ECONOMIC IMPACT OF PUBLIC TRANSPORTATION INVESTMENT

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Economic Impact Issues

Why Measure Economic Impacts?

Types of Economic Impact

Short-term Spending Impact

Long Term Cost Savings & Productivity Impact

Interpreting Future Numbers

Conclusions
Why Measure Economic Impact?

1. Flow of Money in the Economy *(Where does it go?)*
2. Breadth of Impact *(Businesses & Households)*
3. Economic Stimulus Effect
4. Economic Competitiveness Effect
5. Consistency with Public Policy
6. Making Better Decisions
Types of Economic Impact

- Short-Term Spending Impacts
  - Capital Investment Impacts
  - Operations Impacts
- Long-Term Economic Productivity Impacts
  - Travel Time/Cost Improvement Impacts
  - Job and Market Access Improvement Impacts
- Non-Money Impacts (Environment)
Short-Term Impact: Spending Flows

- **29% Capital Purchases**
  - Purchase: Vehicles & Equipment
  - Construction: Right-of-Way & Buildings

- **71% Operations**
  - Drivers & Mechanics
  - Dispatchers, Engineers, Management
  - Fuel & Parts

Key issue is the portion of spending going to businesses in the USA
Capital Investment in Public Transportation in the US

- Construction of Buildings and Related Facilities: 28%
- Construction of Guideways (rail lines or busways): 33%
- Purchase of Buses: 16%
- Purchase of Rail Vehicles: 11%
- Purchase of Supporting Equipment: 12%

APTA Fact Book, 2009
## Economic Impact of National Investment in Public Transportation

<table>
<thead>
<tr>
<th>Economic Impact</th>
<th>Per $ Billion of Capital Spending</th>
<th>Per $ Billion of Operations Spending</th>
<th>Per $ Billion of Average Spending$^B$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs (Employment. thousands)</td>
<td>23.8</td>
<td>41.1</td>
<td>36.1</td>
</tr>
<tr>
<td>Output (Sales, $ billions)</td>
<td>$ 3.0</td>
<td>$ 3.8</td>
<td>$ 3.6</td>
</tr>
<tr>
<td>GDP (Value Added, $ billions)</td>
<td>$ 1.5</td>
<td>$ 2.0</td>
<td>$ 1.8</td>
</tr>
<tr>
<td>Labor Income ($ billions)</td>
<td>$ 1.1</td>
<td>$ 1.8</td>
<td>$ 1.6</td>
</tr>
<tr>
<td>Tax Revenue ($ millions)</td>
<td>$ 350</td>
<td>$ 530</td>
<td>$ 490</td>
</tr>
</tbody>
</table>
Capital Investment: Job Impact

- Construction: 31%
- Manufacturing: 13%
- retail trade: 7%
- Professional svcs: 8%
- Admin srvcs: 6%
- Health & social srvcs: 5%
- Hotel and Restaurants: 5%
- Other srvcs: 4%
- Finance & insur.: 4%
- Transpt & Whse: 4%
- Wholesale Trade: 3%
- Real estate: 3%
- Arts & Entertain.: 1%
- Other: 6%
- Construction: 31%
Operations Spending: Job Impact

- Government: 46%
- Retail Trade: 7%
- Health services: 7%
- Professional services: 5%
- Hotel & Restaurants: 5%
- Manufacturing: 4%
- Other Services: 4%
- Admin Services: 4%
- Finance & Insurance: 3%
- Wholesale Trade: 3%
- Other: 12%
Long-Term Impact: Cost Savings & Productivity

- Household cost savings
- Business delivery savings from reduced congestion
- Worker productivity due to more reliable arrivals
- Market access enlarged:
  - Broader labor market for business
  - Broader job options for workers
- Business cluster or agglomeration economies:
  - Clustering of complementary activities, enabled by public transportation services and terminal facilities
Overall Economic Impact:

1. **Transit ridership increase** from service expansion
2. **Cost** per new rider
3. **Auto use reduction** from transit increase
4. **Passenger cost savings** for those switching to transit
5. **Auto & truck cost savings** from reduced congestion
6. **Business productivity** from greater labor force access and worker reliability

**Overall Economic Impact:** jobs, income, tax revenue
### Long-Term Scenario (invest $13b/yr for 10 yrs)

**Impact per Billion $**

<table>
<thead>
<tr>
<th>Form of Impact</th>
<th>Magnitude by Year 2020*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Households: Disposable Income</strong></td>
<td><strong>$ 1.15 billion/yr.</strong></td>
</tr>
<tr>
<td>from cost savings to public transit passengers</td>
<td></td>
</tr>
<tr>
<td>from savings in auto user operating costs</td>
<td></td>
</tr>
<tr>
<td>from savings in auto ownership costs</td>
<td></td>
</tr>
<tr>
<td><strong>Business: Productivity</strong></td>
<td><strong>$ 0.65 billion/yr.</strong></td>
</tr>
<tr>
<td>from labor market access enhancement</td>
<td></td>
</tr>
<tr>
<td>from auto/truck operating cost reduction</td>
<td></td>
</tr>
<tr>
<td><strong>Total Value Added (Equivalent)</strong></td>
<td><strong>$ 1.80 billion/yr.</strong></td>
</tr>
<tr>
<td><strong>Estimated Tax Revenue Impact (fed, state, local)</strong></td>
<td><strong>$ 0.26 billion/yr.</strong></td>
</tr>
<tr>
<td><strong>Equivalent Wage Income Benefit</strong></td>
<td><strong>$ 1.42 billion/yr.</strong></td>
</tr>
<tr>
<td><strong>Equivalent Job Benefit</strong></td>
<td><strong>30,800</strong></td>
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</table>
Total Impact per $1 Billion Invested
(year 10)

Short-Term Spending Impact $1.8b

Long-Term Productivity Impact $1.75b

Total Impact $3.55b

Present value basis (5% discount rate, 30 years) → Income impact is 4 to 1
Interpreting Numbers

- Long-term economic impact builds up over time
  *(Less in early years, more in later years)*

- Further economic impacts may be enabled in future
  *(reduced auto ownership if quality transit is sustained)*

- Total benefit is much more than impact on economy
  *(add personal time savings + environmental benefit)*

- Job creation rate (per $ spent) changes over time
  *(due to inflation over time)*
Conclusions

Recognize both short-term spending impact and long-term cost/productivity impact.

Type and quality of jobs is also important.

Economic impact can be enlarged by increasing efficiency and locally-produced materials.

Consider job and the economy as part of a broader set of cost & benefit considerations.