Federal Grants to State and Local Governments for Investment

Presentation for the National Federation of Municipal Analysts

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How much does the federal government spend on infrastructure investment, and how does that investment take place?
Federal Nondefense Investment, 1962 to 2017

Billions of 2017 dollars

- Physical Capital
- Education and Training
- Research and Development


Values range from 0 to 200 billion in 2017 dollars.
Federal Nondefense Investment, 2017

- Education and Training ($124 Billion)
- Physical Capital ($114 Billion)
- Research and Development ($64 Billion)

Total: $302 Billion

- Grants to State and Local Governments
- Other Federal Spending
Federal Nondefense Investment in Physical Capital by Budget Function, 2017

Total: $114 Billion

- Transportation: $65 Billion
- Natural Resources and Environment: $10 Billion
- Veterans Benefits and Services: $10 Billion
- Community and Regional Development: $10 Billion
- Commerce and Housing Credit: $10 Billion
- Other *: $19 Billion

* Includes the following budget functions: Administration of Justice; Energy; General Government; General Science, Space, and Technology; Income Security; International Affairs; Health; Education, Training, Employment, and Social Services; Agriculture; and Social Security.
Transportation Infrastructure: Sources of Nondefense Investment, 1962 to 2017

Billions of 2017 dollars

Federal Government

State and Local Governments

175
150
125
100
75
50
25
0

Water Infrastructure: Sources of Nondefense Investment, 1962 to 2017

Billions of 2017 dollars
How does the role of the federal government in infrastructure investment differ from the role of state and local governments?
### Features of Infrastructure Spending by Mode of Transportation

<table>
<thead>
<tr>
<th>Mode</th>
<th>Federal Government's Typical Maximum Share of Total Spending</th>
<th>Federal, State, and Local Decisionmaking Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highways</td>
<td>80% of capital</td>
<td>State and local governments choose projects, following federal rules and conditions</td>
</tr>
<tr>
<td>Mass Transit</td>
<td>80% of capital, 50% of operations</td>
<td>State and local governments choose projects, following federal rules and conditions</td>
</tr>
<tr>
<td>Rail</td>
<td>n.a.</td>
<td>Regulatory</td>
</tr>
<tr>
<td>Aviation</td>
<td>75% to 90% of capital</td>
<td>State and local governments choose projects, following federal rules and conditions; federal government designs the national aviation system</td>
</tr>
<tr>
<td>Water Transportation</td>
<td>40% to 100% of construction, 50% to 100% of operations</td>
<td>Federal government chooses water projects with Congressional approval(^a)</td>
</tr>
</tbody>
</table>

n.a. = not applicable.

\(^a\) The state or local port authority chooses land projects and may receive federal funds through other federal transportation programs.
Do state and local governments use federal funds for infrastructure investment to substitute for spending from other sources?
# Estimates of Substitution Rates From Literature on Highway Grants

<table>
<thead>
<tr>
<th>Study</th>
<th>Main Substitution Rate Estimate</th>
<th>Period Studied</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meyers (1987)</td>
<td>−0.6</td>
<td>1976–1982</td>
<td>State spending for highways</td>
</tr>
<tr>
<td>Knight (2002)</td>
<td>−0.9</td>
<td>1983–1997</td>
<td>State spending for highways</td>
</tr>
<tr>
<td>Gamkhar (2003)</td>
<td>−0.2(^a)</td>
<td>1976–1990</td>
<td>State and local spending for highways</td>
</tr>
<tr>
<td>Nesbit and Kreft (2009)</td>
<td>−0.2</td>
<td>1974–2002</td>
<td>State spending for highways</td>
</tr>
<tr>
<td>Dupor (2017)</td>
<td>−0.8(^b)</td>
<td>2008–2010</td>
<td>State capital spending for highways</td>
</tr>
<tr>
<td>Leduc and Wilson (2017)</td>
<td>1.3(^b)</td>
<td>2008–2012</td>
<td>State spending for highways, including transfers to local governments</td>
</tr>
</tbody>
</table>

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\(^a\) Substitution rates are calculated as the cumulative effect of a change in spending in response over three years.

\(^b\) This substitution rate is based on the cumulative change in state highway spending over the period.
What are some resources from CBO about federal investment?
Related Work on Federal Investment by CBO

(Source of information for slides 5 and 6.)


(Source of information for slides 8 and 10.)

Related Work on Federal Investment by CBO (Continued)


