



March 14, 2016

Alternatives for Making Federal Highway Spending More Productive

IBTTA Transportation Policy & Finance Summit

Chad Shirley

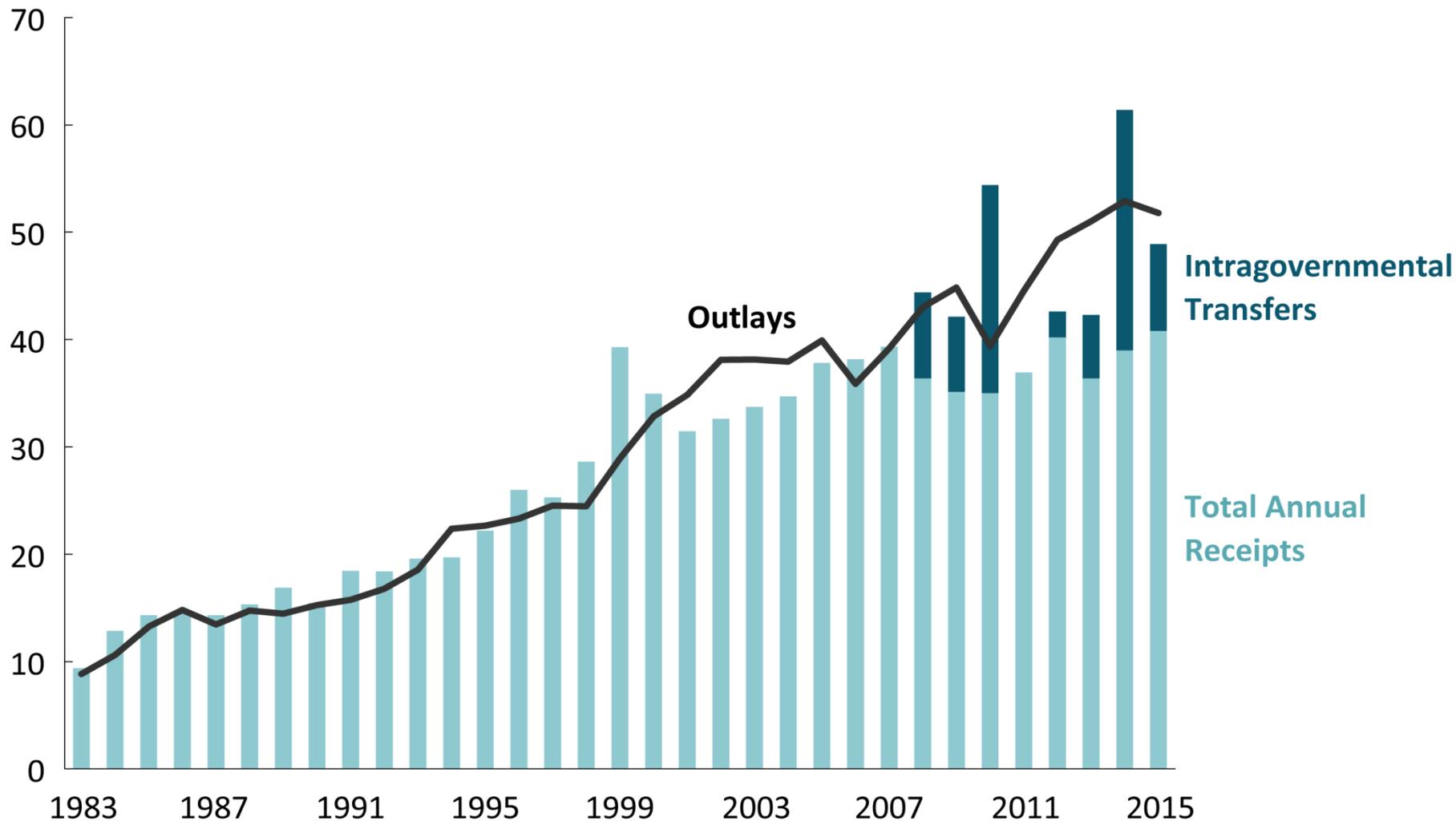
Deputy Assistant Director for Microeconomic Studies

This presentation draws on *Approaches to Making Federal Highway Spending More Productive* (February 2016),
<https://www.cbo.gov/publication/50150>.

The revenues from gasoline and diesel fuel taxes dedicated to the Highway Trust Fund—the federal government’s main source of funds for highways—have been insufficient to pay for highway spending.

The Highway Trust Fund's Outlays, Receipts, and Transfers

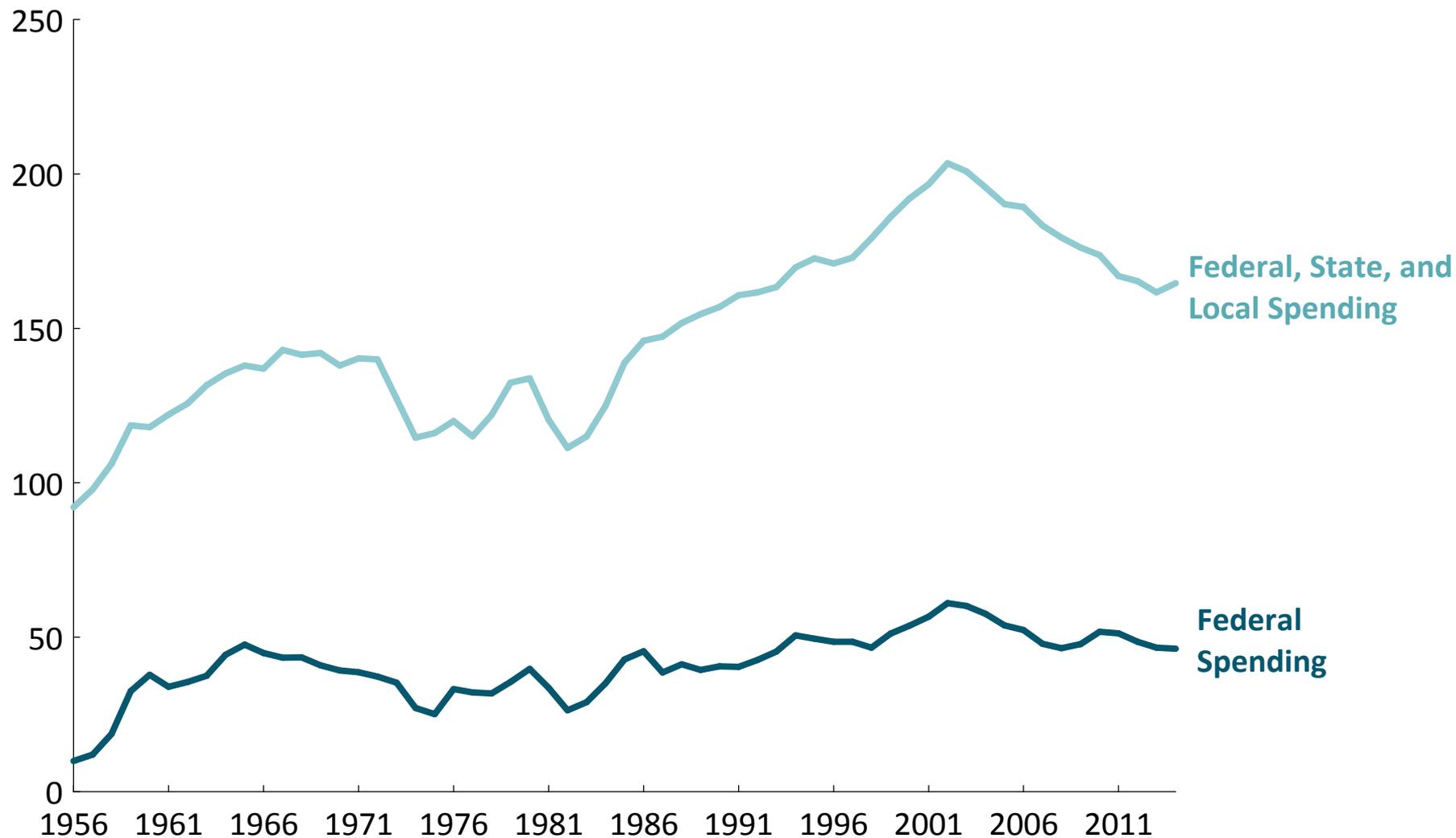
Billions of Dollars



The amount of federal spending for highways, as well as the amount of spending by all levels of government, has declined since the early 2000s when adjusted for changes in the cost of materials and other inputs.

Spending for Highways

Billions of 2014 Dollars

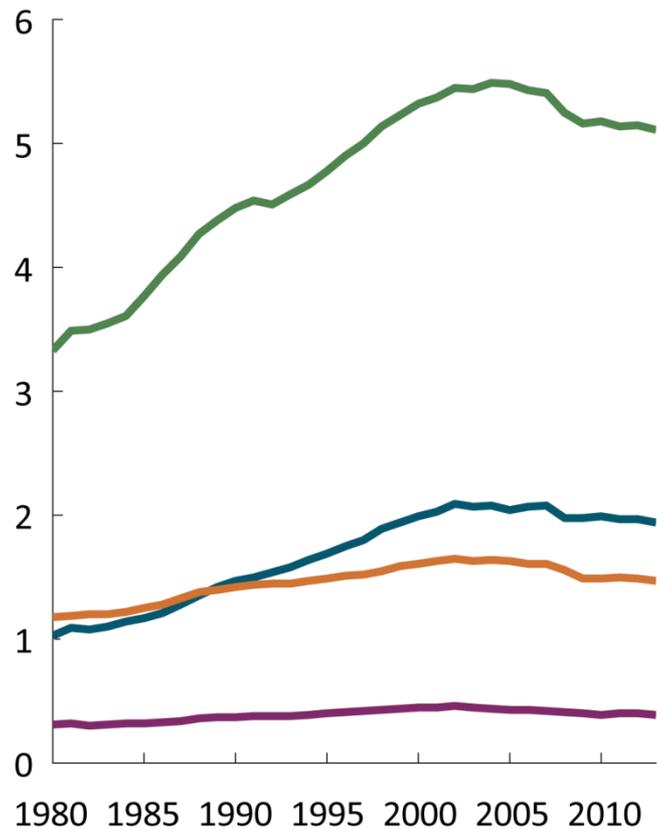


The allocation of federal highway funding is only loosely related to how much highways are used.

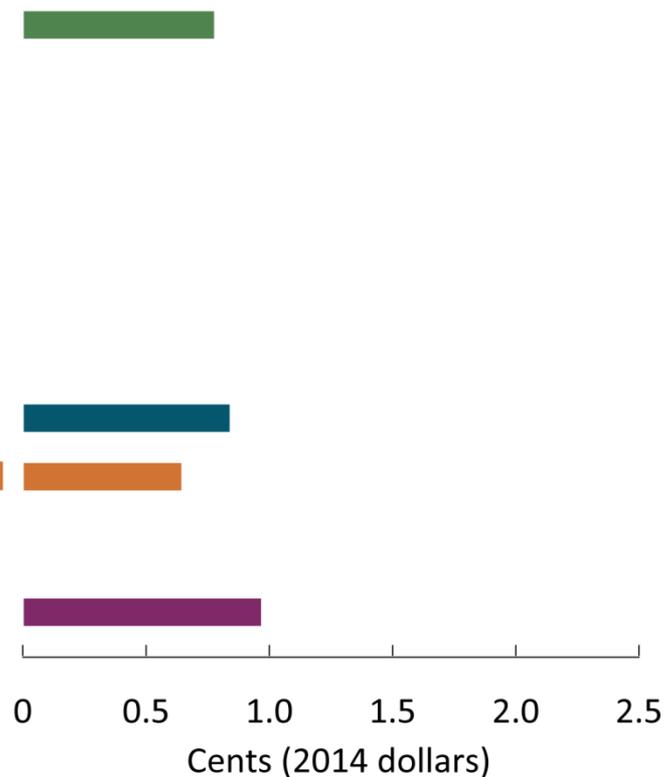
Traffic Congestion and Spending, by Type of Highway

Highway Congestion

Millions of Annual Vehicle-Miles Traveled per Lane-Mile



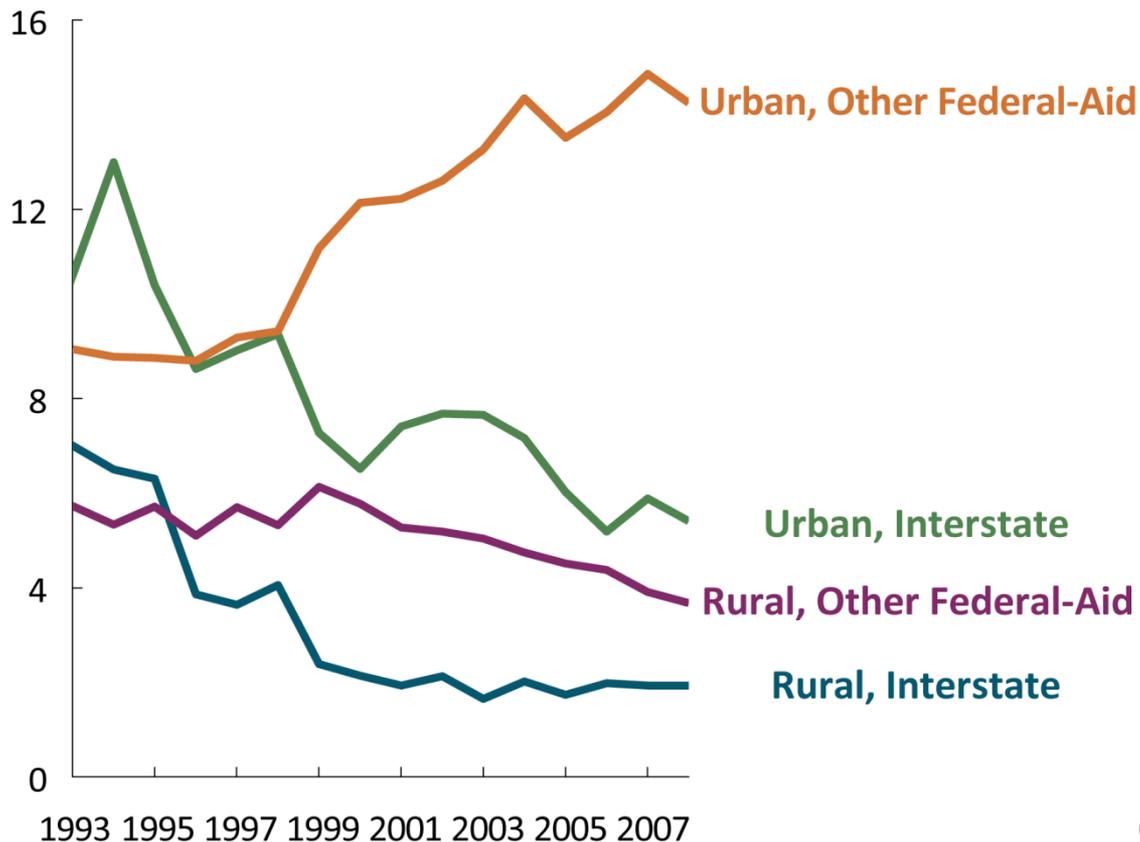
Spending to Expand Capacity per Vehicle-Mile Traveled in 2013



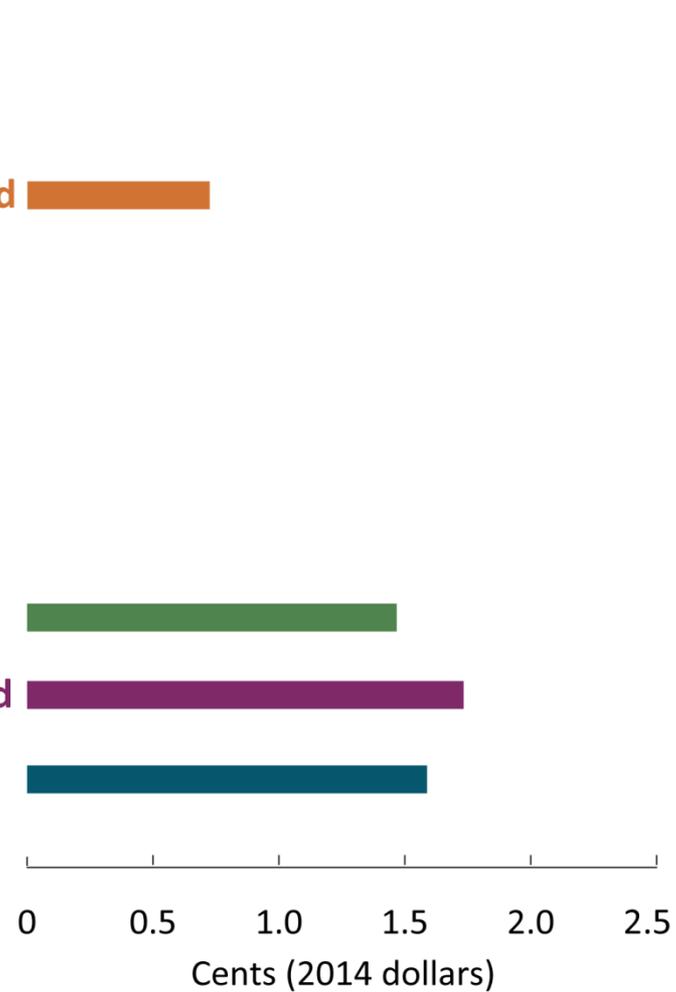
Pavement Condition and Spending, by Type of Highway

Pavement Quality

Percentage of Road Miles With Poor Pavement Quality



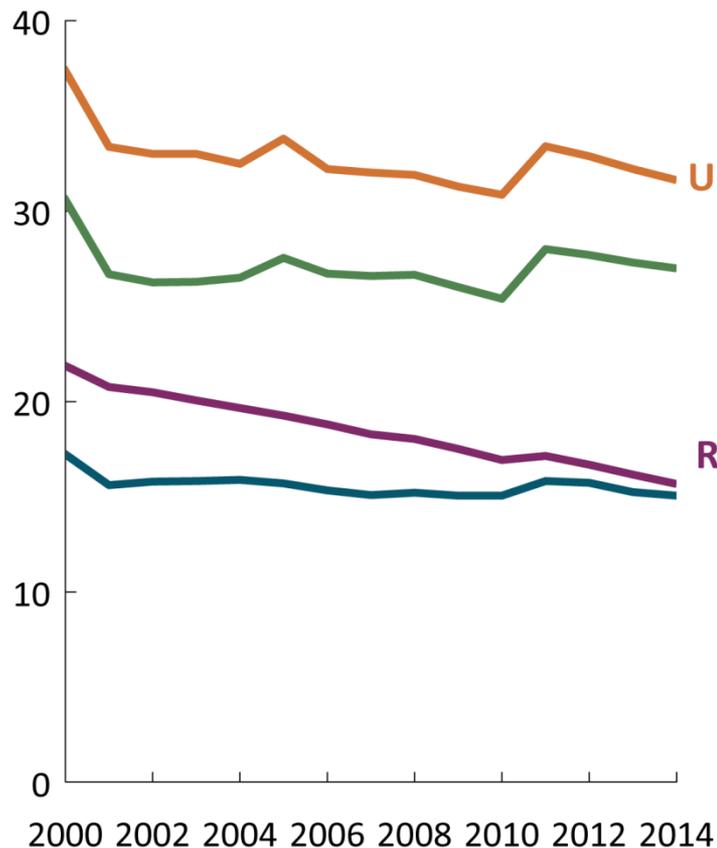
Spending to Repair Pavement per Vehicle-Mile Traveled in 2013



Condition of Bridges and Spending, by Location and Bridge Class

Condition of Bridges

Percentage of Bridges Deemed Deficient or Obsolete



Spending to Repair Bridges per Crossing in 2013

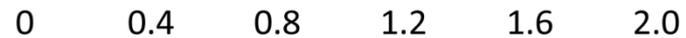
Cents (2014 dollars)

Urban, Other Federal Aid

Urban, Interstate

Rural, Other Federal Aid

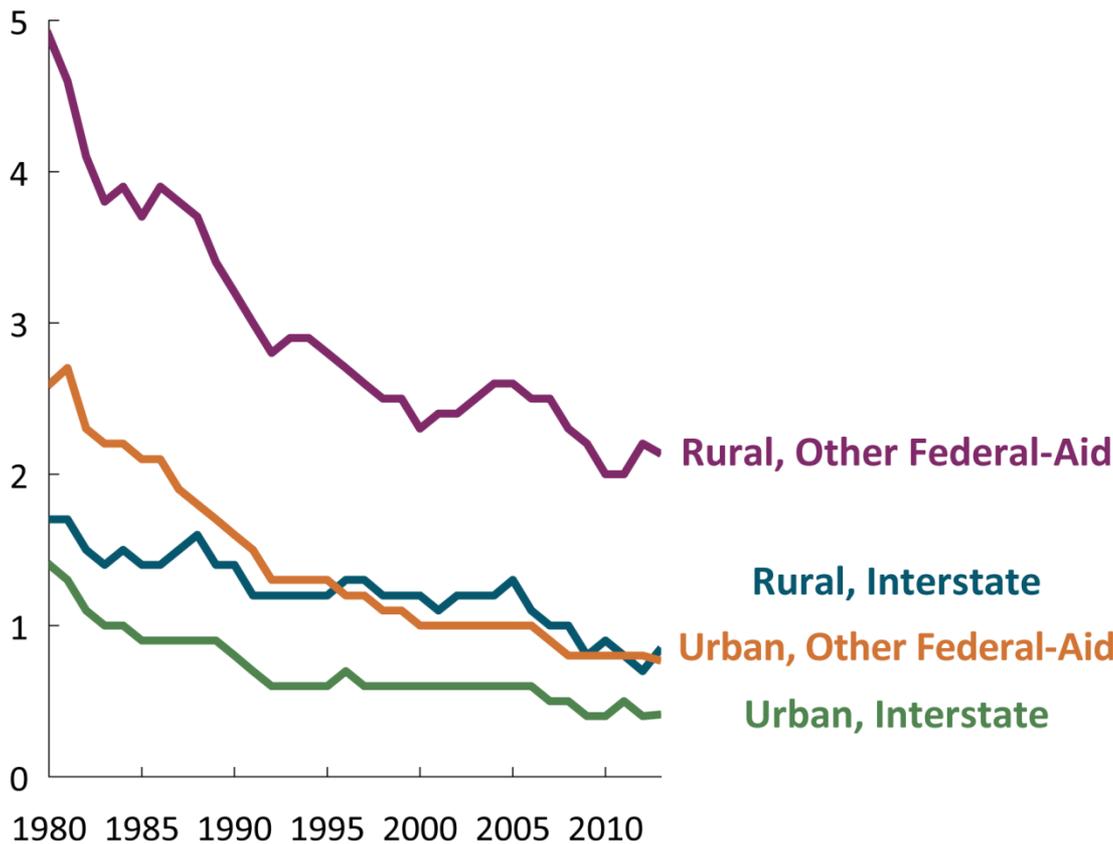
Rural, Interstate



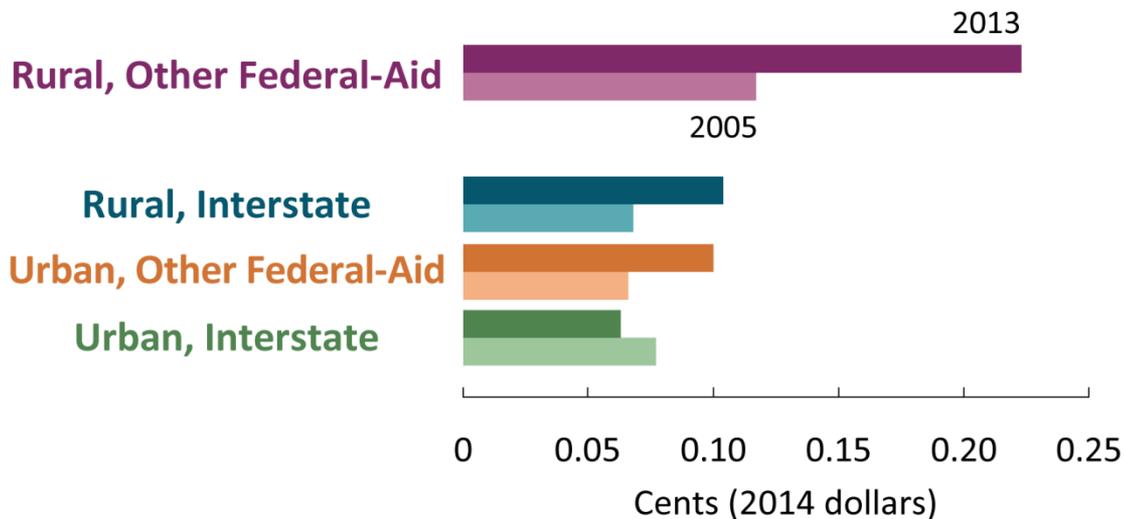
Highway Safety and Spending, by Type of Highway

Highway Safety

Fatalities per 100 Million
Vehicle Miles Traveled



Spending to Improve Safety per Vehicle-Mile Traveled



To make federal highway spending more productive for the economy, policymakers could adopt different approaches to managing highways and determining how to allocate funds, including:

- Charging drivers,
- Using benefit-cost analysis, or
- Linking spending to performance.

Charging Drivers

Policymakers could have the federal government—or allow states or private businesses to—charge drivers directly for their use of more roads than they are currently charged for using.

The Congress could incorporate more direct pricing of the use of roads in a number of ways, including:

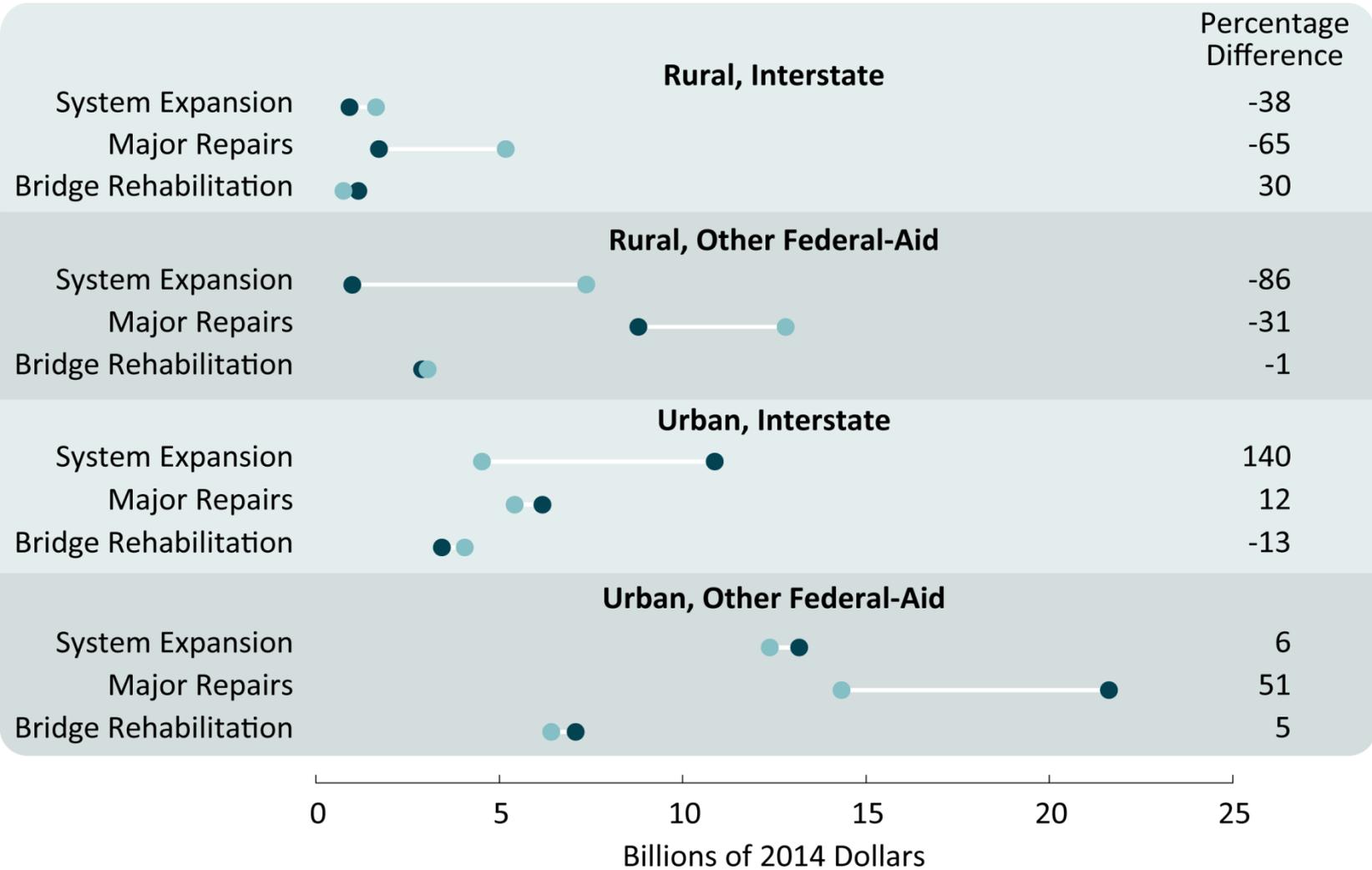
- Implementing vehicle-miles traveled charges,
- Facilitating more congestion pricing, or
- Allowing tolling on additional existing Interstates.

Benefit-Cost Analysis

Policymakers could use estimates of the economic benefits and the costs of spending for particular programs or highways and reallocate spending to programs or projects with benefits for the economy greater than their costs.

Changes in Spending Suggested by the FHWA's Benefit-Cost Analysis If Total Spending Was Held Constant

● Amounts Suggested by FHWA's Benefit-Cost Analysis ● Spending in 2010



Linking Spending to Performance

Policymakers could link spending more closely to measures of the performance of the highway system that have implications for the economy—such as ones for traffic congestion or road quality—by providing additional funds to states that meet certain standards or reducing funding for states that do not.

Spending to Repair Pavement per Vehicle-Mile Traveled

Percentage of Road Miles With Poor Pavement Quality

