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Innovative models to fund local public transport: a case study of road pricing in Lyon

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Funding mechanisms of PT

Traditional Tax- and Fee-Based Transit Funding Sources

- General Revenues
- Sales Taxes (variable base of goods and services, motor fuels)
- Property Taxes (real property, includes vehicles)
- Contract or Purchase-of-Service Revenues (by human service agencies, school/universities, private organizations, etc.)
- Lease Revenues
- Vehicle Fees (title, registration, tags, inspection)
- Advertising Revenues
- Concessions revenues

Common Business, Activity, and Related Funding Sources

- Employer/Payroll Taxes
- Car Rental Fees
- Vehicle Lease Fees
- Parking Fees
- Realty Transfer Taxes/Mortgage Recording Fees
- Corporate Franchise Taxes
- Room/Occupancy Taxes
- Business License Fees
- Utility Fees/Taxes
- Income Taxes
- Donations
- Other Business Taxes

Revenue Streams from Projects (Transportation and Others)

- Transit-Oriented Development/Joint Development
- Value Capture/Beneficiary Charges
- Special Assessment Districts
- Community Improvement Districts/Community Facilities Districts
- Impact Fees
- Tax-Increment Financing Districts
- Right-of-Way Leasing

New “User” or “Market-Based” Funding Sources

- Tolling (fixed, variable, and dynamic; bridge and roadway)
- Congestion Pricing
- Emissions Fees
- VMT Fees

Financing Mechanisms^a

- General Obligation (GO) Bonds
- Private Activity Bonds (PABs)
- Tax Credit Bonds
- Grant Anticipation Notes (GANs)
- Grant Anticipation Revenue Vehicles (GARVEEs)
- Revenue Anticipation Notes (RANs)
- Certificates of Participation (COPs)
- State Infrastructure Bank (SIB) loans

^a While some financing mechanisms may be authorized and applied statewide, they typically require some commitment of future revenues by local borrowers as well as other local commitments to satisfy borrowing requirements and debt servicing.

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Local and Regional
Funding Mechanisms
for Public Transportation



Funding mechanisms of PT

Name	Description	Advantages	Disadvantages
Fare increases	Increase fares or change fare structure to increase revenues	Widely applied. Is a user fee (considered equitable).	Discourage transit use. Is regressive.
Discounted bulk passes	Discounted passes sold to groups based on their ridership	Increases revenue and transit ridership	Increases transit service costs and so may provide little net revenue
Property taxes	Increase local property taxes	Widely applied. Distributes burden widely.	Supports no other objectives. Is considered regressive.
Sales taxes	A special local sales tax	Distributes burden widely.	Supports no other objectives. Is regressive.
Fuel taxes	An additional fuel tax in the region	Widely applied. Reduces vehicle traffic and fuel use	Is considered regressive.
Vehicle fees	An additional fee for vehicles registered in the region	Applied in some jurisdictions. Charges motorists for costs.	Does not affect vehicle use.
Utility levy	A levy to all utility accounts in the region	Easy to apply. Distributes burden widely.	Is small, regressive and support no other objectives.
Employee levy	A levy on each employee within a designated area or jurisdiction	Charges for commuters.	Requires administration. Encourage sprawl if in city centers.
Road tolls	Tolls on some roads or bridges	Reduces traffic congestion.	Costly to implement. Can encourage sprawl if only applied in city centers.
Vehicle-Km tax	A distance-based fee on vehicles registered in the region	Reduces vehicle traffic.	Costly to implement.
Parking taxes	Special tax on commercial parking transactions	Is applied in other cities.	Discourages parking pricing and downtown development.
Parking levy	A special property tax on parking spaces throughout the region	Large potential. Distributes burden widely. Encourages compact development.	Costly to implement. Opposed by suburban property owners.
Expanded parking pricing	Increase when and where public parking facilities (e.g. on-street parking) are priced	Moderate to large potential. Distributes burden widely. Reduces parking & traffic problems.	Requires parking meters and enforcement, and imposes transaction costs.
Development or transport impact fees	A fee on new development to help finance infrastructure, including transit improvements	Charges beneficiaries.	Limited potential.
Land value capture	Special taxes on property that benefit from the transit service	Large potential. Charges beneficiaries.	May be costly to implement. May discourage TOD.
Station rents	Collect revenues from public-private development at stations	Charges beneficiaries.	Limited potential.
Station air rights	Sell the rights to build over transit stations	Charges beneficiaries.	Limited potential.
Advertising	Additional advertising on vehicles and stations	Already used.	Limited potential. Sometimes unattractive.

This table summarizes potential funding options identified in this study.



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Local Funding Options for Public Transportation

23 March 2016

By
Todd Litman
Victoria Transport Policy Institute



Funding mechanisms of PT



Financing public transport PRESS KIT

1. EARMARKING LOCAL CHARGES TO FUND PUBLIC TRANSPORT

One innovative way of funding public transport operations and investment is to use the proceeds from certain **local taxes** and **charges**.

One option could be to levy a charge on those who benefit most from public transport supply, such as employers, retailers and real-estate owners. Meanwhile, charges can also be levied on those whose mobility habits are most harmful to society. These charges can include **urban tolls, congestion and or/pollution charges, parking charges** and **fuel taxes**. These two concepts are commonly known as the 'polluter pays' and 'beneficiary pays' principles.

2. BUILDING NEW PARTNERSHIPS WITH PRIVATE INVESTORS

There is scope for public transport to develop new **financial partnerships with long-term investors**, such as banks, private investors, urban developers and the business community. Relevant frameworks need to be in place and risks must be clearly allocated for these partnerships to be a success.

Working with property developers to share the value created by transport systems is one path that is worth exploring. Carbon finance could also help support public transport projects, mainly in developing economies.

Public-private partnerships (PPP)

Public transport is generally a sound investment and one that is as least as profitable as other sectors with a similar risk profile. It benefits from a stable revenue and cash flow, presents strong growth potential and is a provider of essential services.

PPPs are characterised by the relatively long duration of the relationship, involving cooperation between the public partner and the private partner on different aspects of a planned project, which can include design, completion, implementation and funding. The public partner concentrates primarily on defining the desired outcomes in terms of public interest, quality of services provided and pricing policy, and it takes responsibility for monitoring compliance with these objectives.

PPPs are complex structures, so the decision to enter into such a partnership must not be taken lightly. **The PPP needs to be a real partnership that distributes risks and rewards in such a way that the aspirations of both parties are met.**

2. BUILDING NEW PARTNERSHIPS WITH PRIVATE INVESTORS

Optimising debt financing

In the current economic climate, recourse to the financial markets can be complicated and obtaining credit is increasingly difficult. Nevertheless, debt financing can be considered as a source of funding for capital investment in public transport.

Various options are available to public transport companies in order to reduce the cost of debt financing, although a sound and thorough understanding of the financial markets and instruments is essential.

There are **several ways to optimise debt financing**, including:

- Rating procedures;
- Debt notes;
- Fiscal leases;
- Options and derivative instruments.

3. DEVELOPING A STRONG REVENUE STRATEGY

By taking a more **commercial approach** to their fares and products, public transport companies can better cover their costs. Developing a successful **revenue strategy** will also involve exploring new sources of income by tapping into non-fare revenue streams. It is important to have an appropriate business and regulatory framework in place that leaves room for business entrepreneurship in the public transport sector, whilst still ensuring the provision of essential public transport services.

Enhancing revenue management

By adopting a more commercial approach to service provision, public transport companies will be able to boost their fare revenues. Currently, public transport operators tend to provide a single type of service, charging a flat fare for that service.

Smart fare and product strategies offer a wealth of untapped potential. This could involve applying **time-of-day pricing** or distance-based pricing, or charging passengers more to use **premium services**. Meanwhile, targeted discounts such as loyalty schemes can increase the annual revenue per passenger and improve customer satisfaction.

Technological innovations can facilitate the design of sophisticated fare structures. They can also help deliver tailor-made information and services, for which a higher price could be charged.

Funding mechanisms of PT



3. DEVELOPING A STRONG REVENUE STRATEGY

Setting and adjusting fares

In many countries, the process of setting and adjusting public transport fares is carried out on an ad-hoc basis.

A more **regular, systematic and sophisticated fare review mechanism** will make it possible to sustain public transport services and enhance quality, whilst still keeping services affordable. Good fare regulation needs to take many factors into account, such as affordability for passengers, changes in service production costs, and the resources needed to invest in capacity and service quality. In Germany, for example, there is a long history of cooperation between operators and authorities within fare associations.

Secondary revenue sources

Public transport is typically a low-margin business. But by developing secondary revenue streams, public transport companies can capitalise on their existing assets and know-how. This will help them increase both their revenues and their margins.

Public transport operators' assets include **space for advertisement, retail, and property development, telecommunication systems, and their company's brand**. By tapping into the potential of these various assets, public transport companies will not only generate income, they will also be able to enhance the journey experience for passengers.

3. DEVELOPING A STRONG REVENUE STRATEGY

Traditional public transport companies have developed **know-how** in many areas over the years and have applied this know-how for in-house purposes. This know-how ranges from technical expertise to planning and project management. Although often overlooked, this know-how could be an important source of revenue.

Getting the message across



In 2009, UITP launched the PTx2 strategy aimed at doubling the market share of public transport worldwide by 2025. The new campaign **Grow with Public Transport** supports this strategy and targets policy makers worldwide aiming to raise their

awareness of the urgent need for more and better public transport, highlighting the benefits of sustainable mobility. It also offers guidance for decision makers, public transport authorities and transport companies on how to improve public transport and tools to help them implement sustainable mobility solutions in their city or region.

Find out more: www.growpublictransport.org



1. France: the purpose taxes

Reference laws:

“Grenelle 1” (Nov. 2009) and “Grenelle 2” (July 2010)

- Purpose tax applied to economic activities in tourist municipalities → *Versement Transport*, variable from 0,5 % to 1,75 % of sales of enterprises (public and private) according to the number of inhabitants
- Tax of “value capture” applied by transport authorities on lands and buildings close to transport infrastructures
- Urban tolls for cities > 300.000 inhabitants having a urban mobility plan

The Versement Transport, in 2008, covered the 36% of investments' costs for new rail infrastructures

2. UK: private funding of infrastructures



Public-Private Partnerships (PPP)

- Construction of rail infrastructures (e.g. Train Northern Line, extension of Docklands Light Railway ...)
- Construction and management on metros
NB: Contracts of PPP of London Underground provide the fulfilment of performance standards in terms of regularity, capacity and quality of service

Value Capture

- Docklands Light Railway: PPP and sale of building areas in the vicinity

Private funding and application of purpose taxes

- Crossrail funded by private investors, “stakeholders” and “Business Rate” (surtax on economic activities)

PPP in Spain : the metro of Madrid



1. Responsibility for building the infrastructure given to operational agency MINTRA

- MINTRA is obliged to cover, at least, the 50% of its costs thanks to the revenues obtained by renting the infrastructure to the transport operators

2. Four-year investments plans:

- The 3rd Plan 2003-2007 (4,8 billion euros) was funded for 34% thanks to partnership contracts

3. Other innovative funding mechanisms:

- Investment of 45 milion € to extend line 8 till to the new terminal of Madrid-Barajas airport → private dealership;
- PPP realised to build interchange parkings;
- Parla tramway (8,2 km), project of municipality of about 138 milion €, funded by a private group.

The Light Rail of Bergen is an application of road pricing:

1. The construction cost of the infrastructure (about 5,3 billion \$) has been shared by State (40%) and local administrations (60%)
2. The 60% has been mainly obtained through the revenues of the “toll ring”, active since 1986 in Bergen
→ 55% of revenues are given to develop local public transport

Automated metro of Copenhagen

- Establishment of a governmental Commission (Wurtzen Committee) to define alternative funding methods of new transport infrastructures



The infrastructure has been entirely built using:

- the revenues of sales;
- the “value capture” of building areas and buildings in the vicinity
 - municipality taxes on ownership
 - sales of building areas and buildings owned by the State thanks to the increase of value after the infrastructure construction



Citizens' reactions to an hypothetical pricing scheme: the case study of Lyon

Investigate the citizens' reactions to the hypothetical introduction of a road pricing scheme in Lyon

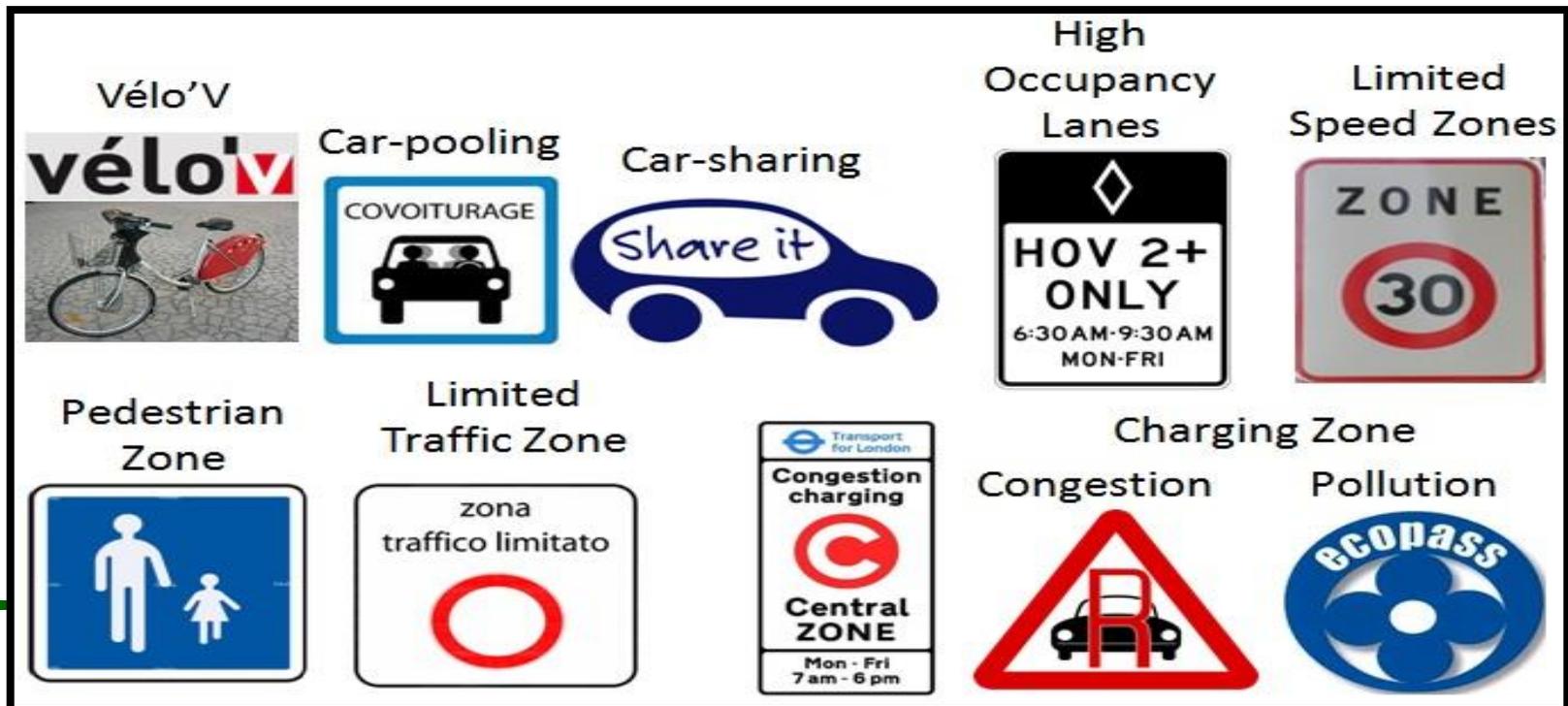
→ **Qualitative and quantitative surveys:**

- Focus Groups (8 discussions)
- Web-questionnaire (LimeSurvey)
 - Before the Focus Group
(travel behaviour, attitudes, life style, urban transport policies, and socio-economic data)
 - After the Focus Group
(road pricing policy)

Methodology – the Focus Group outline (1)



1. Presentation of the participants;
2. Daily mobility → travel habits and attitudes;
3. Transport policies:
 - discussion about the levers (technology, economics, and individual behaviour) suggested by the EC to face congestion;
 - presentation and discussion about specific transport policies:

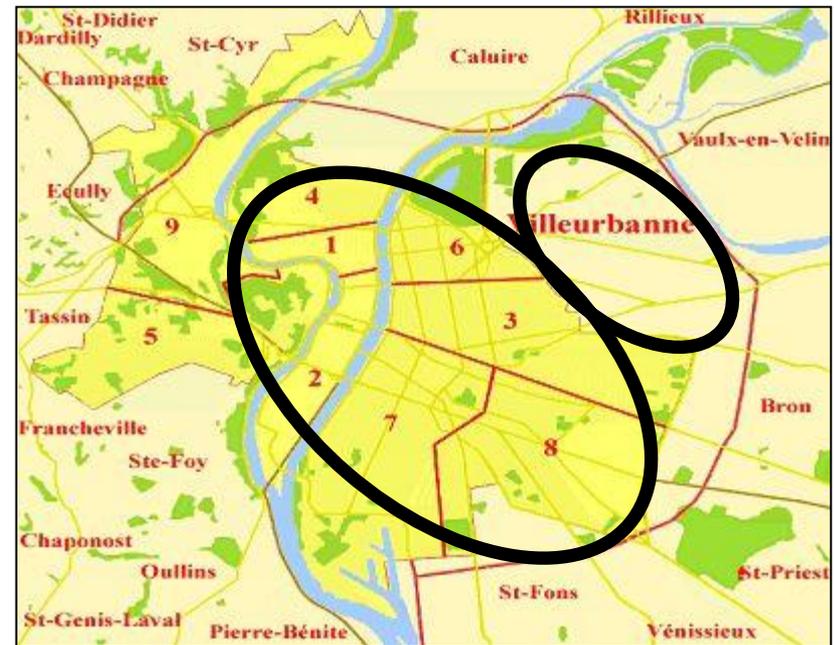
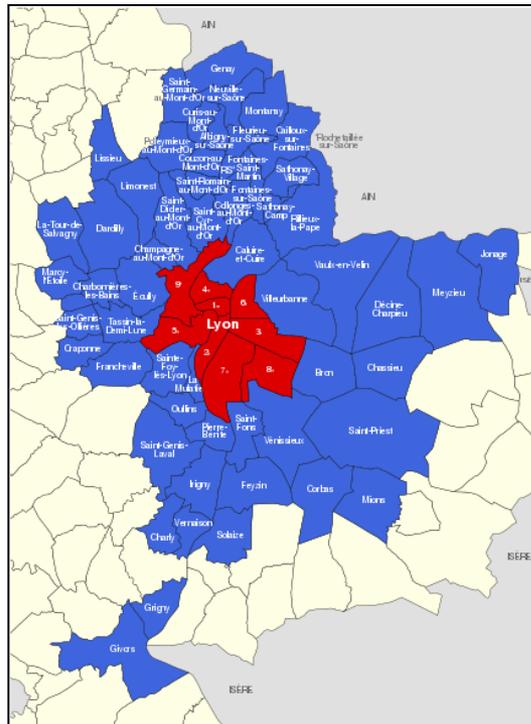


Methodology – the Focus Group outline (2)



4. Hypothetical road pricing in Lyon:

- in force during weekdays from 7.00 a.m. to 7.00 p.m. ;
- applied to all cars entering or circulating in Lyon (excluding the 5th and the 9th arrondissements) and in Villeurbanne.



- Held in October 2011
- Sample of 61 persons selected according to :
 - ✓ gender;
 - ✓ age;
 - ✓ income level;
 - ✓ occupation;

Aim of the sample :
include different citizens profiles

- ✓ household composition;
- ✓ travel behaviour;
- ✓ residence location

The analysis of the Focus Group discussions

- Audio and video record of the discussions
- Verbatim transcription of the discussions
- Creation of a Synoptic grid → structure of the content analysis
- Iterative process to fill in the grid

- **Existing pricing schemes:** Singapore (1975), Stockholm, London, Bergen, Oslo, Trondheim, Milan, Gothenburg
- **Lack of public acceptance** and **fear of political consequences**
 - ✓ intrinsic social iniquity of pricing schemes emphasizes people disparities, since benefits would be greater for the wealthiest (Langmyhr, 1997; Eliasson and Mattsson, 2006; Jones, 1992; Schlag and Teubel, 1997; Viegas, 2001)
- People feel a **lack of freedom** by paying for something that has been always free of charge (Jakobsson et al. 2000)
- **Huge investment** required to establish a management system
- Loss of attractiveness of the city centre, entailing negative effects on its commercial and social role within the conurbation.

Results: sample description



Socio-economical data

- gender balanced (30 women, 31 men)
- mainly highly educated (37.7% hold a university degree)
- mainly employed (77%), 9.8% students and 11.5% retired.
- all income levels are represented
- household composition: nearly 30% live with kids

Mobility data

- 95% have a driving license and about 90% of households have at least one car at their disposal
- daily mobility : 57.4% car driver, 20% PT, 5% bike, 8.2% walk
- most frequent trip: 72% home to work, 9.8% home-university
- weekend → most frequent transport mode: 75.4% car, 13.1% PT



First reactions to the hypothetical pricing

Strong oppositions, the charge is perceived as:

- unfair, emphasizing social disparities, increasing social segregation
- ineffective for reducing congestion and pollution
- compromising personal freedom, represented by car (pride)
- a supplementary tax to raise money from the citizens during the recession
- similar to the TEO (ring-road) → strong protests in 1997-98

More moderate reactions:

- need for effective measures to limit traffic and pollution
- general awareness that it could become a reality, as in other Countries
- very few supporters of a road pricing

Claim to frame the toll within a **coherent transport policy**,
to offer a **real alternative to the car** for all metropolitan trips



		Supporters (n=3)	Cannily Well- disposed (n=6)	Non partisans (n=18)	Reluctants (n=9)	Strong opponents (n=16)	Fierce opponents (n=5)
Gender	Female	66.6%	33.3%	66.6%	22.2%	43.7%	40%
	Male	33.3%	66.6%	33.3%	77.8%	56.3%	60%
Age [years old]	Average	35.33	49.33	38.83	48.55	45.8	41.2
	Median	32	53	31	52	43	39
Education	Low	-	-	11.2%	22.2%	18.7%	-
	Medium	66.6%	66.6%	44.4%	11.2%	43.7%	60%
	High	33.3%	33.3%	44.4%	66.6%	37.6%	40%
Occupation	Student	33.3% (PhD)	-	27.5%	-	-	-
	Worker	-	-	5.5%	-	-	-
	Office-worker	33.3%	-	39.5%	22.2%	43.7%	80%
	High level	33.3%	83.3%	16.5%	66.6%	37.6%	20%
	Retired	-	16.7%	11%	11.2%	18.7%	-
HH income [€/month]	Average	1833	3708.3	2703.1	3937.5	3583.3	2950
	Median	2250	4000	2250	4000	4000	2250
HH composition	Single	33.3%	33.3%	39.3%	11.2%	18.7%	40%
	Couple	66.6%	16.7%	16.5%	33.3%	56.3%	20%
	3 people hh	-	-	16.5%	-	-	40%
	>= 4 people hh	-	50%	22.2%	44.3%	18.7%	-
	Single with a child	-	-	-	11.2%	6.3%	-
	ND	-	-	5.5%	-	-	-
HH with children		-	50%	22.2%	55.5%	25%	40%
Used mode	Car	-	33.3%	55.8%	66.7%	75%	100%
	Motorbike	-	16.7%	-	-	-	-
	Regional Train	-	-	-	11.1%	-	-
	PT	-	50%	22.2%	-	12.4%	-
	Bike	33.3%	-	-	-	-	-
	Foot	33.3%	-	5.5%	-	-	-
	Other (specified)	33.3% Only on foot (SS) / PT (AW)	-	5.5% Bike (SS) / PT (AW) 5.5% Bike (SS) / Only on foot (AW) 5.5% Only on foot (SS) / PT (AW)	11.1% Car + PT + On foot 11.1% Two- wheelers (SS) / Car (AW)	6.3% PT + foot 6.3% Car + PT + foot	-
Scope	Work	33.3%	83.3%	61.2%	88.9%	75%	100%
	Voluntary work	-	-	-	11.1%	12.4%	-
	Study	33.3%	-	22.2%	-	-	-
	Shopping	33.3%	-	-	-	-	-
	Leisure	-	16.7%	11.1%	-	6.3%	-
	Pick up / Drop someone	-	-	5.5%	-	6.3%	-
Most frequent OD	IN	66.6%	33.3%	50%	-	31.3%	40%
	MIX	33.3%	33.3%	27.8%	77.8%	56.3%	60%
	EXT	-	33.3%	22.2%	22.2%	12.4%	-
Time spent [min]	Average	17.33	22	23.3	44.44	31.38	43
	Median	15	22.5	20	45	30	30



	Name	Acceptable charge	Deterrent charge	Comments	Commonalities
Supporters	Alexandra	2	3	Charge for polluting vehicles 🚩	They agree on introducing a charge. Awareness of the effects of pollution on health.
	Camille	1,5	7,5		
	Frédéric H	1,5	7,5		
Cannily well-disposed	Ariane	2,5	5	Need of an alternative to car (PT and P+R) before introducing the charge 🚩	The charge would be effective. They agree on a charge IF concrete alternatives (PT and P+R) to car are introduced as well as high charges are provided.
	Gabriel	1,5	7,5	High charge to deter car use 🚩 There should be a special rate for car-pooling 🚩	
	Marie-Chantal	1,5	7,5	High charge to deter car use 🚩	
	Michael G	2	6		
	Thierry	3,5	7		
	François			Need of an alternative to car (PT and P+R) before introducing the charge 🚩	
Non-partisans	Colette	1,5	2,5	A threshold similar to the ring road charge is acceptable	They argue a lot, elaborating on pros and cons, without taking a defined position. Their positions are indeed both close to some "Cannily well-disposed" and "Strong opponents".
	Cyril	2	17	The psychological threshold would be the rate of a fine in a no-parking zone (e.g. 17 €) The charge should vary according to the car pollutant emissions 🚩	
	Déborah	2	4	The deterrent rate would vary according to the income level 🚩 The employer might pay part of the charge	
	Franck	1,5	7,5	High charge to deter car use 🚩 (BUT be careful to avoid social injustice) It would be shocking to have both the charge and the parking pricing If the charge is introduced, PT should cost less than 0,5 €	
	Françoise	2	4,5	A threshold similar to the ring road charge is acceptable for an exceptional use	
	Gaelle	1,5	8	She would pay "anything" in case of extreme need 🚩	
	Guillaume	0	1	He rarely uses his car so he would not pay a high rate	
	Julien	2	3		
	Marylène	2	3	The charge should be higher than the price for a return ticket by bus	
	Mélissa	1,5	5	High charge to deter car use 🚩	
	Pierre	0	1	The charge should vary according to the car pollutant emissions 🚩	
	Sophie P	2	8	High charge to deter car use 🚩 (BUT pay attention to avoid social injustice)	
	Sophie R	4	6	There should be a special rate for car-pooling 🚩 The residents could have 2-3 free accesses per day, as in Montpellier	
	Virginie	2	8	High charge to deter car use 🚩	
	Julia			Indexing the rates on income and on the model of the car 🚩	
	Lahssen			The charge should vary according to the engine size 🚩	
	Marie-Françoise			The charge should vary according to the car pollutant emissions 🚩	
Nicole			Need of an alternative to car (PT and P+R) before introducing the charge 🚩		

	Name	Acceptable charge	Deterrent charge	Comments	Commonalities
Reluctants	Bernard	0	5	Agree on varying the charge according to the engine size 🚩	<p>Claim for a coherent policy: providing an improvement of PT before introducing a charge.</p> <p>The revenues should be invested in further improving the PT service.</p>
	Cécile	3	4,5	Need of an alternative to car (PT and P+R) before introducing the charge 🚩	
	Christian	0	4,5		
	Francine	3	4,5	Need of an alternative to car (PT and P+R) before introducing the charge 🚩	
	Jacques	1,5	8	He would pay "anything" in case of extreme need 🚩	
	Richard	0,5	1		
	Yves	0	5	High charge to deter car use 🚩	
	Pierre-Yves				
	Svein			The charge should vary according to the engine size 🚩	
Strong Opponents	Ana	2	3	The charge should vary according to the car pollutant emissions 🚩 (even though she has an old car) The charge should vary according to the income, if feasible 🚩	<p>Strongly opposed.</p> <p>Socially unfair.</p> <p>Just useful to get money.</p> <p>Not effective to reduce congestion.</p> <p>Need of an alternative to car (PT and P+R).</p>
	Aurélien	2	3	Need of an alternative to car (PT and P+R) 🚩 Indexing the rates on income 🚩 and on the model of the car	
	Aysel	0	15	High charge to deter car use 🚩	
	Aysun	0	5	No rate would be acceptable, but she places the deterrent level at 5 euros	
	Christelle	1	1,5	The revenues should be invested to improve cycle paths. The charge should vary according to the engine size 🚩	
	Erna	1	1,5	Need of an alternative to car (PT and P+R) 🚩	
	Gilles	0	0,5	Need of an alternative to car (PT and P+R) 🚩	
	Michel R	0	0,5	Need of an alternative to car (PT and P+R) 🚩 Parking fee is already a charge 🚩 (people would not change their travel habits)	
	Michel W	0	0,5	Parking fee is already a charge 🚩 (people would not change their travel habits) It would be shocking to have both the charge and the parking pricing	
	Mickael H	5	15	He would pay "anything" 🚩 because the toll would not make him change his mode of transport	
	Mickael G	2	3	Indexing the rates on the age of the car and [the level of] pollution	
	Nadira	1	1,5	Strong opposition	
	Rémy	5	15	He would pay "anything" 🚩 unless it would be more convenient to change his job. His threshold would be 100 to 200 euros/month	
	Anthony			increase of congestion in the surrounding area	
	Frédéric P			The charge should vary according to the engine size 🚩	
	Myrose				
Fierce Opponents	Eric	0	0,5	Tax big oil companies instead of motorists	<p>Violent reaction, strongly opposed to the principle, just one more tax.</p> <p>Complaints about the high installation costs: invest in PT and PR would be more effective.</p> <p>Always the same people who pay.</p>
	Estelle	0	0,5		
	Loïc	0	0,5		
	Malika	0	0,5		
	Régis	0	0,5	Parking fee is already a charge 🚩 (people would not change their travel habits)	

Two pillars for a coherent transport policy

1st → well planned parking policy:

- the cost of parking
 - ✓ key role in limiting car access to the city centre
- adequate P&R facilities
 - ✓ easier management of congestion



2nd → improving PT supply:

- higher frequencies to offer a real alternative to car
- claim for FREE PT (which would not be actually free !!!)

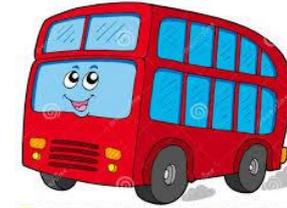
Coherent transport policy, avoiding the toll
but reducing congestion and pollution

Hypothetical behaviours after the scheme implementation

➤ Relocate



➤ Change transport mode



➤ Bypass the toll (changing schedule or path)



➤ Just pay it, although not enthusiastically



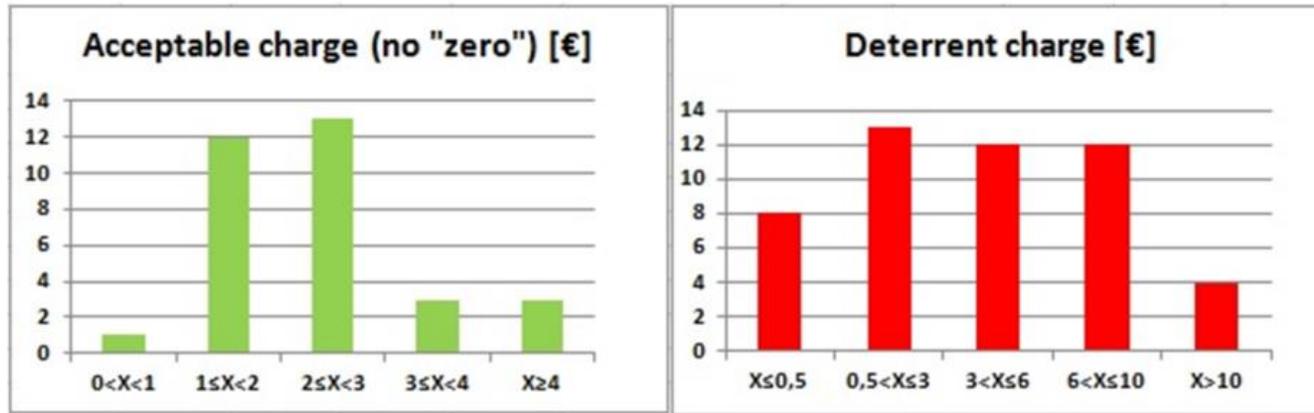
In line with the behavioural adjustments analysed by Karlström and Franklin (2009) during the trial test of the Stockholm congestion charge



The charge level (1)

- **Great variations**, according to income, attitudes, trip purposes
- Terms of comparison to **define the charge level**:
 - ✓ Parking rate for 3 hours in the city centre → 4 to 8 €
 - ✓ Single or Return PT ticket → 1.6 or 3.2 €
 - ✓ Fine for parking in a no-parking zone → 17 €
- People who are **car-dependent for their work-trip**
→ **very high WTP**, unless it is worthier to change job:
Rémy: “I really need to go to work by car, because of unpredictable and irregular working hours and locations, so I would pay anything, any amount that would still make my job profitable instead of changing it”
- **Rather null WTP for leisure trips**

The charge level (1)



Acceptable		Deterrent	
Average	Median	Average	Median
0,00	0,00	0,50	0,50
1,14	0,50	4,64	3,00
1,46	1,00	5,00	4,50
1,67	1,50	5,61	4,75
1,71	2,00	6,00	7,00
2,20	2,00	6,60	7,50

Legend

Supporters
Cannily well-disposed
Non-partisans
Reluctants
Strong opponents
Fierce Opponents

The charge level (2)

- **Spontaneous raising** of the threshold from 0.5-1 € to ≥ 2 €, recognizing that such a charge would not be a real deterrent
- The key **role of habit** is very clear, notably to the most careful observers



Rémy: *“Although at the beginning people would strongly complain, after a while we would all get used to it”*

“As long as we can pay the toll we would not change our habits in order to continue taking advantage of car comfort”

Virginie : *“After a first opposition, all new fees become habits for all who can afford to pay them”.*

Yves: *“Everyone complained when the charge for TEO was introduced in 1997, but it is now so much used that it is always congested”*

Change the rate level according to the income level

- The **rate** should be the **same** for everyone:

Malika: *“everyone should have the same right to move, otherwise also the baguette should have different prices according to the income level”*

Micheal W.: *“since the tax does not have the role of redistributing money, no sense to impose different charge levels”*

→ Scared about data confidentiality and traceability

- The **rate** should **change** according to the **income level**:

Sophie P.: *“it would be fairer”*

Régis: *“it would be more logical”*

M. Chantal: *“it would give the opportunity to everyone to contribute according to his/her possibility, as for other taxes”*

Change the rate level according to car pollutant emissions (1)

➤ **Strong opponents :**

It would be doubly unfair, penalizing whom owning an old car and cannot afford a new one (giving up travelling by car or bearing an excessive rate) and favour rich people:

Mélissa: *“richer people usually have newer and less pollutant cars”*

Franck: *“richer people would pay less and also take advantage from greater traffic fluidity”*

Régis: *“richer people could also buy a hybrid car to pay a reduced rate”*

Loïc: *“they could simply bear the cost of a higher rate without any problem”*

Change the rate level according to car pollutant emissions (2)

➤ **Some people would agree:**

Pierre: *“such a policy would allow fleet renewal, economical upturn, pension investments and increase of jobs”*

➤ **It may not be the best method** to make people aware and responsible against pollution:

Rémy: *“I propose to tax the purchase of polluting cars”,*

Michael G.: *“I would define the tool by making the ratio between the year of the car and also [the level of] pollution”.*

Yves: *“I would consider both the power and the pollutant emissions level.”*

The size of the charging zone

- Several people think that the hypothetical area would definitely be *“huge and unreasonable, entailing the increase of traffic jams in surrounding areas which are already rather congested”*
- The inclusion of some quiet areas (**part of the 3rd, the 8th and particularly Villeurbanne**) seemed just a way to raise money
- Others pointed out that the **Croix Rousse (4th)** should not be included, since its hilly topography makes it uncomfortable for soft modes
- Someone remarked that it would be fairer to include even the **5th and 9th**



Charging zone in the Presqu'île



➤ Agree

- ✓ Reasonable and justifiable by its geography
- ✓ Socially acceptable, being easily accessible on foot or by PT
- ✓ Positive for pedestrians: more space, more attractive for tourists, less congestion and noise
- ✓ Proposal to test the charge in the Presqu'île

➤ Disagree

- ✓ Pay attention to traffic along the rivers' banks
- ✓ It would cause an increase of car traffic in the surrounding areas

Michael G. : *"the toll in the Presqu'île could trigger a vicious circle, leading the car parks of the city centre to bankruptcy"*

Worries and doubts concerning the toll (1)



➤ The **charge** could cause **urban sprawl**:

- ✓ Environmental concerns
- ✓ Strong economical and cultural recession of the city and of its role within the agglomeration

Colette: *“there would be strong protests from traders”*

Jacques: *“it would be the death of the city and of the Presqu’île”*

François: *“big malls in the outskirts would become even more attractive, particularly for motorists”*

Eric: *“I would change shopping habits, strongly penalizing the businesses in the city centre”*

Worries and doubts concerning the toll (2)



- Would the toll be really **effective** in **reducing congestion and pollution** ?



Erna: *“congestion would simply move in the surrounding zone”*

Cyril: *“People will continue to travel by car, as smokers continue to smoke”*

STRONG ROLE OF HABIT



Gabriel: *“people would think twice before taking the car”*

Ariane: *“the toll could act as a deterrent by making explicit the cost of the car, which, although being high, is not really perceived by motorists”*

- Should the **residents** have a **reduction** ?
- Would the **daily period** of the scheme be **fair** ?
- How the **revenues** would be **used** ?

Discussion and conclusion (1)

The changes of mind

IMPORTANCE OF FOCUS GROUPS

- Congestion problems in Lyon:
 - ✓ strong complains at first, then “about-face” when they perceived the hypothetical introduction of a road pricing
- People would pay much more than stated at first, to continue taking advantage of car use
- The acceptance increases after the pricing entry into force
 - ✓ role of habit (Larsen, 1995) and Graduality Strategy (Herman and Chomsky, 2002)

Social injustice

- Restrictions should be coupled with the improvement of PT, incentives for buying “green cars”
- Pricing favour wealthier people

Discussion and conclusion (2)



Public acceptance increases when:

- giving information about the role of the charge (congestion and environmental problems) (see also Musselwhite and Lyons, 2009)
- including the charge in a well structured and coherent transport policy (e.g. alternatives to car use) (see also Green and Stone, 2004)

Costs

- High installation cost of a toll system (see also Jansson, 2008)
- PT and P&R are more appreciated ("second-best remedies" to tackle congestion and pollution) (see also Jansson, 2008)

Discussion and conclusion (3)



Methodological considerations

Focus Group

- ✓ individual thoughts and reaction to the other participants' remarks;
- ✓ talkative and proactive participants: only 5/61 (8.2%) were "lazy" ;
- ✓ usually spontaneous and genuine reactions (difficult to "play a role" throughout the whole discussion)



Quantitative questionnaire

- ✓ no certainty about care, honesty and awareness of the respondents "forced" to reply to all questions (Rappazzo, 2010);
- ✓ convenient and socially appreciated answers that do not correspond to their real opinions: Social Desirability Bias (Nederhof, 1985; Kreuter et al., 2008; King and Bruner, 2000; Fisher and Katz, 2000)

- Qualitative methods allow **monitoring emotions, reactions and changes of opinions**
- Importance of **using both quantitative and qualitative methods** when pricing issues are investigated