Making the Economic Case for Transit

Naomi Stein
EDR Group
Rail-Volution
Why Economic Analysis?

Of the $2.3 billion that Congress has given USDOT for transit capital investments since the beginning of this administration, only 20 percent has been distributed to transit projects waiting for funding.

On the ballot (2016)

<table>
<thead>
<tr>
<th>Referendum (click for details)</th>
<th>Share in favor</th>
<th>Passed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Proposition 53</td>
<td>40.0%*</td>
<td>☒</td>
</tr>
<tr>
<td>Alameda-Contra Costa CA Measure C1</td>
<td>82.1%</td>
<td>☒</td>
</tr>
<tr>
<td>BART CA Measure RR</td>
<td>70.5%</td>
<td>☒</td>
</tr>
<tr>
<td>Contra Costa CA Measure X</td>
<td>62.7%</td>
<td>☒</td>
</tr>
<tr>
<td>Los Angeles CA Measure M</td>
<td>69.9%</td>
<td>☒</td>
</tr>
<tr>
<td>Sacramento CA Measure A</td>
<td>68.4%</td>
<td>☒</td>
</tr>
<tr>
<td>Santa Clara CA Measure B</td>
<td>71.5%</td>
<td>☒</td>
</tr>
<tr>
<td>San Diego CA Measure A</td>
<td>56.9%</td>
<td>☒</td>
</tr>
</tbody>
</table>

Backlog of Investment

Smart Growth America
Improving lives by improving communities

2017 Infrastructure Report Card
ASCE

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10/22/2018 2
Why Economic Analysis?

• Economic analysis is becoming an increasingly important consideration as transit agencies seek to be more accountable to their funders and constituents.
“Economic impact” studies portray effects on the regional economy in terms of local jobs and income.

“Economic benefit” studies explore the value of transportation, environmental, and other societal benefits.

Both types of studies are commonly applied, often in tandem, as complementary concepts that support the business case for transit investments.
Impacts to the Economy

We invest in transportation to grow our economy by improving business competitiveness.

- Decreased business spending on transportation
- Transportation improvements achieve economic growth by changing the travel costs incurred by households and businesses
- Changing household spending patterns
- Improved market access

**Economic Impact Measures**

- **Business Sales (Output)**
  - Profits, Taxes, Subsidies
  - Wages/Income
  - Cost of Purchased Goods and Services
  - Gross Regional Product

Icons created by William Joseph for the Noun Project
Benefits to Society

We also invest in transportation to support policy objectives including protecting the environment and improving quality of life.

- Reducing environmental damage
- Improving safety
- Providing access to opportunities
- Reducing time and cost required to engage in society/the economy

\[\rightarrow\] Not all societal benefits change the flow of income in the economy

Monetization of benefits addresses the goal of quantifying overall improvements to society in easily comparable dollar terms.
Roles and Goals of Transit Investment

- Transit investment as a multi-modal source of efficiency
- Transit as access to opportunities
- Transit as a strategic planning and development tool
Transit agency as a generator of jobs and income

Activity Directly Supported
Transit agencies employ workers, pay them wages, and invest in equipment & supplies to provide transit service

Supplier Activity
Transit agencies purchase goods & services from companies who in turn employ and pay workers

Spending of Worker Income
Transit agency & transit agency supplier employees spend their income on consumer goods, resulting in additional sales within the regional economy

Bus by Kangrif; tire by Becca; ticketing machine by Gan Khoon Lay; groceries delivery by Alena Artemova from the Noun Project
Transit agency as a generator of jobs and income

*Capital investment* in public transportation (including purchases of vehicles and equipment and the development of infrastructure and supporting facilities) are a significant source of jobs in the United States. The analysis indicates that nearly 15,900 jobs are supported for a year per $1 billion of spending on public transportation capital.

*Public transportation operations* (i.e., management, operations and maintenance of vehicles and facilities) are also a significant source of jobs. The analysis indicates that more than 24,200 jobs are supported for a year per $1 billion dollars of annual spending on public transportation operations.

*Combining investment in public transportation capital and operations* within the United States, the analysis indicates that an average of 21,800 jobs are supported for one year, per $1 billion dollars of annual spending on public transportation, given the existing mix of operations (71 percent) and capital (29 percent) expenditures.

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Economic Impact
of Public Transportation Investment
2014 UPDATE
Transit’s as access to opportunities

Source: APTA. WHO RIDES PUBLIC TRANSPORTATION. 2017
Transit’s role in enabling job access & business activity

55,531 workers in Allegheny County

Source: American Community Survey 2012-2016 5-yr estimate

Military & Veterans Affairs
Other Services
Professional & Management Services
Retail
Hospitality & Entertainment
Education, health care, and social assistance
Finance, insurance, and real estate
Public Administration
Manufacturing
Transit’s role in enabling job access & business activity

Nationally, approximately **22%** of transit users report that they would not be able to make their trip if public transit was not available.

Applied to transit commuters in Allegheny County, this means that **~12,217** transit commuters, and their employers, depend on transit as an viable way of connecting workers and jobs.

Source: American Community Survey 2012-2016 5-yr estimate
Transit as a multi-modal source of efficiency

- Transit enables travelers and society to benefit from improved travel efficiency.

- These benefits can be evaluated by comparing a typical transit trip to the “next best” option reported in surveys.

Source: APTA. WHO RIDES PUBLIC TRANSPORTATION. 2017
Transit as a multi-modal source of efficiency

For example, in Hampton Roads, VA, transit allowed the region to avoid (in 2015):

- 26.7 million vehicle-miles and $8.0 million in associated vehicle operating costs that would be imposed on the system from more circuitous carpooling routes;
- 18.3 million vehicle-miles and $5.5 million in vehicle operating costs associated with those who would drive to work in the absence of transit;
- $38.4 million in total travelling and waiting time costs associated with inconvenient routings and slower travel speeds for those who walk or bike; and
- $8.8 million in safety and environmental costs.

This efficiency effect supports an average of 123 jobs each year.
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If transit plays a significant role in ameliorating congestion, then modeling network effects of removing transit is key.
Scenarios and alternatives analysis

<table>
<thead>
<tr>
<th>Base Case</th>
<th>Build Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in transportation conditions (trips, vehicles, travel times, operating costs, safety, reliability, zonal accessibility, etc.)</td>
<td></td>
</tr>
</tbody>
</table>

**IMPACT ON THE ECONOMY**

**BENEFITS TO SOCIETY**

Test sensitivity of returns to other factors such as *Land Use*

![Graph showing the impact of investments in transit on the region's benefits.](chart.png)

- **Maintain:** $1.68 billion
- **Expand:** $2.04 billion
- **Expand and Plan:** $3.22 billion

The More We Invest in Transit, the Greater the Region Benefits

- Investments
- Benefits compared with decline

*Chicago Metropolis 2030*

One Region. One Future.

EDR Group © 2018
Distributional and long-term effects – Strategic Goals

Sustainable, long-term effects on communities
More difficult to forecast - transformational
1. Identify Key Sources of Return – *reflect community context & values*

Costs to maintain auto-centric development will outpace our region’s future tax revenues in 2050.
2. Ensure Credibility

- Don’t conflate types of measures (not all $s are the same)
- Be clear about analysis perspectives – scenario definitions, impact geographies, timelines, EIA/BCA/social benefits to specific groups, etc.
- Acknowledge effects not captured
- Learn from other regions, but do not assume direct applicability of results

For example:

<table>
<thead>
<tr>
<th>Effect</th>
<th>Economic Impact Analysis</th>
<th>Formal BCA</th>
<th>Societal Benefits (Multiple Perspectives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoided Cost of Roads</td>
<td>Reallocation between sectors</td>
<td>Must affect net public expenditure to be counted</td>
<td>May be reported directly if aligns with community goals</td>
</tr>
</tbody>
</table>
3. **Make it real.** Connect quantitative results to “real world” experience and observations

**Call Center Industry:** Rapidly developing industry in Hampton Roads Economy is particularly Transit Dependent. Companies much higher transit use than regional trends, with up to one third of employees either using or wanting to use transit.

**Shipyards:** Core basic industry to Hampton Roads with significant current and projected parking and plant expenses saved due to transit availability.
4. Bring In Other Voices – (Don’t Take My Word For It!)

Transit is important to employers’ ability to attract employees

- Improved transit provides greater efficiency to attract employees, enabling them to connect with labor groups.
- “Our younger workers show a higher level of interest in transit.”
- “60% of our downtown employees have a Metropass. We want to support that.”
- Transit comes up in every HR conversation with new employees.
- “Transit is important to attracting workers. Without it, working downtown would be very difficult.”
- “We have a company priority to be green and socially-responsible. Supporting transit is important. We find that it gets a very positive reaction within our younger employees.”
- “We worry about future commuting costs, as gas could be significantly more expensive.”

Itasca Project. (Minneapolis-St. Paul)

IBEX Global is one example. “IBEX Global operations in Hampton rely on a workforce of about 500 employees. Many of them rely on transit every day to access the worksite,” says Eric Green, Director of Operations for IBEX, Global in Hampton. Green adds, “It is imperative they have reliable, accessible commuting options, like local bus service.”

Hampton Roads

Omaha – Chamber of Commerce