Win-Win Transportation Solutions

Todd Litman
Victoria Transport Policy Institute

Presented
Lipinski Symposium on Transportation Policy
Chicago, Illinois
15 October 2007
What is “The” Transportation Problem?

- Traffic congestion?
- Road construction costs?
- Parking congestion or costs?
- Excessive costs to consumers?
- Government costs?
- Traffic crashes?
- Lack of mobility for non-drivers?
- Poor freight services?
- Environmental impacts?
- Inadequate physical activity?
- Others?
Current transportation planning tends to be *reductionist*, problems are considered individually. This often results in solutions to one problem that exacerbate other problems facing society, and tends to undervalue strategies that provide multiple but modest benefits.
Put another way, more comprehensive planning helps identify “Win-Win” strategies: solutions to one problem that also help solve other problems facing society.

Ask:
“Which congestion-reduction strategy also reduces pollution emissions and saves consumers money…and which emission reduction strategy also reduces traffic and parking congestion”
# Comparing Benefits

<table>
<thead>
<tr>
<th>Planning Objectives</th>
<th>Reduce Vehicle Travel</th>
<th>Expand Roads</th>
<th>Efficient or Alt. Fuel Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce congestion</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roadway cost savings</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parking cost savings</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer cost savings</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better mobility options</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic safety</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce pollution</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Energy conservation</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Land use objectives</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved fitness &amp; health</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

✓ = supports objective
Comparing Costs

Average Annual Cost Per Vehicle

- Vehicle Ownership
- Crash Damages
- Parking Subsidies
- Vehicle Operation
- Roadway Costs
- Residential Parking
- Traffic Congestion
- Pollution Emissions
- Roadway Land Value
- Fuel Externalities
- Traffic Services

Costs range from $0 to $3,000.
Congestion Costs

![Graph showing the relationship between annual dollars per capita and city population (in thousands). Different cities like San Francisco, Los Angeles, New York, Miami, Chicago, and Philadelphia are plotted on the graph. The graph includes three types of transportation options: Large Rail, Small Rail, and Bus Only.](image)

- **San Francisco**: High annual dollars per capita, especially for Large Rail.
- **Los Angeles**: Shows a significant increase in annual dollars per capita with the city population.
- **New York**: Exhibits a moderate increase in annual dollars per capita.
- **Miami**: Displays a moderate increase, similar to Chicago and Philadelphia.
- **Chicago and Philadelphia**: Have a moderate increase in annual dollars per capita.

The graph highlights the impact of city population on congestion costs for different transportation options.
Traffic Fatalities

![Graph showing traffic fatalities per 100,000 population vs. annual per capita transit passenger-miles.]

Legend:
- Large Rail
- Small Rail
- Bus Only

Bar chart showing:
- Large Rail: Deaths per 100,000 population
- Small Rail: Deaths per 100,000 population
- Bus Only: Deaths per 100,000 population
High quality transit provides about $500 annual per capita consumer cost savings.
Per Capita Transport Energy

OECD in Figures, 2005
Market Distortions - Examples

- Roadway costs not borne directly by motorists.
- Free/underpriced parking.
- Fixed vehicle insurance and registration fees.
- Uncompensated environmental damages.
- Land use policies favoring lower-density, automobile-oriented development.
- Planning biases that favor mobility over accessibility and automobile travel over alternative modes.
- Others...
Win-Win Transportation Solutions

Market reforms justified on economic principles that help provide various economic, social and environmental benefits.

- Improved travel options.
- Incentives to use travel alternatives.
- Accessible land use.
- Policy and market reforms.
Pay-As-You-Drive (PAYD) Pricing

Motorists pay by the vehicle-km, so a $600 annual premium becomes 5¢/mile and a $1,200 annual premium becomes 10¢/mile. This gives motorists a significant financial incentive to drive less, but is not a new fee at all, simply a different way to pay an existing fee.
A typical motorist with a 50-mile daily commute would save an additional $3.00 each day they use alternative modes rather than drive alone.
Efficient Parking Management

- Reduced and more flexible parking requirements.
- Shared parking
- Parking pricing
- Parking ‘cash out’
- Parking property taxes
Parking is never really free, consumers either pay directly or indirectly. Paying directly tends to be more fair and efficient, and typically reduces parking demand about 20%.
Smart Financing

- Expand when and where on-street parking is priced.
- Per-space parking taxes.
- Increased vehicle fuel taxes.
- Local improvement districts around transit stations.
- Employer levies.
- Transportation management association fees.
- Road tolls and congestion pricing
Employers encourage employees to walk, bicycle, carpool and ride transit rather than drive to work. For example, offer a tax incentive for businesses that have effective commute trip reduction programs.
Mode Shifts

How do we convince people who drive luxury cars to shift mode?
Attracting Discretionary Riders

- Quality service (convenient, fast, comfortable).
- Low fares.
- Support (walkable communities, park & ride facilities, commute trip reduction programs).
- Convenient information.
- Parking pricing or “cash out”.
- Integrated with special events.
- Positive Image.
Market studies suggest that a third of suburban automobile commuters would consider vanpooling, if it had:

- Flexibility.
- High Occupant Vehicle priority lanes and parking.
- Financial incentives.
- Integration with public transit.
- Employer support.
Walking and Cycling Improvements

- More investment in sidewalks, crosswalks, paths and bike lanes.
- More traffic calming.
- Bicycle parking and changing facilities.
- Programs to encourage safe walking and cycling.
Freight Transport Management

- Efficiently road pricing.
- Improve rail and marine transport services.
- Encourage more efficient local delivery services.
If implemented to the degree justified by economic principles, Win-Win strategies would reduce total vehicle travel by a third or more, while making consumers better off overall.
For more information

www.vtpi.org

“Online TDM Encyclopedia”

“Win-Win Transportation Solutions”