Commuter Benefits to Promote Cycling

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The Role of Commuter Benefits in Shaping the Decision to Walk, Cycle, or Ride Public Transport to Work in the Washington, DC Region (Hamre and Buehler 2013, TRB Poster #13-1429)


Trends and Determinants of Cycling in the Washington DC Region (Buehler with Hamre, Sonenklar, and Goger 2011)

International Bicycle Urbanism Symposium
June 2013
Overview

- Introduction
- Literature Review
- Case Study: Washington DC Region
- Best Practices
- Key Findings & Recommendations
  - 1. Multimodal
  - 2. Comprehensive (Facilities, Collaborations, Rewards)
Introduction

- Commuter benefits, broadly defined:
  - Workplace policies, programs, initiatives and expenditures that influence the workforce journey to work
  - If you bike for **all or part** of your journey to work, you’re a bike commuter
    - “primary mode” thinking undervalues non-motorized travel
    - \( \rightarrow \) monomodal to multimodal
Introduction

- Bike commuting can be a catalyst for:
  - Diversifying cycling trip purposes (increasing the share of utilitarian trips relative to recreational trips)
  - Building a broader cycling constituency
  - Benefiting employees, employers, and communities

- Commuter benefits promoting cycling can:
  - Encourage existing cyclists to maintain or increase their cycling, and new cyclists to try bike commuting at least once in a while
  - Act to **legitimate, dignify, and normalize** cycling in the workplace environment and greater community
Literature Review

1. Both pull ("carrot") & push ("stick") factors are needed to get commuters out of cars
   - Transit subsidies in the U.S. are largely rendered ineffective in the absence of complementary automobile taxation policies (Pucher 1988)
   - Effective TDM requires disincentives for driving along with incentives for walking, cycling, and transit (Washbrook 2006)
   - Commuter benefits for biking, walking, and transit seem to work best when car parking is not free (Hamre and Buehler, TRB #13-1429, 2013)
Literature Review

2. Monomodal benefits are very effective... at producing monomodal commuters

- Free car parking → most prevalent benefit offered in the U.S. (5% of auto commuters pay to park at work), people respond to priced parking with reduced SOV commuting (Willson and Shoup 1990; Willson 1992; Shoup 1997; Hess 2001)

- Free transit fares → higher rates of public transportation ridership (Brown et al 2003; Boyd et al 2007), some evidence of reduced cycling (Pucher and Buehler 2012)

- Trip-end facilities like bicycle parking and showers, as well as direct payments → higher rates of cycling (Dill and Wilson 2007; Wardman 2007; Buehler 2012), some evidence of reduced transit use (Dill and Wilson 2007)
3. But many commuters would prefer the option to be multimodal

- In weekly and monthly travel, most people use more than one mode (Kuhnheimhof 2006; Nobis 2007; Vij 2011; Kuhnheimhof 2012); many Americans make at least 1 weekly walk, bike, or transit trip → latent demand for multimodal commuting

- *The Myth of the Single Mode Man* (Block-Schachter 2009): the single mode commuter is a myth

- Monomodal benefits create a preference-behavior mismatch based on “winner-takes-all” incentivizing

- Individuals tend to prefer flexibility/transferability/fungibility
  - (conditional cash transfers, weight loss programs, welfare programs)

4. Multimodal benefits are very effective...at producing multimodal commuters

- Since intrapersonal preferences vary, multimodal benefits align behavioral incentives with the actual preferences commuters have over time

- Multimodal benefits are a “coalition” approach – every mode has a seat at the table

- Cycling likely has the best chance of large uptake in a multimodal framework
## Literature Review

<table>
<thead>
<tr>
<th>Type</th>
<th>Driving</th>
<th>Transit</th>
<th>Biking</th>
<th>Walking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
<td>Car parking</td>
<td>Bus stop shelters, shuttles to/from train stations</td>
<td>Trip-end facilities (secure bike parking, showers/lockers)</td>
<td>Trip-end facilities (showers/lockers)</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Partnerships with planning &amp; transportation departments for data collection, infrastructure provision</td>
<td>Partnerships with planning &amp; transportation departments, local and regional transit agencies</td>
<td>Partnerships with local planning and transportation departments for bikeway supply and bike parking, information sharing, event promotion, bikeshare station locations</td>
<td>Partnerships with local planning and transportation departments for pedestrian infrastructure, information sharing, event promotion</td>
</tr>
<tr>
<td>Reward</td>
<td>&quot;Free&quot; car parking; Tax-exempt $245/month (U.S.)</td>
<td>Subsidized passes; Tax-exempt $245/month (U.S.)</td>
<td>Promotion programs with rewards; In-kind transfers; Tax-exempt $20/month (U.S.)</td>
<td>Promotion programs with rewards; In-kind transfers; Tax-exempt $0 (U.S.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Transport allowances and parking cash out (Minneapolis, MN; Los Angeles County, CA; Bellevue, WA)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Distance-based tax-exempt travel allowances (Netherlands, Belgium € 0.15-0.20/km, UK £ 0.20/mile)</td>
<td></td>
</tr>
</tbody>
</table>

**Author’s Summary**
What do monomodal benefit outcomes look like?

Even as the benefits for transit, biking, and walking become more common, free car parking continues to be the most common benefit...and most people still drive

(Note: great variability benefit magnitude)

### Primary Commute Mode

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<tr>
<th></th>
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<tbody>
<tr>
<td>Auto</td>
<td>71.3</td>
<td>74</td>
<td>77.3</td>
<td>78.4</td>
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<td>Transit</td>
<td>20.2</td>
<td>17.7</td>
<td>16.8</td>
<td>17</td>
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<tr>
<td>Bike/Walk</td>
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<td>2.6</td>
<td>2.2</td>
<td>2.3</td>
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<tr>
<td>Other</td>
<td>6.2</td>
<td>5.7</td>
<td>3</td>
<td>2.3</td>
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</table>

### Benefit

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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Free Car Parking</td>
<td>63</td>
<td>65</td>
<td>66</td>
<td>65</td>
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<tr>
<td>Transit Subsidy</td>
<td>45</td>
<td>33</td>
<td>31</td>
<td>29</td>
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<tr>
<td>Bike/Ped Fac./Services</td>
<td>24</td>
<td>17</td>
<td>14</td>
<td>9</td>
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</table>

Source: 2010 State of the Commute MWCOG
Case Study: Washington DC Region

<table>
<thead>
<tr>
<th>Primary Commute Mode</th>
<th>Share of All Workers</th>
<th>Free Car Parking</th>
<th>Bike/Ped. Fac./Serv.</th>
<th>Secure Bike Parking</th>
<th>Bike/Ped. Fac./Serv. &amp; Secure Bike Parking</th>
<th>Bike/Ped. Fac./Serv. &amp; Secure Bike Parking, No Free Car Parking</th>
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</thead>
<tbody>
<tr>
<td>Auto</td>
<td>78.9</td>
<td>93.4</td>
<td>74.9</td>
<td>77.5</td>
<td>72.5</td>
<td>38.8</td>
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<tr>
<td>Transit</td>
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<td>17.8</td>
<td>16.2</td>
<td>18.8</td>
<td>44.3</td>
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<td>Bike</td>
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<td>0.3</td>
<td>2.3</td>
<td>1.4</td>
<td>2.9</td>
<td>6.6</td>
</tr>
<tr>
<td>Walk</td>
<td>2.1</td>
<td>1.1</td>
<td>2.9</td>
<td>2.8</td>
<td>3.5</td>
<td>6.4</td>
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<tr>
<td>Other</td>
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<td>1.7</td>
<td>2.1</td>
<td>2.1</td>
<td>2.3</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Primary Commute Mode Share By Benefit Type (Percent).
Source: Author Calculations Based On 2007/2008 DC Household Travel Survey

Commuter Benefits for Biking, Walking, and Transit Seem to Work Best When Car Parking Is Not Free (Hamre and Buehler, TRB #13-1429, 2013)
Commuter Benefits Across Modes: Washington DC Region Case Study

Majority of MetroRail Drive-and-Ride passengers drive short distances to stations

12%: <1 mile
32%: 1-3 miles
20%: 3-5 miles

Source: 2007 MetroRail Passenger Survey

Multimodal mindset for commuter benefits could change this
Best Practices to Promote Commuter Cycling:
1. Delhaize Group - Belgium

One of the bike bags on offer by Delhaize.
Credit: GRACQ
Best Practices to Promote Commuter Cycling:

2. New Belgium Brewing

http://www.newbelgium.com/pairswell.aspx
Best Practices to Promote Commuter Cycling:
3. Dero “Gopher” ZAP @ University of Minnesota

https://www.derozap.com/
Key Recommendations

1. Multimodal Benefits
   - Travel allowances, parking cash out, and a level modal playing field create multimodal commuters & align preferences, incentives, and behavior
   - Tax incentives should be fungible (transferable) across modes
   - No single mode should be privileged: charge for car parking, reduce car parking availability, eliminate tax-exempt status of car parking

2. Create comprehensive packages including facility-, collaboration-, and reward-based elements
Next Steps

1. How do commuter preferences for benefits vary within population subgroups? How can benefits be adapted for varying groups of commuters?

2. How can commuter benefit data collection be improved to aid policy-making?
Thank You! Questions?

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