Overcoming Political Opposition to Freeway Congestion Pricing

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Overview

- Strong academic/planner support for freeway congestion pricing (CP)
- Little or no *political* support for CP
- Strong opposition from highway customers (motorists, truckers)
- Conventional CP model not optimal
- Revised goal more realistic/fewer negatives
- Evolutionary approach, not big bang
The case for freeway pricing

Two main purposes:
- Balance demand and capacity
- Generate revenue and target investment where most needed

FHWA’s 2008 C&P Report illustrates the impact of both
### Impact of pricing on Interstate system capital investment

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Status Quo ($B)</th>
<th>Congestion Pricing ($B)</th>
<th>Difference ($B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>16.5</td>
<td>16.5</td>
<td>0</td>
</tr>
<tr>
<td>Sustain current C&amp;P</td>
<td>24.8</td>
<td>11.6</td>
<td>13.2</td>
</tr>
<tr>
<td>Improve C&amp;P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Using B/C&gt;1.0</td>
<td>47.0</td>
<td>30.4</td>
<td>16.6</td>
</tr>
<tr>
<td>b) Using B/C&gt;1.2</td>
<td>43.5</td>
<td>27.5</td>
<td>16.0</td>
</tr>
<tr>
<td>c) Using B/C&gt;1.5</td>
<td>39.0</td>
<td>24.0</td>
<td>15.0</td>
</tr>
</tbody>
</table>
Political obstacles to pricing

- Paying twice/double taxation (e.g. truckers and I-80 tolling proposal; also AAA)
- Voters = motorists (91% of households)
- Hence, elected officials not supportive.
- Pricing alone (no system improvements) can be seen as monopolistic exploitation.
Previous U.S. attempts

- UMTA, 1970s: planning grants to cities, Urban Institute—but no takers on implementation
- Value Pricing Pilot Program, 1990s: major REACH project in Los Angeles—opted for HOT lanes instead.
- Urban Partnership Agreements, 2000s: the proposals to price currently “free” capacity rejected (SR 520 bridge is all new capacity).
Limited overseas success

- Rejections in:
  - Hong Kong
  - Kuala Lumpur
  - Netherlands
  - Cambridge and Manchester
- Yet all have much lower car ownership and much greater transit than US cities
Congestion pricing produces losers as well as winners

1. **The Tolled**: they pay because time savings are worth it to them
2. **The Tolled-Off**: they divert to arterials, since time savings are not worth the price.
3. **The Un-Tolled**: those already on arterials, made worse off by added traffic.
What if groups 2 + 3 are larger than group 1?

- High freeway congestion requires high market-clearing peak tolls.
- If revenues are not used to expand freeway, customers face monopoly pricing.
- In most US metro areas, expanded transit not a viable option for most drivers.
Proposals to overcome opposition

- Ken Small, 1992: 2/3 of revenues for various tax rebates, 1/3 for added transit/highway capacity.
- Most others call for most or all of the proceeds for expanded transit, as in London and Stockholm.
How viable is expanded transit?

- Average U.S. transit commuter mode share is 5% (lower if NYC left out).
- Doubling transit mode share is beyond means of most MPO long-range plans.
- Doubled mode share would still leave 90% using roadways.
- Door-to-door transit trip time is 48 minutes (vs. 23.9 min. for SOV).
More radical UCLA proposal

- Give all net revenues to cities through which the freeways run, for general purposes.
- Major problems with this:
  - Ignores one of two purposes of CP (investment targeting)
  - Ignores users-pay/users-benefit principle
  - Jurisdictional problems (states vs. cities)
Problems with conventional freeway pricing model

- Single-Price assumption
- GP Lanes assumption
- Rethinking both opens the way to a more feasible approach.
The single-price assumption

- There is not “a” value of time; Small et al. find heterogeneous VOT and VOR.
- Single-price approach does not maximize social welfare; some pay too little, many pay too much.
- Dual-price (premium and regular) does better, in Small’s social welfare modeling.
- Shmanske came up with this first; modeled dual-price Golden Gate Bridge in 1992.
The GP lanes assumption

General case for GP lanes:
- Multi-lanes have higher throughput.
- Lumpiness means GP lanes more cost-effective.

However, we now know:
- HOT lanes have demonstrated a useful role, with higher peak throughput.
- Truck lanes offer safety, productivity and life-cycle cost savings.
New goal: three-part pricing on differentiated lanes

Our freeway pricing goal should be:
- Premium lanes with premium pricing;
- Regular lanes with modest peak pricing;
- Truck-only lanes in select corridors.

This approach should produce more winners than losers.
Evolutionary path to the goal

- **Step 1:** Express (HOT) lanes on several freeways, to show that pricing works.
- **Step 2:** Express Lanes network, mostly single-lane/direction; high capital cost, high prices.
- **Step 3:** Only then, propose converting adjacent GP lane, for 2 lanes/direction, better flow, more affordable prices.
- **Step 4:** Only then, propose modest peak pricing on GP lanes, plus truck toll lanes.

Each step is justified by benefits; lays basis for broader support for next step.
Conclusions

Conventional freeway pricing is not making headway, despite its merits.
Express Lanes and networks are making considerable headway.
Build on that, in evolutionary fashion, toward a 3-part pricing solution.
Evolution more likely to succeed than revolution.
Questions?

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