



January 31, 2019

Federal Grants to State and Local Governments for Investment

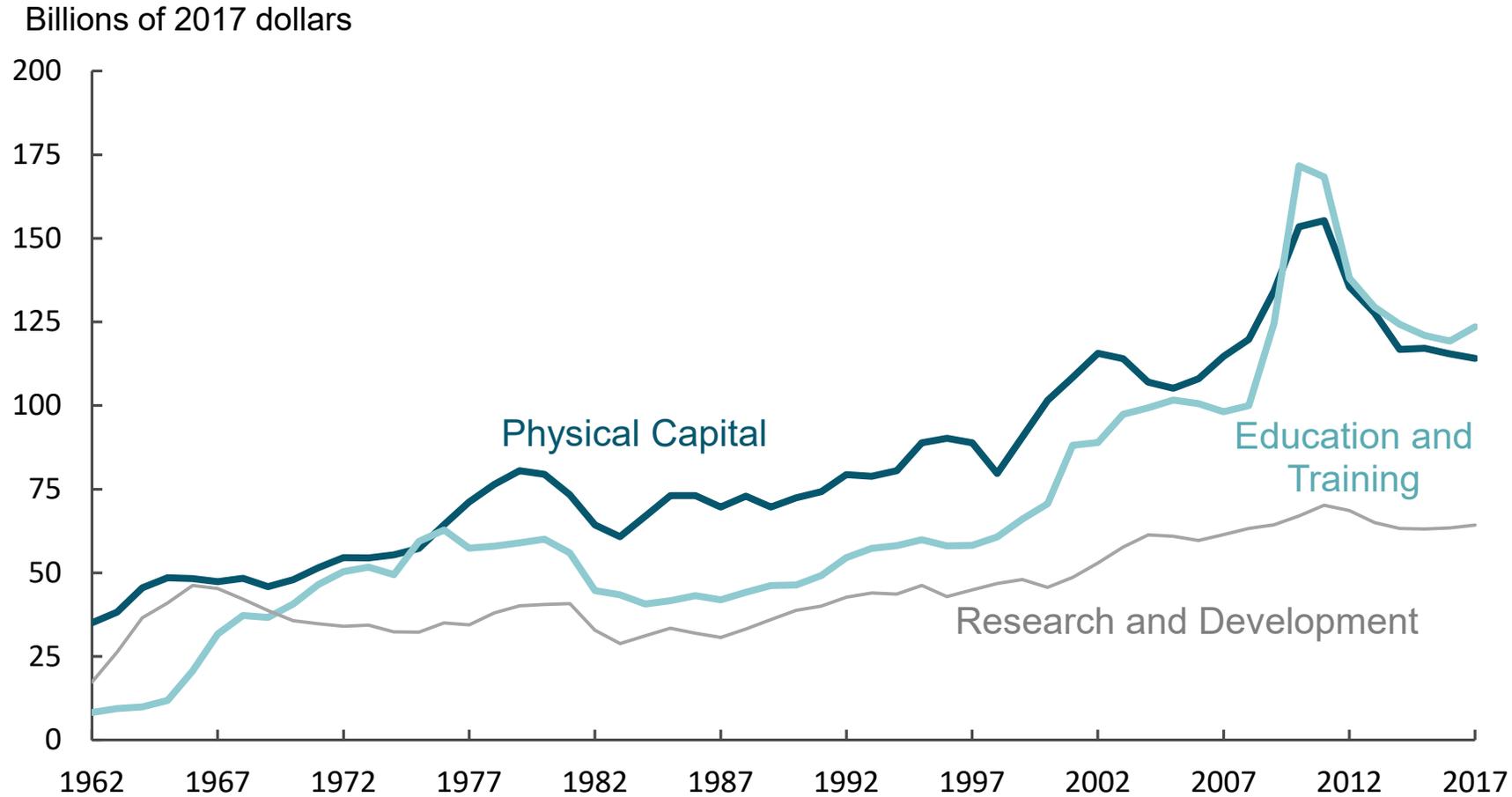
Presentation for the National Federation of Municipal Analysts

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How much does the federal government spend on infrastructure investment, and how does that investment take place?

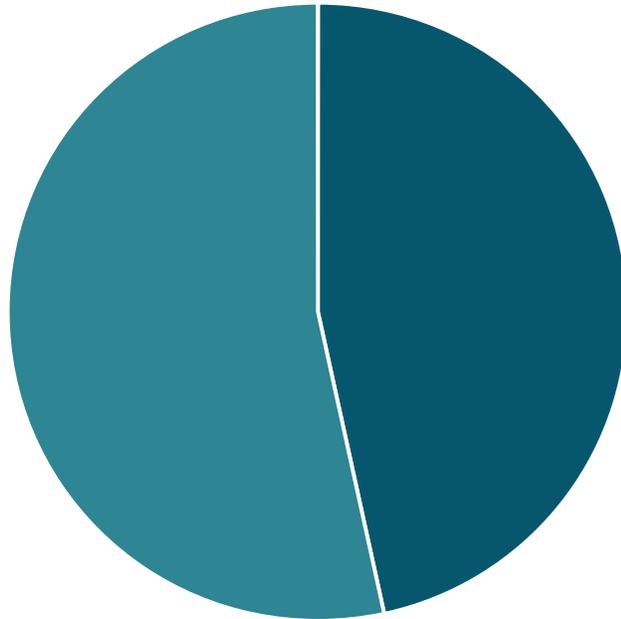
Federal Nondefense Investment, 1962 to 2017



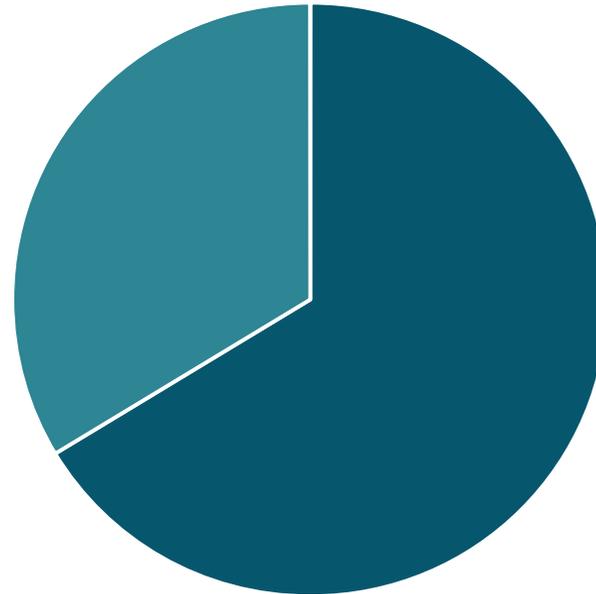
Federal Nondefense Investment, 2017

Total: \$302 Billion

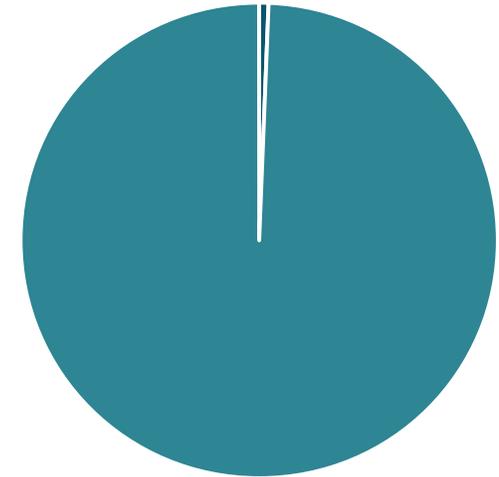
Education and Training
(\$124 Billion)



Physical Capital
(\$114 Billion)



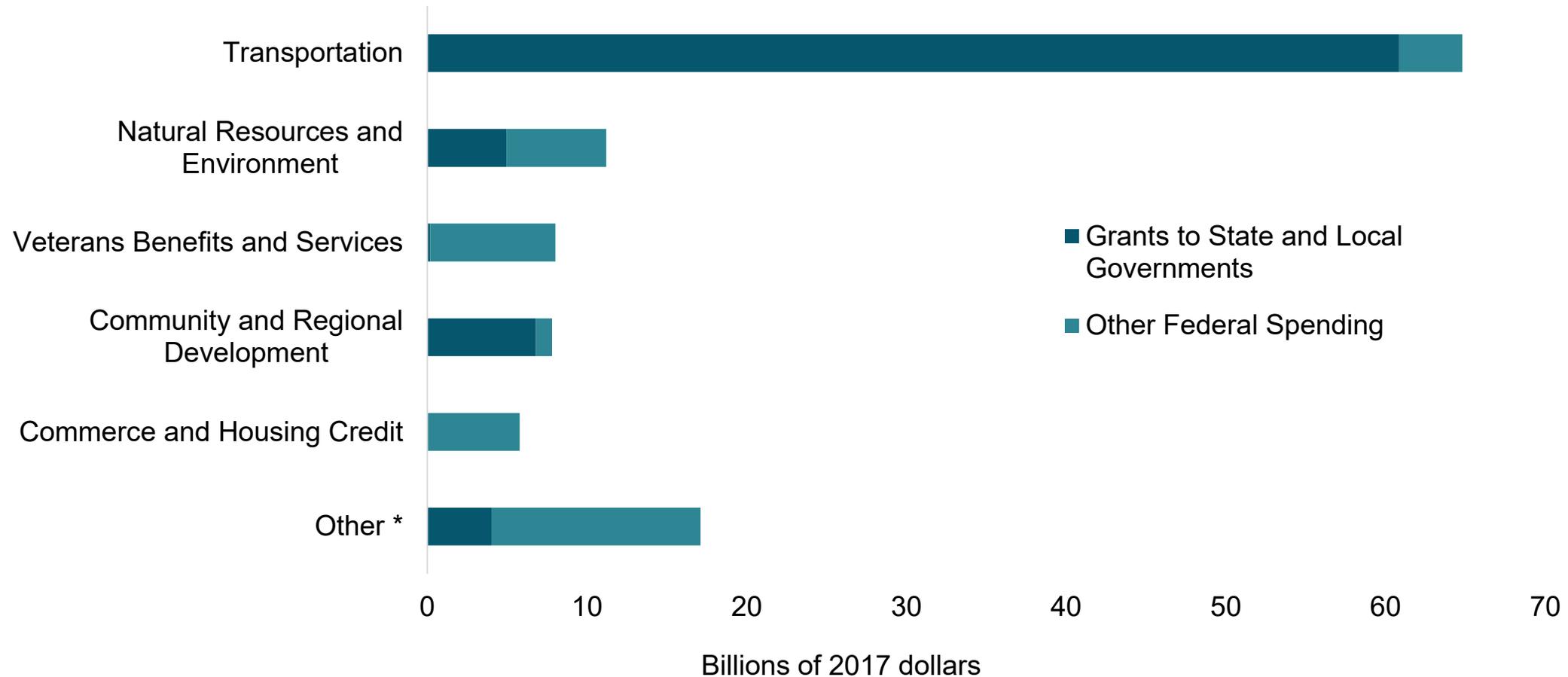
Research and Development
(\$64 Billion)



- Grants to State and Local Governments
- Other Federal Spending

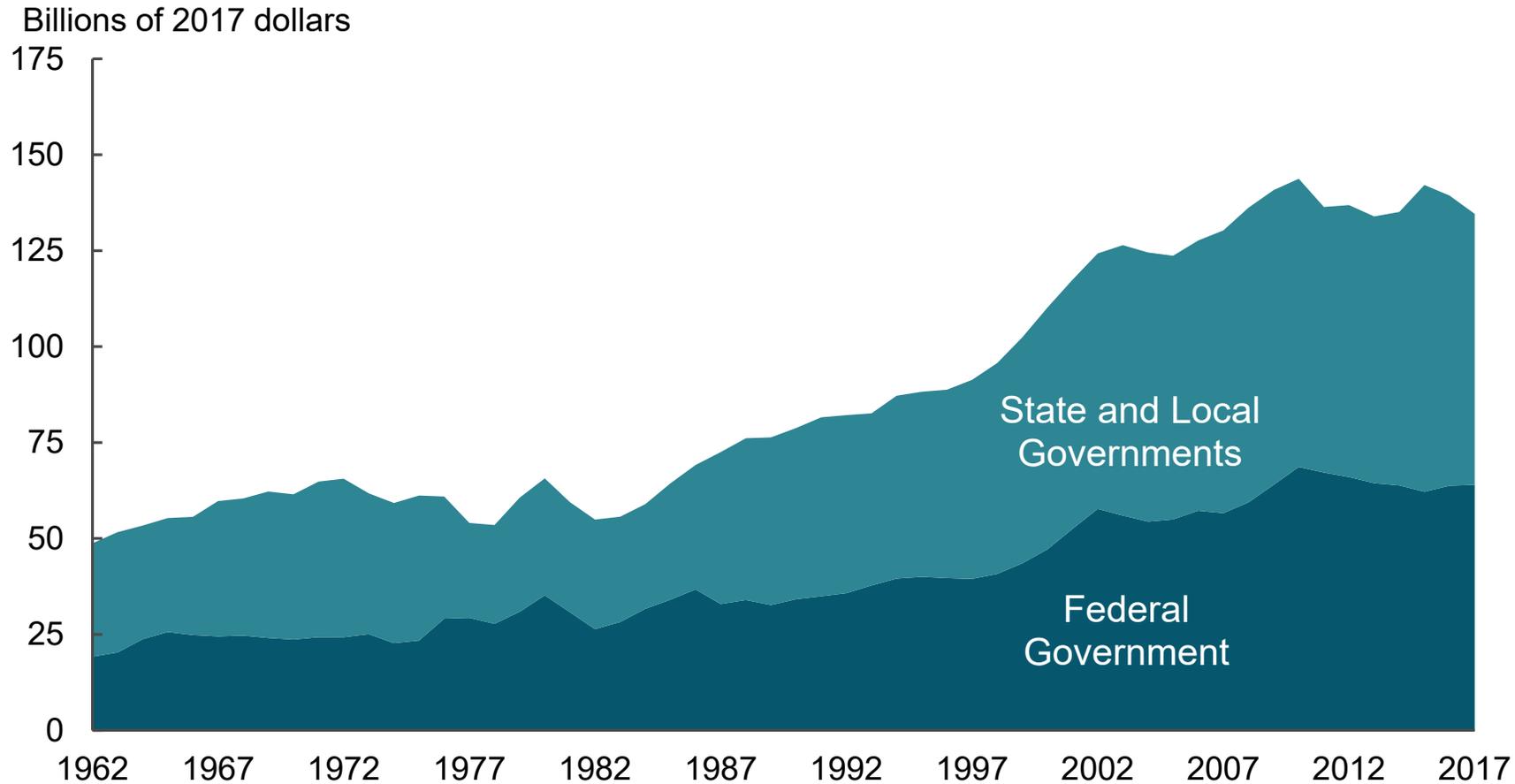
Federal Nondefense Investment in Physical Capital by Budget Function, 2017

Total: \$114 Billion



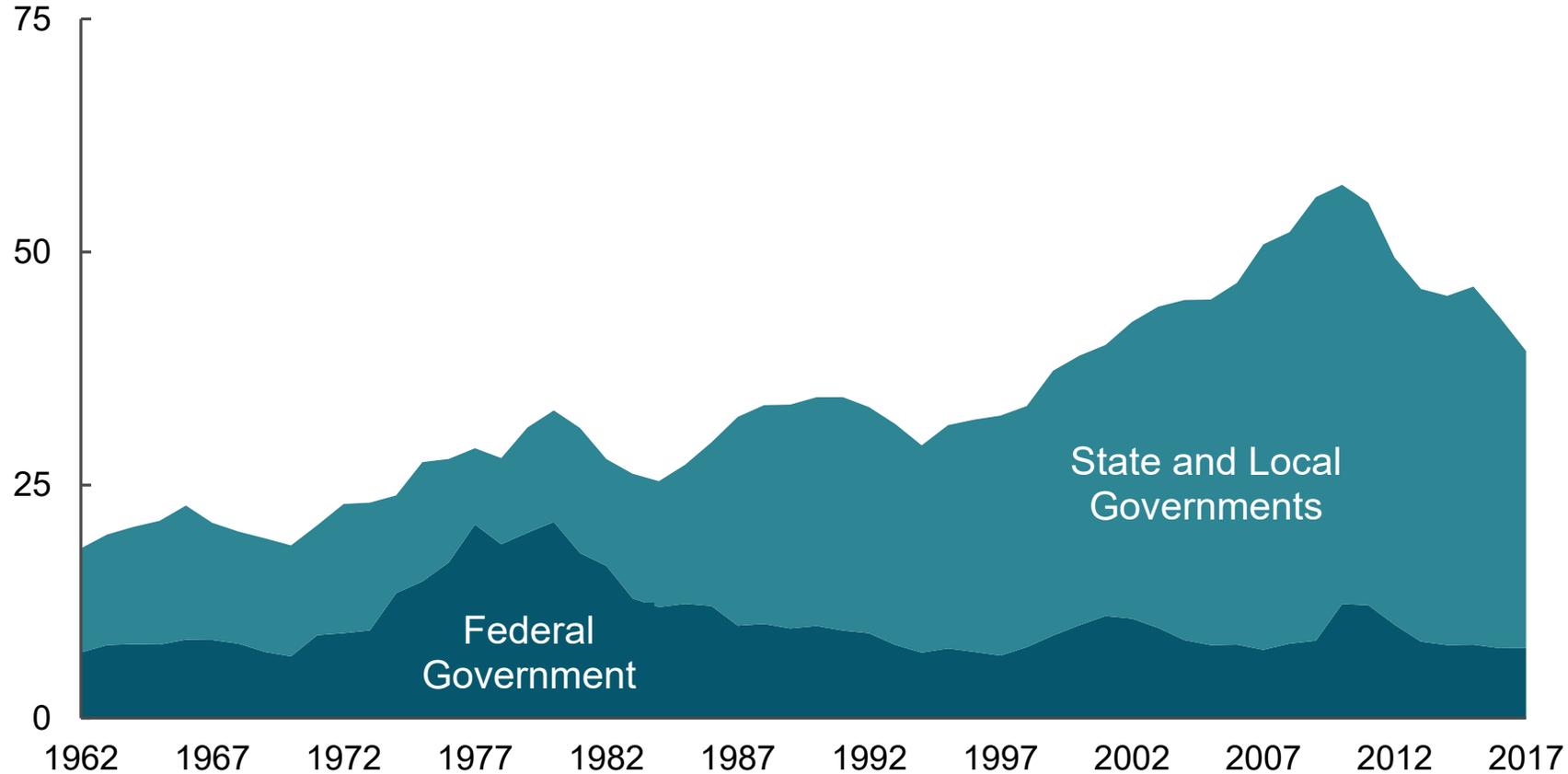
* Includes the following budget functions: Administration of Justice; Energy; General Government; General Science, Space, and Technology; Income Security; International Affairs; Health; Education, Training, Employment, and Social Services; Agriculture; and Social Security.

Transportation Infrastructure: Sources of Nondefense Investment, 1962 to 2017



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

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

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

| Study | Main Substitution Rate Estimate | Period Studied | Dependent Variable |
|---|---------------------------------|----------------|---|
| Meyers (1987) | -0.6 | 1976–1982 | State spending for highways |
| Knight (2002) | -0.9 | 1983–1997 | State spending for highways |
| Gamkhar (2003) | -0.2 ^a | 1976–1990 | State and local spending for highways |
| Government Accountability Office (2004) | -0.5 | 1983–2000 | State and local spending for highways |
| Nesbit and Kreft (2009) | -0.2 | 1974–2002 | State spending for highways |
| Dupor (2017) | -0.8 ^b | 2008–2010 | State capital spending for highways |
| Leduc and Wilson (2017) | 1.3 ^b | 2008–2012 | State spending for highways, including transfers to local governments |

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

Federal Support for Financing State and Local Transportation and Water Infrastructure (October 2018), www.cbo.gov/publication/54549.
(Source of information for slides 5 and 6.)

Public Spending on Transportation and Water Infrastructure, 1956 to 2017 (October 2018), www.cbo.gov/publication/54539.

Fiscal Substitution of Investment for Highway Infrastructure, Working Paper 2018-08 (August 2018), www.cbo.gov/publication/54371.
(Source of information for slides 8 and 10.)

How CBO Produces Fair-Value Estimates of the Cost of Federal Credit Programs: A Primer (July 2018), www.cbo.gov/publication/53886.

Related Work on Federal Investment by CBO (Continued)

Fair-Value Estimates of the Cost of Federal Credit Programs in 2019
(June 2018), www.cbo.gov/publication/54095.

The Macroeconomic and Budgetary Effects of Federal Investment (June 2016),
www.cbo.gov/publication/51628.

Approaches to Making Federal Highway Spending More Productive
(February 2016), www.cbo.gov/publication/50150.

Federal Investment (December 2013), www.cbo.gov/publication/44974.

Federal Grants to State and Local Governments (March 2013),
www.cbo.gov/publication/43967.