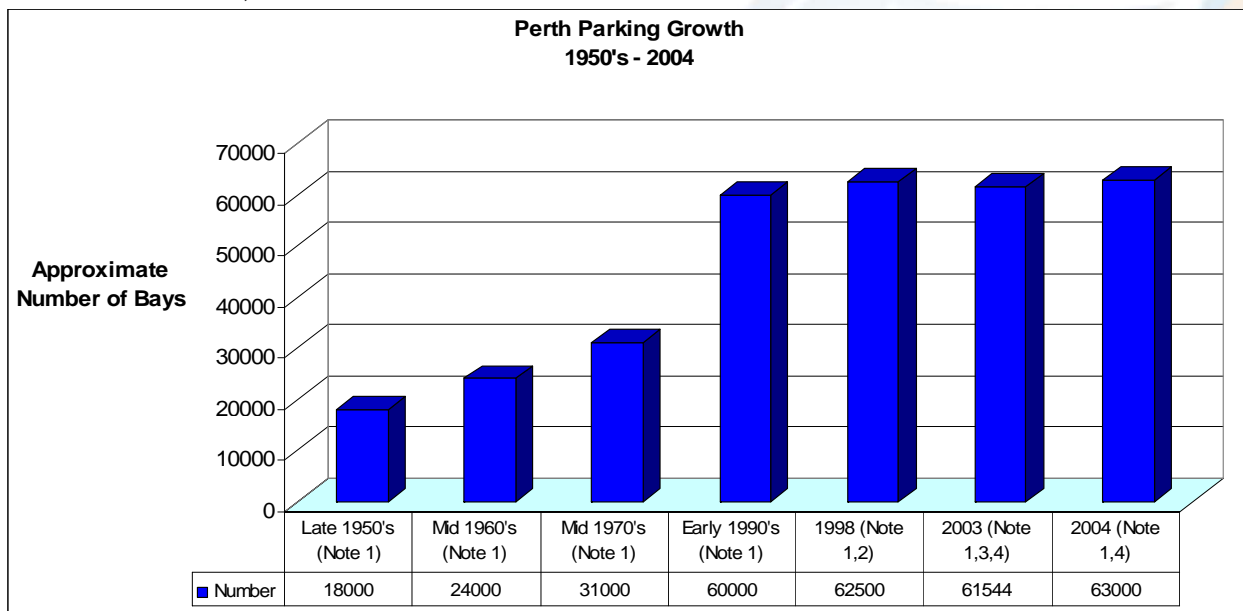


Natural asset: WA should make the most of the Swan River's beauty.



Growth Parking Supply in Central Perth

Source – DPI, G. Brown





New Approach to parking

- **Change the Policy setting from “pro car” to “manage the car”.**
- **Recognise that for about half of all car trips there is no alternative means available therefore parking must be provided**
- **Provide alternative access to city centre by means other than private cars –public transport, bicycle and walking**



New Approach to parking

- **Move from minimum to maximum levels of parking for office developments**
- **Prioritise access in CBD public car parks to short stay users, not commuters.**
- **Locate commuter car parks to the fringe of CBD.**
- **Tax parking used and direct revenue stream to provision of “free public transport” in central city.**
- **Create a new culture -“park once and walk or use free public transport” for journeys in the central city.**



Has it worked

Combined CAT & FTZ Passenger numbers in millions

Year	Clipper	FTZ	CAT	Total	Growth
1992	1.8			1.8	
1997		2.6	3.5	7.1	---
2000		3.2	4.2	7.7	8.5%
2004		3.6	6.3	9.9	28.5%
2007		4.0	6.85	10.85	10%

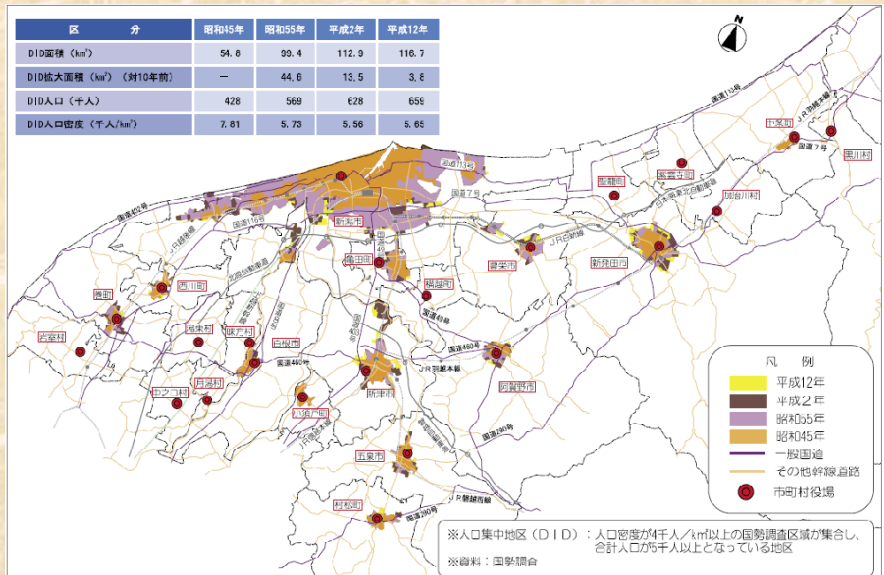
- During this period central area working population grew from 91,000 to 125,000

Niigata Metropolitan region

Metro region: over 1 million people,
density 15 per ha.

City Area: 520,000, density 23 per ha.

Private car: 1.43 cars/HH.

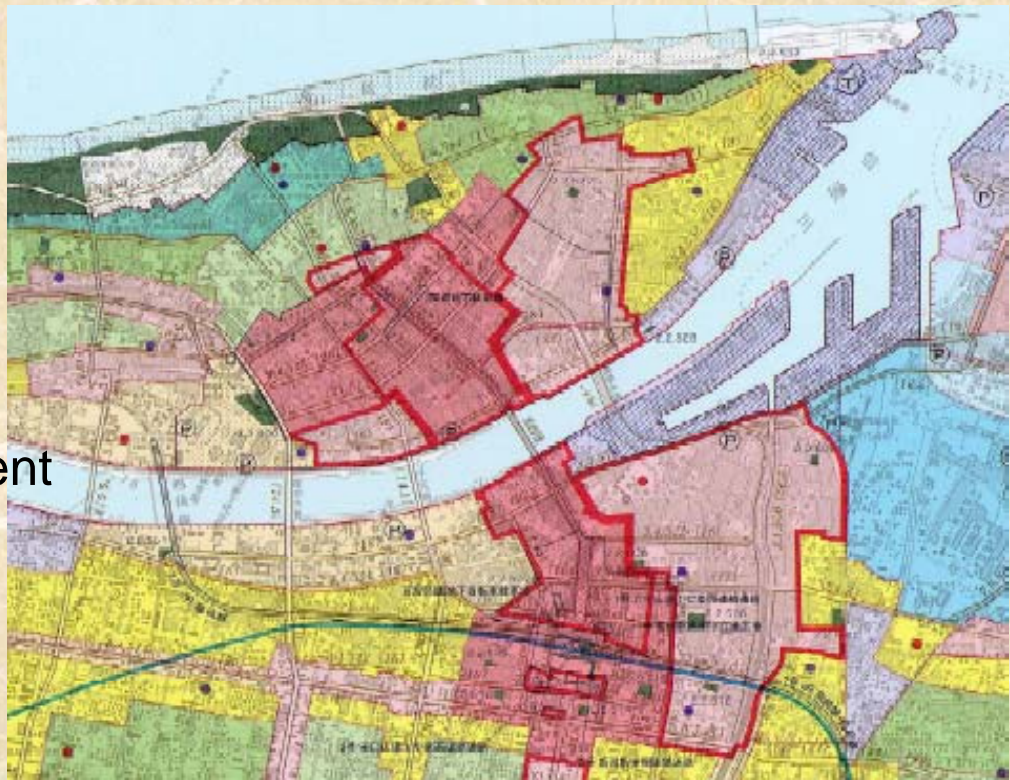


Population : 49,000, density 97 per ha.

Parking: 41,000 bays, 81 bays per ha

CBD,
Niigata

PID
(Parking
Improvement
District)



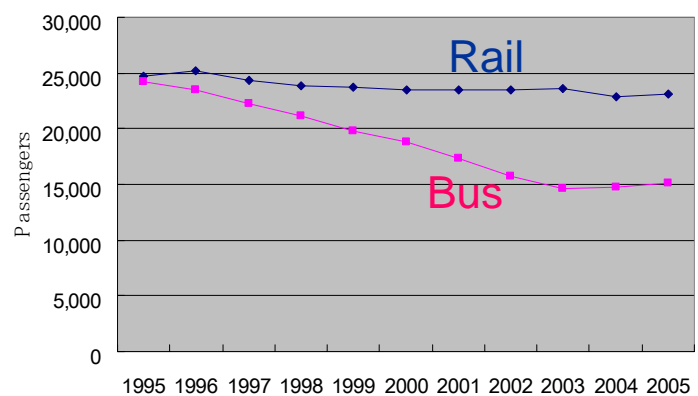
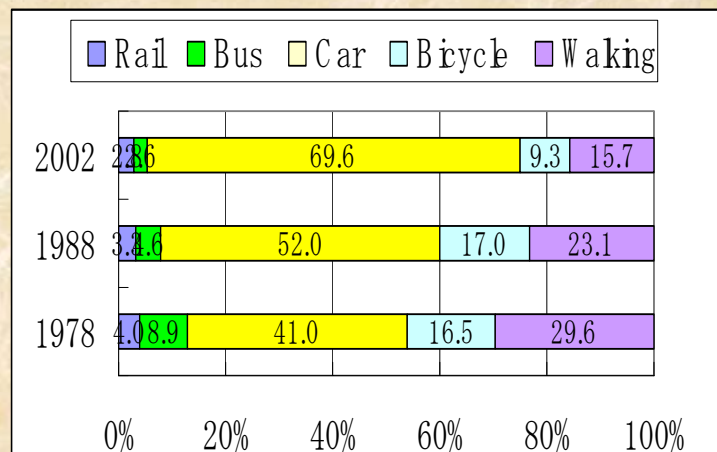
How people move in Niigata?

Trips in Metro
region;

	Car	Public
2002:	70%	5.5%
1978:	41%	12.9%

Trips to CBD (2002);

Car	58%
Public	18%
Walk/Bicycle	24%



Growth parking supply in Niigata CBD

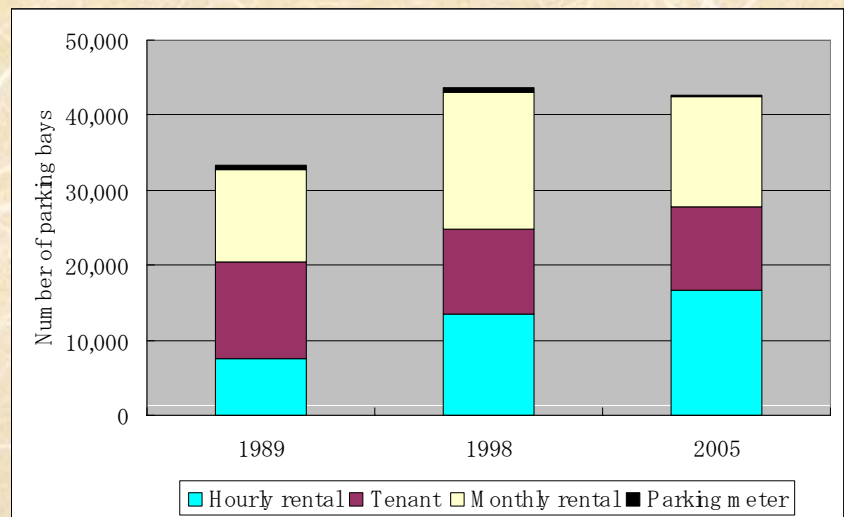
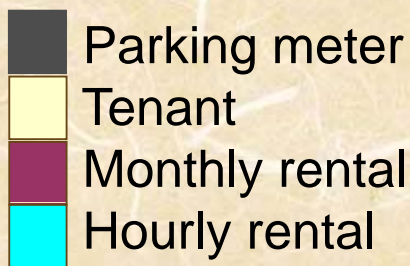
1965 Parking Improvement District

1968 Parking Ordinance

1973 Ordinance for promoting parking supply



1993 Parking Improvement Plan



Transport policy after 2000

- 2002-2005 Regional transport plan
- 2000-2004 TDM projects
- 2007-2010 Omnibus town plan & project
- 2007-2008 Public transport strategy plan
- 2007-2017 Elevated JR railway project for the central station

Parking policy ?

- In 2005, parking demand is met by the supply, then no need to revise Parking Improvement Plan.
- Decline of commercial activities in CBD due to competition with suburban shopping centers.
- No intention to introduce alternative parking policy to mitigate traffic problems and revitalize downtown.

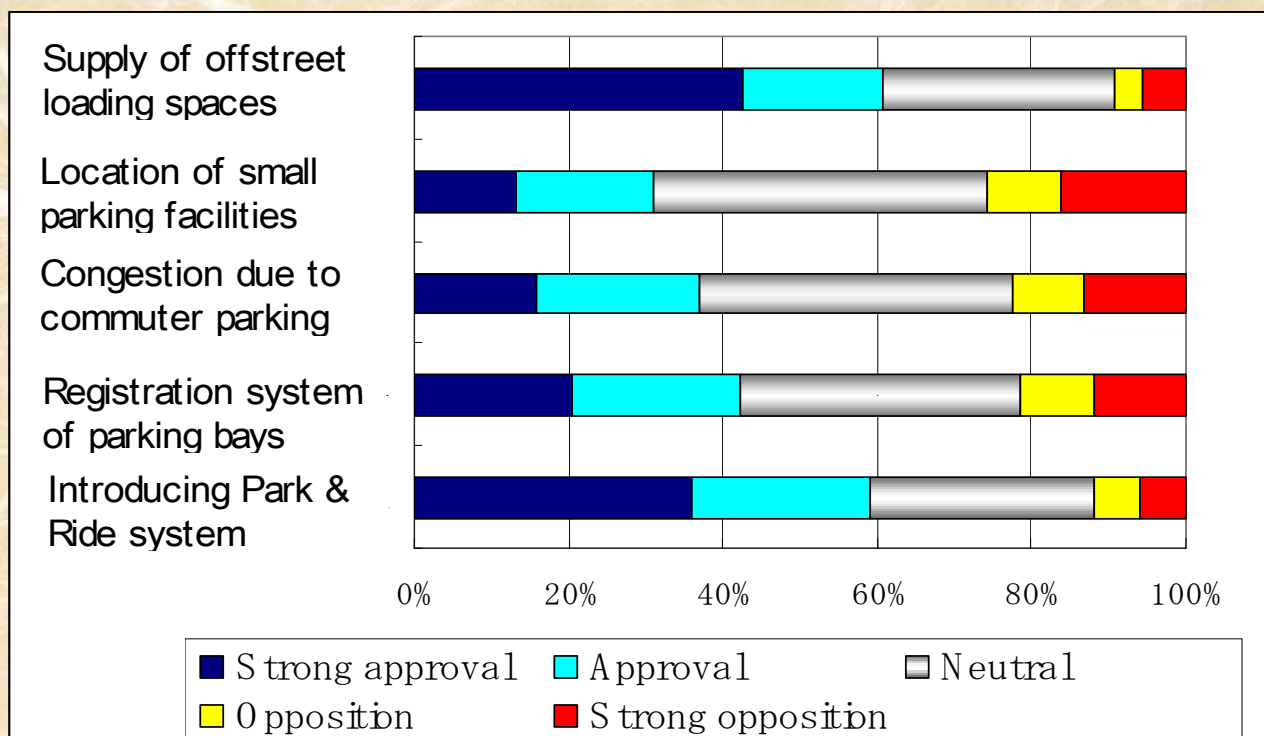
Hypothetical introduction of parking taxes to downtown/CBD in Niigata to increase public transport use and revitalize downtown



A questionnaire survey about the attitudinal acceptability of parking tax in April 2007.

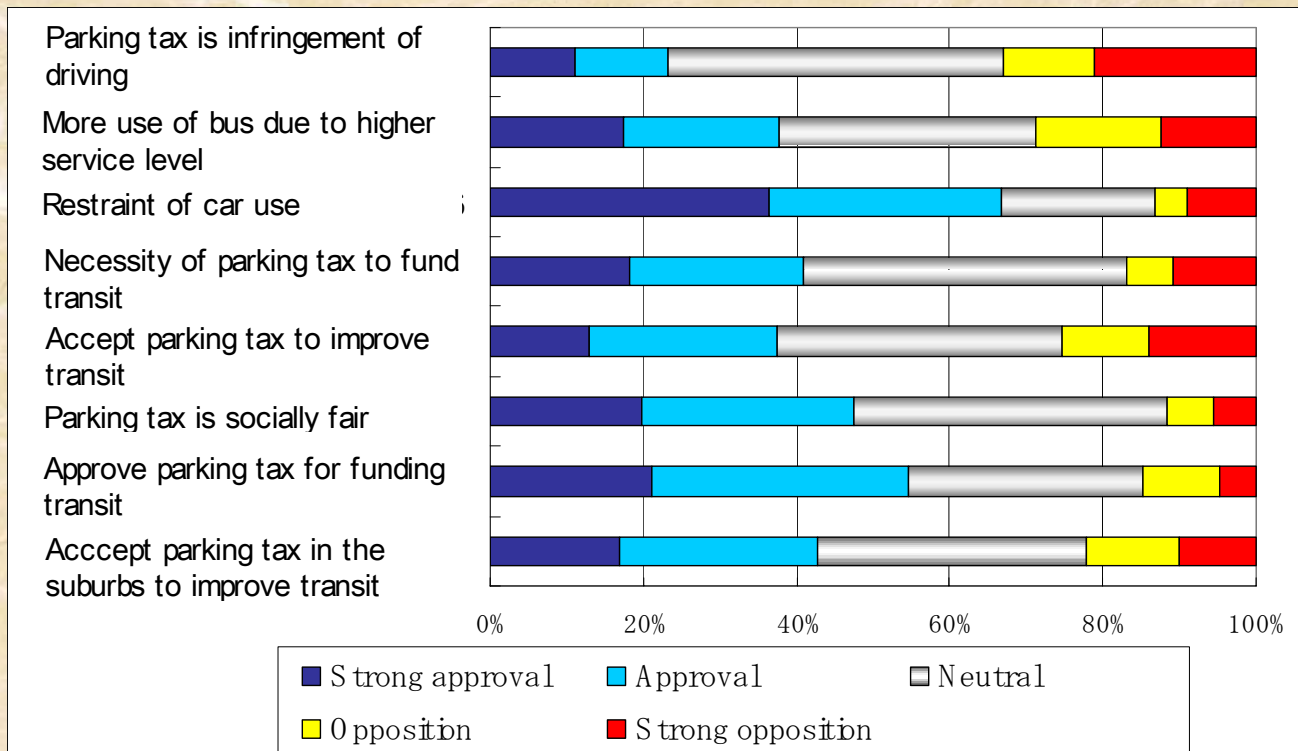
232 effective samples.
Men 58%, Women 42%
59% are more than 60 years of age.
Employees 43%, Non-employees 57%.
37% live in CBD, 63% in non-CBD.
Commuting: 46% by car, 23% by transit.

Attitude responses to traffic and parking issues



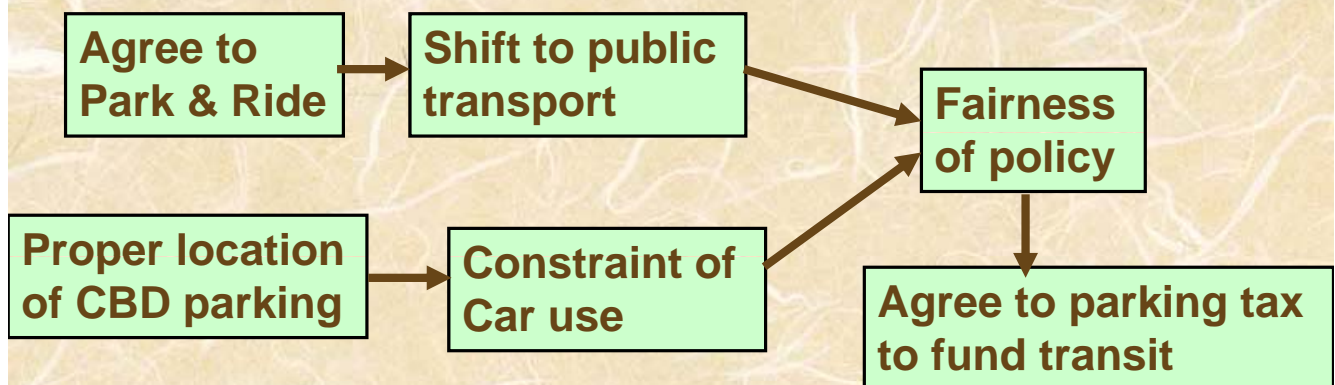
Traffic congestion is related with parking supply.

Attitude responses to parking taxes



Parking tax for funding transit: accepted by 38~57%

Structural equation model (SEM) of Acceptability (Latent variables only)



- Start with park & ride and parking registration in CBD.
- Have to make the paradigm shift in transport and parking policy that has started to emerge in Perth.

Conclusions: Parking policy in Niigata

- **Local earmarked parking taxes for funding public transport is accepted by 38~57%.**
- **Need to introduce some measures to control traffic flow, manage parking, and improve public transport.**
- **Have to make the paradigm shift in transport and parking policy that has started to emerge in Perth.**
- **Parking management would be a promising measure for downtown revitalization.**
- **Earmarked taxes are one measure that can affect positively people's attitudes.**