Congestion pricing in Mexico City

TDM history & opportunities

Mobilize 2019
Fortaleza, Brazil
1. ITDP & policy innovation
2. Context
3. An informed bet
4. Next steps & questions
What we do?

Change the status quo of mobility and urban development towards more sustainable and equitable models. (BRT, active mobility, TOD)

How we do it?

1. ITDP & Policy Innovation

- Research
- Advocacy
- Projects
- Capacity building
Example:
Research + advocacy
Less parking more city
report & contest

ITDP & policy innovation

2014
2016
2017
Junio 30, 2017
Off-street parking reform

ITDP e IMCO convocan al concurso
MENOS CAJONES, MÁS CIUDAD

http://www.menoscajonesmasciudad.mx
2. Context
What is TDM?

• Strategies to maximize efficiency in urban transport by disincentivizing unnecessary trips in certain modes and promote trips in more efficient modes. (SUTP, 2009)

• Measures to mitigate negative externalities from the excessive use of certain transport modes.

• Low cost actions with great effects on the environment and urban accessibility
### Why is it important?

Congestion generates enormous social costs. People living in the Mexico City Metropolitan Area lose 2,771,980,844 hours per year, the equivalent of **3.12% of its GDP**. (ITDP, 2019 work in progress)

Congestion occurs when the roads get saturated, lowering the capacity of the network.

Congestion generates negative effects to the environment and the economy.

Motorists do not pay the social costs associated with their transport choice.

### How to manage demand?

<table>
<thead>
<tr>
<th>Pricing</th>
<th>Control</th>
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<tr>
<td>Charge the social costs of certain trips</td>
<td>Limit certain types of trips and the use of certain vehicles</td>
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‘There is nothing more difficult... than to take the lead in the introduction of a new order of things. Because the innovator has for enemies all those who have done well under the old order of things, and lukewarm defenders in those who may do well under the new’ (Machiavelli)

- Stated or revealed preferences to elicit attitudes towards pricing (Whitles, 2003, Schade & Schlag, 2003; Garling, 2010)

- Political process and key actors (Giuliano, 1994; Viegas 2001; King et al., 2007)
  - Winner, losers & the use of revenue

- Case studies of success and failure mostly from developed world cities
  - Pre-existing public transport network
  - Political and policy concerns:
    - Addresses a crisis (environment, congestion)
    - Political will and backing from different levels of government and other stakeholders.
    - Strategies to navigate between electoral processes
  - Transferability of lessons to other cities & particularly to developing world cities?

Political Feasibility & Social Acceptability
Singapore

Technically informed policy decision promoted by the WB.

Outstanding results:
- 45% in traffic demand.
- Increased bus speeds, profitability and demand.

Limited transferability from political process. When Singapore first implemented congestion pricing it was a developing country.
Norwegian cities

Designed to raise revenue, after its introduction, more than 30% of the country’s road infrastructure was financed through toll rings.

After its renewal (Oslo) 50% of its revenue was planned to finance public transport.

Raising revenue is appealing for authorities in resource scarce cities.

Ramjerdi, 2004
Political Feasibility & Social Acceptability

London

National and local policies alignment.

Backed by business and key stakeholders.

Strategic timing, enough time for motorists to understand the benefits before elections.

Expansion to the west didn’t had backing from same stakeholders. Cancelled after election of a new Mayor.
Stockholm

Attitudes towards pricing were measured beforehand.

Introduced through a referendum after a trial period.

Equity concerns were included in its design.

Wider policy objectives were planned and achieved.

Political Feasibility & Social Acceptability

Stockholfsforsocket, 2006
Milano

Ecopass developed after a perceived air quality crisis, related to a new EU Standard. Policy design included exceptions, some of them fostered fleet renewal.

Evolved from Ecopass to Area C after a referendum, Activists and media played a key role in the process.

Area C included a carte blanche for further area expansion (incremental approach) and stricter rules.
New York

First attempt blocked by state level politics.

Second attempt focused on raising revenue to invest in infrastructure.

Source: Transport Policy 17 (2010) 266-273
Travel supply & travel demand policies in Mexico City

Mobility hierarchy & Federal funds investment in urban mobility

Mobility Hierarchy

Federal funds spending in urban mobility (ITDP, 2018)
TDM & Air quality

Driver of plate restrictions and major policy changes in the early 90s.

Mandatory School Transport Programme in 2010.

Both measures are part of air quality plans and managed by the environment ministry rather than the transport one.
Parking TDM

On street parking: Ecoparq 2012
- Few neighborhoods.
- Introduction to new neighborhoods blocked by neighbors.

Off-street parking:
- Parking reform in June 2017: minimums per maximums.
- Mobility fund still to be created.
- Impact assessment be presented in October.

The system charges $2.00 Mexican pesos per 15 minutes and must be refreshed in person every 3 hours.
3. An informed bet for 2018-2024 Administration
An informed bet for 2019-2024

Road-based congestion pricing seems more feasible than cordon based, because:
- Authorities have stated that they are not considering congestion charge in its plans.
- No baking from key stakeholders

Opportunities for road-based congestion pricing:
- Considered in the contracts of urban highways.
- Already being charged, it is not charging for something that previously was free.
- Easy to pilot.
- Public transport run for free in some of the highways.
- TNC are simplifying carpooling, which could be an option for motorists.
- Tolled roads are saturated.
Moving people, not cars...

68% of all car trips are made in solitary in the ZMVM (INEGI, 2018)

### An informed bet for 2019-2024

<table>
<thead>
<tr>
<th>Types of Managed Lanes</th>
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<tr>
<td>HOV only lane</td>
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<td>Only cars with a certain number of people (usually 2+) are permitted. Also called ‘car-pool lane’.</td>
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<tr>
<td>HOT lane</td>
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<tr>
<td>Same concept as HOV lanes, except 1-person cars can enter for an extra fee.</td>
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<tr>
<td>Express Toll lane</td>
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<tr>
<td>Available to any vehicle for a fee. The amount of the fee is based on several factors, including traffic in GP lane.</td>
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<tr>
<td>Discounted lane</td>
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<td>While not its own physical lane, discount policies are another way to reduce congestion through traffic management.</td>
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Road-based congestion pricing

Road management, efficiency and equality

Pricing in combination with other measures could benefit society, increasing efficiency and equality through avoid, shift & improve (ASI):

- **Increasing accessibility**: more trips with fewer costs per person through public transport and carpooling.

- Pricing can **reduce externalities**, such as congestion, emissions and road risk, producing a more socially beneficial equilibrium. (ITDP, 2012)

- **Generate revenue for public transport.**
Road-based congestion pricing

Low level of service is a condition in the contracts of highway operators

Congestion level (0 = free flow, 5 = closed road)
0 = Free flow to 80% of free flow
1 = 80% to 61% of free flow
2 = 60% to 41%
3 = 40% to 21%
4 = 20% to 1%
5 = camino cerrado

ITDP, with data from Waze
Plan to Reduce Emissions from the Transport Sector (June 2019)

- Presented after the most recent air quality crisis,
- Strategic use of infrastructure (ASI)
- HOV & carpooling (not pricing)
- Low emissions zones
- Improve public transport.
4. Next steps and questions
Next Steps & Questions

Next steps:
- Codesign the pilot with authorities, highway operator and carpooling TNC.
- Get data for the baseline.
- Implementation.
- Report.

Questions
- Would carpooling be an option for current motorists?
- Would the financial model be attractive for the highway operator and the authorities who operate the bus corridor?
- If successful, how to replicate or expand it?
- Would it work as a first step to a more ambitious pricing scheme?
- Would pricing contribute to increase access in sustainable modes?
Gracias

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