



# Size and Impact of Federal Spending in Virginia



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# COMMONWEALTH of VIRGINIA

*Joint Legislative Audit and Review Commission*  
201 North 9th Street, General Assembly Building, Suite 1100  
Richmond, Virginia 23219

*Hal E. Greer*  
Director

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June 30, 2014

The Honorable John C. Watkins, Chair  
Joint Legislative Audit and Review Commission  
General Assembly Building  
Richmond, Virginia 23219

Dear Senator Watkins:

House Joint Resolution 635 (2013) directed the Joint Legislative Audit and Review Commission to review the size and impact of federal spending in Virginia.

This report was briefed to the Commission and authorized for printing on June 9, 2014. On behalf of the Commission staff, I would like to thank the staff of the Department of Taxation and the Department of Accounts for their assistance during this review. I would also like to acknowledge those staff members of the Department of Planning and Budget, the University of Virginia, George Mason University, the Auditor of Public Accounts, and the Virginia Employment Commission who provided information and assistance with this project.

Sincerely,

A handwritten signature in cursive script that reads "Hal E. Greer".

Hal E. Greer  
Director

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# JLARC Report Summary: Size and Impact of Federal Spending in Virginia

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## Key Findings

- Federal spending per person is larger in Virginia than in all but one state, primarily because of military spending (Chapter 1).
  - Virginia state government receives less federal funds per person than any other state, mainly because the state's relatively strict eligibility criteria for Medicaid and its low poverty rate result in fewer enrollees (Chapter 2).
  - Nearly half of Virginia residents receive a direct payment from the federal government (Chapter 3).
  - Recent cuts in federal spending, particularly military spending, appear to have had a negative impact on Virginia's economy (Chapter 4).
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Prompted by concern about Virginia's reliance on federal spending and the impacts of possible spending cuts, the General Assembly directed JLARC to examine the size and impact of federal spending in Virginia. This includes spending on military contracts and personnel, non-military contracts, direct payments to individuals, salaries of federal employees, and funds to state and local governments (Appendix A).

Research methods include analyses of detailed government spending data from the U.S. Census Bureau and the Virginia Department of Accounts; analysis of Current Population Survey data on the number of Virginia residents receiving federal payments; interviews with state and federal agency staff; interviews with economists about the impacts of federal spending; and a review of the research literature (Appendix B).

### **FEDERAL GOVERNMENT SPENDS MORE PER PERSON IN VIRGINIA THAN IN ALL BUT ONE OTHER STATE**

Federal spending accounts for about 20 percent of the state's economy. In 2012 the federal government spent \$136 billion in Virginia, compared to the state's total output of approximately \$700 billion. Military spending was by far the largest category of federal spending (see figure, page ii). Less than 10 percent of federal spending was for income assistance, education, and transportation.

Over the past 30 years, federal spending per person in Virginia has doubled when adjusted for inflation. Military spending was the largest source of growth, followed by non-military contracts for

## Military Spending Accounts for More than 40 Percent of All Federal Spending in Virginia

Category of Federal Spending	Amount Spent in 2010 (millions \$)	% of Total	
Military Contracts and Personnel	\$59,700	44%	} 91% of Total
Contracts for Services and Goods, Non-Military	\$17,960	13%	
Social Security	\$17,477	13%	
Federal Employees	\$14,324	11%	
Health Care	\$13,893	10%	
Income Assistance	\$5,657	4%	
Education	\$3,046	2%	
Transportation	\$1,587	1%	
Other	\$2,167	2%	
Total	\$135,811		

Source: JLARC staff analysis of 2010 Consolidated Federal Funds Report data.

goods and services. From 2000 to 2010, federal spending increased as a share of the state’s economy. Federal spending peaked in 2010, declining in 2011 and 2012 as stimulus spending receded.

Over the past 30 years, federal spending per person has been higher in Virginia than in any state except Alaska. This is primarily due to military spending, which is four times the national average. Virginia also ranks high in non-military purchases and in federal employee salaries. In contrast, Virginia ranks 49th in per person spending on income assistance. Virginia is well below the national average in federal spending on health care.

### **VIRGINIA STATE GOVERNMENT RECEIVES LESS FEDERAL FUNDS PER PERSON THAN ANY OTHER STATE**

Although they make up only about seven percent of all federal spending in Virginia, federal funds are a substantial source of revenue to the state government. Virginia state government used \$9 billion in federal intergovernmental grants in 2012, about 20 percent of total state government spending, to support a variety of programs. Health care was by far the largest category of programs, accounting for 48 percent (\$4.3 billion) in federal funds received in 2012. Most of these funds (\$3.6 billion) were for Medicaid. Highway planning and construction accounted for another 13 percent of federal funds. The remaining federal funds were used by the state government primarily for income assistance and education programs.

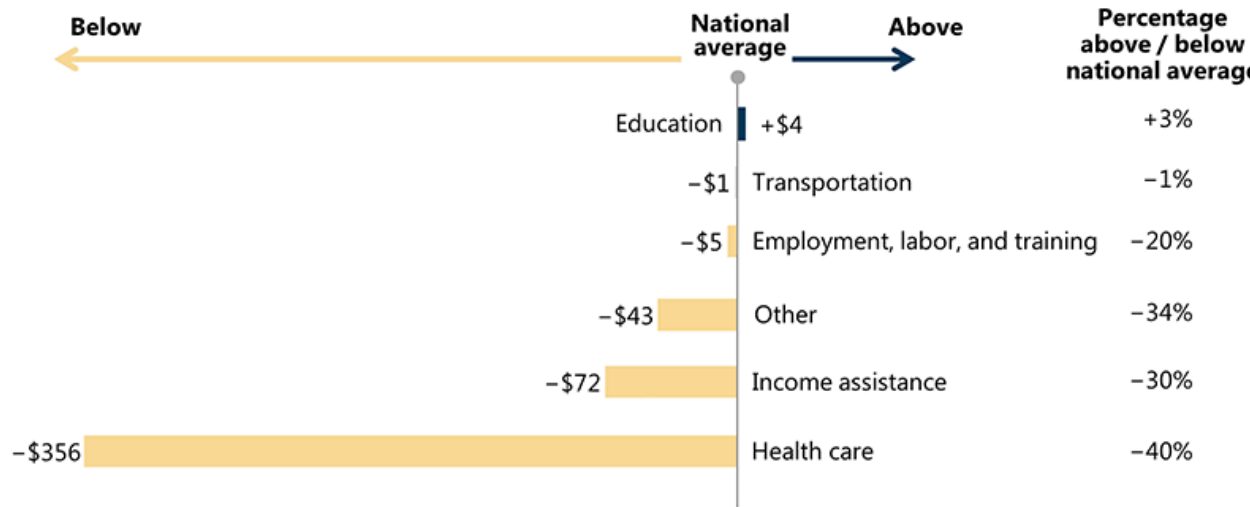
Even though Virginia ranks near the top among states in total federal spending per person, federal funds received by the state government are lower per person than in any other state. This is primarily because Virginia receives less federal health care funds than other states (see figure below). The state's relatively strict eligibility criteria for Medicaid and its low poverty rate result in a smaller proportion of the population being enrolled in the program. Virginia also spends fewer federal dollars on income assistance, because the average size of TANF benefits is smaller, and the poverty rate is lower, than in most other states.

**ABOUT HALF OF VIRGINIA RESIDENTS ARE DIRECT RECIPIENTS OF FEDERAL PAYMENTS**

Close to half of all Virginians (3.8 million) were direct recipients of federal spending in 2012, either through assistance programs, retirement benefits, or federal employment (see figure, page iv). The programs with the largest number of recipients—Social Security, Medicare, the Supplemental Nutrition Assistance Program, and Medicaid—each provided benefits to more than one million Virginia residents in 2012.

Virginia's percentage of residents receiving a direct federal payment is the same as the national average. The large number of military and federal civilian employees is offset by the relatively small number of residents who participate in income assistance programs.







**Virginia Government Receives Less Federal Funds for Health and Income Assistance Than the National Average (2012)**



Source: JLARC staff analysis of data from the Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts.



## Almost Half of All Virginians Receive a Direct Federal Payment

	Recipients (millions)	Total spending (\$ billions)
Income assistance programs and Medicaid	 1.8	 \$8.8
Medicare and Social Security	 1.4	 \$33.7
Federal or military employee pay and health care	 1.1	 \$23.5
	<b>Total 3.8 million (unduplicated)</b>	<b>\$66 billion</b>

Note: Total counts recipients once, even if they receive more than one type of federal payment.

Source: JLARC staff analysis of statistical summaries by program and Current Population Survey data.

The state ranks second (behind Maryland) in the percentage of workers who are federal employees and third (behind Alaska and Hawaii) in the percentage who are active military, but 46th in the percentage of the population receiving assistance program benefits.

A greater share of federal spending in Virginia goes to high income households than in most other states. The median income of all households receiving any type of federal payment in Virginia was about \$50,000, below only Alaska, Hawaii, and Maryland. In these three states and Virginia, 21 to 22 percent of people who receive a federal payment live in households with income above \$100,000. This percentage of high-income recipients is twice the national average.

### **CUTS IN FEDERAL SPENDING WILL HAVE LARGER ADVERSE IMPACTS IN VIRGINIA THAN IN OTHER STATES**

Because of the Budget Control Act of 2011 (sequestration) many areas of discretionary federal spending will decline or grow more slowly through 2021, including military spending. Military procurement in Virginia has already declined by 20 percent between 2011 and 2013, from \$44 to \$35 billion. Federal spending cuts have been larger in Virginia than other states, in part because the state relies more on military spending. Federal cuts also adversely affect state tax revenue, because between 18 and 30 percent of general fund revenue is estimated to come from federal spending.

The impacts of changes in federal spending on Virginia's economy are not captured entirely by the dollar amount of the direct change. Indirect effects, or secondary impacts, can make the total impact larger or smaller than the initial impact.

Simulation models suggest that cuts due to sequestration could cause total job losses of 75,000 to 150,000 in Virginia within the next few years, affecting up to four percent of the state's labor force. The state is currently experiencing slower job and economic growth than the national average.

Over the next decade, increased spending for Social Security and health care, driven by an aging population and increasing costs of health care per beneficiary, is expected to cause federal spending in Virginia to rise again. The federal debt is projected to grow faster than the economy, which could increase interest rates and reduce investment and future growth nationwide, according to economic theory.

# Federal Government Spends More per Person in Virginia than in All but One Other State

## In Summary

Federal spending per person in Virginia is higher than in all but one other state. Virginia's rank on this measure is due primarily to high military spending, including contracts for goods and services and military and civilian personnel costs. Military spending per person in Virginia is four times the national average. Spending on non-military contracts and federal employees in Virginia is also much larger than the national average. Adjusting for inflation, federal spending per person in Virginia has nearly doubled over the past 30 years. This growth was driven primarily by increases in military and non-military contracts. Federal spending by locality in Virginia varies significantly, with military spending being concentrated in a small number of localities and Social Security being the largest category of federal spending per person in most localities.

### Federal Spending Compared to Taxes Paid

Federal spending is financed primarily by federal taxes, but Virginia receives far more in federal spending than residents and businesses pay in federal taxes.

In 2012, Virginia residents paid a total of \$64 billion in federal taxes, according to IRS statistics. At \$136 billion, federal spending in Virginia in 2012 was more than twice as large as federal taxes paid by Virginia residents. The federal government is a net contributor to Virginia's economy.

The mandate for this study was prompted by concerns about Virginia's reliance on federal spending and the economic effects of possible federal spending cuts. Passed in 2013 during a period of Congressional conflict over the federal budget, the mandate directs the Joint Legislative Audit and Review Commission (JLARC) to study the amount, nature, and impact of federal spending in Virginia (Appendix A). In particular, JLARC is directed to

- study the amount of federal revenue that Virginia receives at the state and local level annually, by functional area;
- review all sources of Virginia revenue that are due to federal government spending, including grants, wages and salaries, direct payments to individuals, and procurement contracts; and
- determine the importance and impact of federal spending, including the indirect benefits to individuals, companies, and state and local governments.

Although it is generally known that Virginia receives more federal dollars than most states, less is known about the types of federal spending, the geographic distribution, and how spending has changed over time. This information is important for predicting how changes in federal spending might impact Virginia.

### Gross Output and Gross State Product (GSP)

Gross output for a state is the total value of all goods and services produced. Gross state product is the sum of all value added by industries within a state. Gross output is broader and equals GSP plus the value of intermediate goods and services. In 2012 Virginia's gross output was about \$700 billion and GSP was \$446 billion.

Comparing federal spending to gross output rather than to GSP is more appropriate because federal spending is a gross measure, not a value added measure. Because GSP data is more readily available, however, the remainder of this report uses GSP.

## FEDERAL SPENDING IN VIRGINIA IS MAJOR DRIVER OF STATE ECONOMY

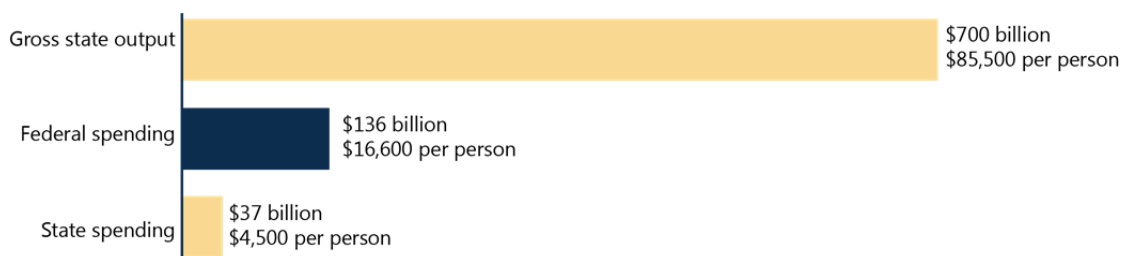
In 2012 the federal government spent approximately \$136 billion in Virginia. The large size of federal spending is due both to Virginia's proximity to Washington D.C. and to a large military presence in the state.

Federal government spending in Virginia was equivalent to about 20 percent of the state's economy as measured by its total output of \$700 billion. In 2012, federal spending was about four times larger than state government spending, excluding state spending of federal funds (Figure 1). Because it is much larger, federal spending has a far greater economic impact in Virginia than state government spending.

### Growth in Federal Spending Has Increased Over the Past Decade

Federal spending per person in Virginia grew substantially over the past 30 years, particularly since 2000 (Figure 2). The average annual increase was 3.3 percent from 2000 to 2012, adjusted for inflation, as compared to 1.5 percent from 1983 to 1999. Spending peaked in 2010 with the federal stimulus, which supplied extra funding in response to the economic recession of 2007–2009. In 2012 federal spending averaged \$16,600 for every person in Virginia, or \$45,000 per household.

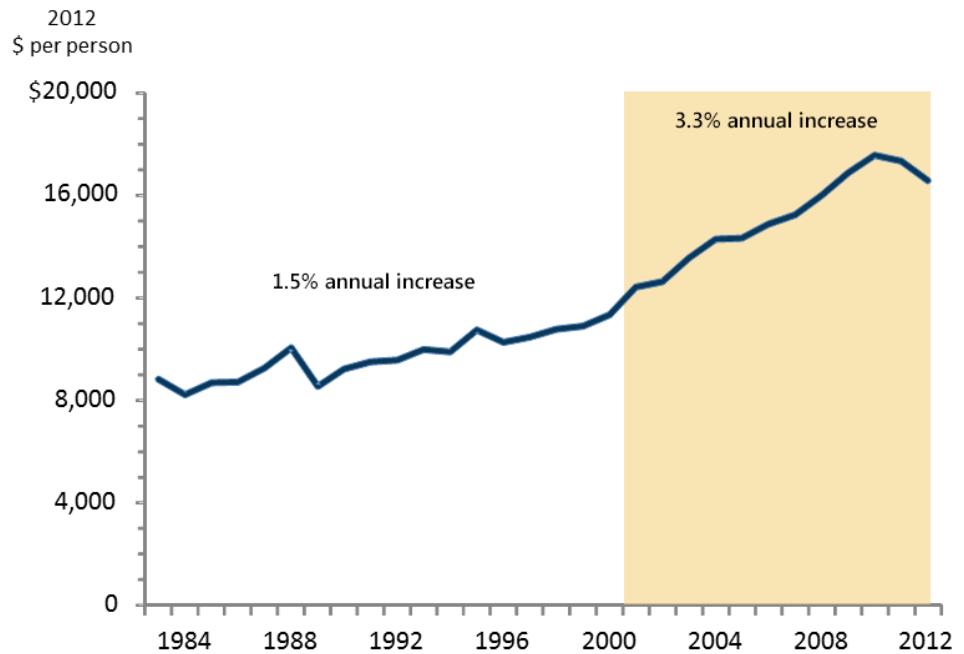
**Figure 1: Federal Spending in Virginia in 2012 Accounted for One-Fifth of the State's Economy and Was Four Times Larger than State Spending**



Note: State spending excludes \$13 billion in federal funds received by the state government.

Source: JLARC staff analysis of data from [usaspending.gov](http://usaspending.gov), Bureau of Economic Analysis, and Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts.

**Figure 2: Growth in Federal Spending per Person in Virginia Has More Than Doubled Since 2000**

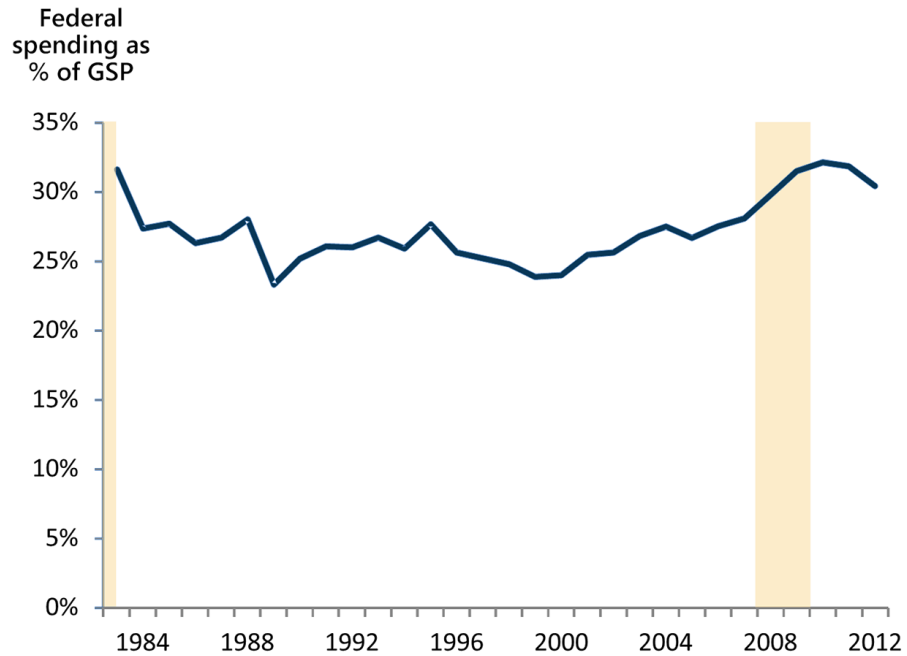


Source: JLARC staff analysis of data from Consolidated Federal Funds Report and [usaspending.gov](http://usaspending.gov).

Federal spending in Virginia grew faster than GSP over the past decade and represents a growing share of the state economy, from 24 percent in 2000 to 30 percent in 2012 (Figure 3). During the 1980s and 1990s, federal spending declined slightly as a share of GSP. Over the past 30 years, federal spending as a share of Virginia's economy peaked twice at 32 percent, both times in response to a recession (1983 and 2010).

Federal spending tends to be a larger share of the state's economy during recessions, because some types of federal spending increase as GSP growth slows. Income assistance spending, such as unemployment benefits and Supplemental Nutrition Assistance Program (SNAP) payments, increases as individual income declines. Federal spending acts as an economic stabilizer when the economy weakens and state tax revenue declines.

**Figure 3: Federal Spending Peaked as a Share of Virginia Economy in 1983 and 2010 Due to Recessions**



Note: Shaded areas indicate recessions.

Source: JLARC staff analysis of data from Consolidated Federal Funds Report and [usaspending.gov](http://usaspending.gov).

### **Military Spending Is Much Larger than Other Types of Federal Spending in Virginia**

Five categories of federal spending together accounted for more than 90 percent of the \$136 billion spent in 2010 (Figure 4).

- **Military spending** accounts for 44 percent of federal spending in Virginia. At \$60 billion, military spending was equivalent to 13 percent of GSP in 2010. About two-thirds of this was Department of Defense contracts with private companies, with most of the remainder being personnel costs.
- **Non-military contracts for goods and services** are the second-largest category of federal spending in Virginia (13 percent). Private companies produce about \$18 billion of non-military goods and services for the federal government in Virginia. The federal government is a very large customer for many companies in the state.

**Figure 4: Military Spending Accounts for More than 40 Percent of All Federal Spending in Virginia**

Category of Federal Spending	Amount Spent in 2010 (millions \$)	% of Total
Military Contracts and Personnel	\$59,700	44%
Contracts for Services and Goods, Non-Military	\$17,960	13%
Social Security	\$17,477	13%
Federal Employees	\$14,324	11%
Health Care	\$13,893	10%
Income Assistance	\$5,657	4%
Education	\$3,046	2%
Transportation	\$1,587	1%
Other	\$2,167	2%
<b>Total</b>	<b>\$135,811</b>	

} 91% of Total

Source: JLARC staff analysis of 2010 CFFR data.

**Income Assistance Programs** provide financial help to individuals and families with low income. These programs help individuals purchase food, housing, and education services.

Most programs provide in-kind assistance (such as SNAP and subsidized housing).

A few provide cash assistance (primarily the Earned Income Tax Credit and the Temporary Assistance for Needy Families program).

- **Social Security** payments represent another large proportion of federal spending in Virginia (13 percent). The largest component of Social Security is retirement benefits, which amounted to \$10.5 billion in 2010 in Virginia. Survivors' and disability insurance each paid about \$3 billion in benefits to Virginia residents.
- **Federal employees** received salaries and benefits that accounted for another 11 percent of federal spending in Virginia. This amount is understated, because personnel spending data captures only the federal employees who work in Virginia and excludes those who live in Virginia and commute to federal offices in Washington, D.C.
- **Health care** accounts for 10 percent of total federal spending in the state. Federal spending on Medicare hospital and supplemental insurance (\$8.3 billion) is the largest component, and is about twice as large as federal spending on Medicaid (\$4.2 billion).
- **Income assistance, education, and transportation programs** accounted for seven percent of total federal spending. These programs include the Supplemental Nutrition Assistance Program (SNAP), the Earned Income Tax Credit, and Pell grants, on which the federal government spends about \$1 billion each in Virginia annually.

**Figure 5: Military Spending and Non-Military Contracts Have Grown the Most Over the Past 30 Years**

Spending category	30-year \$ increase in federal spending per person (Inflation-Adjusted, 2008-10 vs. 1983-85)	30-year % increase
Military	\$2,785	60%
Non-military contracts	\$1,792	471%
Health	\$1,063	170%
Social Security	\$999	84%
Federal employment	\$675	62%
Education	\$398	394%
Income assistance	\$347	107%
Other	\$138	96%
Transportation	\$68	55%

Source: JLARC staff analysis of CFFR data.

Over the past 30 years, every category of federal spending in Virginia has grown, even after adjusting for inflation and population growth. The amount spent in Virginia on military personnel and contracts has grown far more than other categories (Figure 5). The largest growth in percentage terms has been in non-military contracts, education, and health care spending.

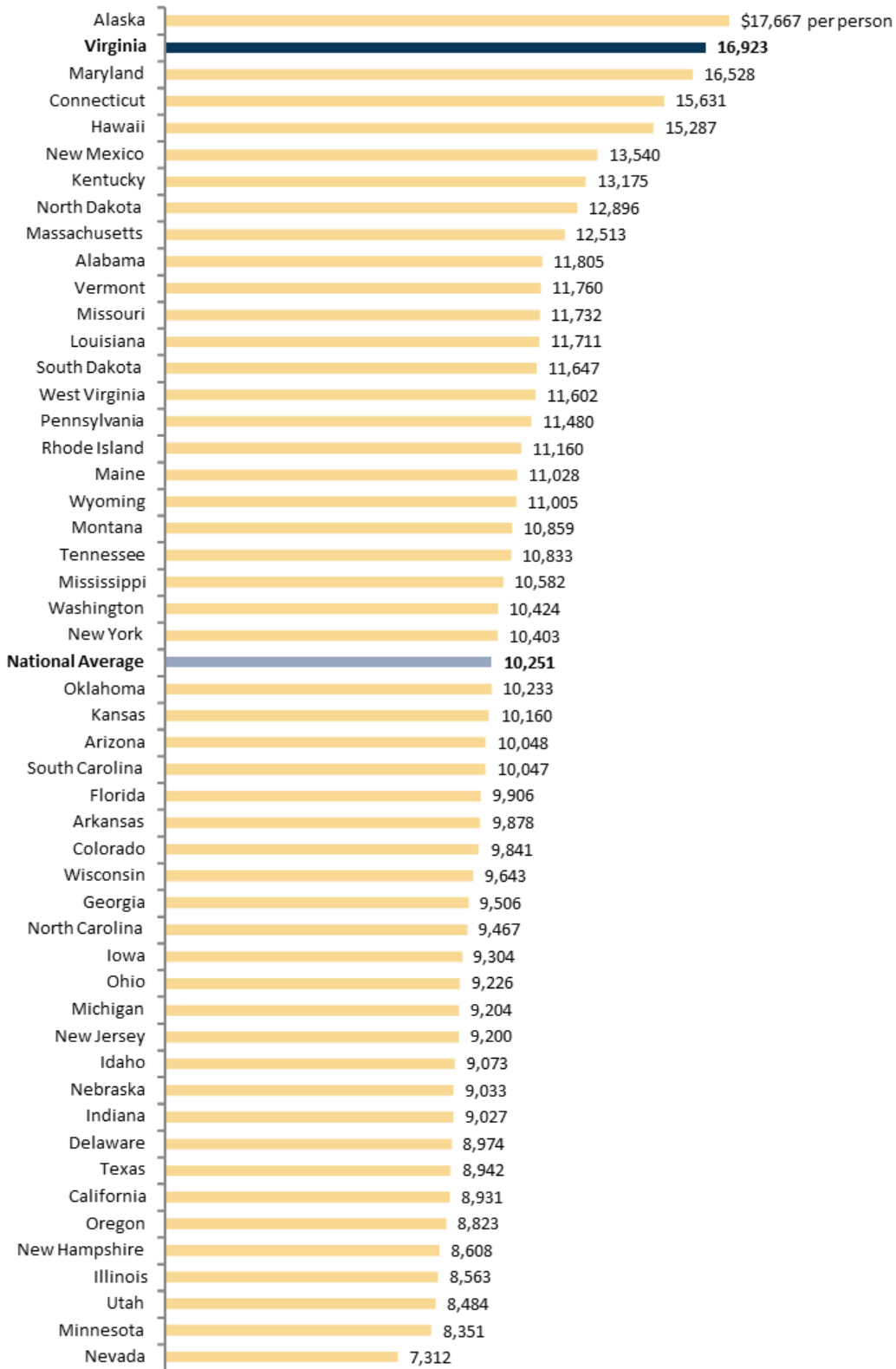
### **FEDERAL SPENDING PER PERSON IS HIGHER IN VIRGINIA THAN IN ALL BUT ONE OTHER STATE**

Federal spending per person has been consistently higher in Virginia than in any state except Alaska. In 2010, the most recent year for which detailed data was available, federal spending was \$16,900 per person in Virginia, behind only Alaska, at \$17,700 (Figure 6). This pattern has held, on average, since 1983.

Military spending is the main reason Virginia ranks so high in total federal spending. Military spending in Virginia in 2010 was \$7,400 per person, about \$5,600 above the national average (Figure 7). The amount of federal spending on non-military contracts and federal employee salaries was also well above the national average. Virginia ranked second among states in per person spending on federal employee salaries (behind Maryland), and third among states in military spending (behind Alaska and Hawaii) and non-military contracts (behind New Mexico and Maryland).

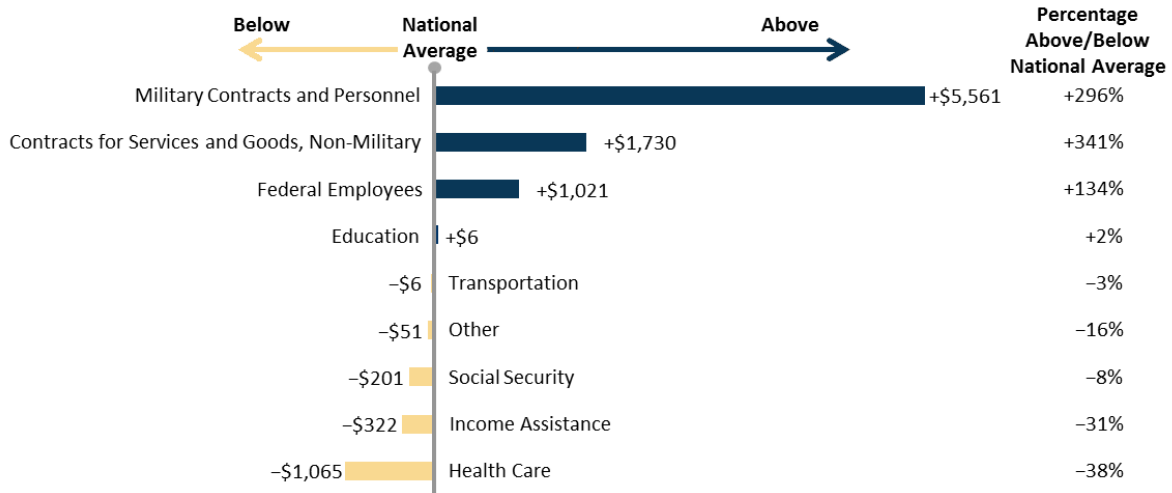


**Figure 6: Virginia Was Second Only to Alaska in Federal Spending per Person in 2010**



Source: JLARC staff analysis for CFFR data.

**Figure 7: Military Spending per Person Is Much Higher in Virginia than the National Average**



Source: JLARC staff analysis of 2010 CFFR data.

Virginia was at or below the national average in all other categories of federal spending. Virginia ranked 49th in federal spending on income assistance (above Utah), and 48th in federal spending on health care (above Colorado and Nevada). Health care spending in Virginia is lower than average for both Medicare and Medicaid. Low Medicare spending per person may be due to seniors being a slightly smaller proportion of the population and slightly healthier than the national average. Low Medicaid spending per person is due to the state's low poverty rate and relatively strict Medicaid eligibility rules.

Despite having the second-highest federal spending per person, Virginia relies less heavily on federal spending as a share of its economy than six other states (New Mexico, Kentucky, West Virginia, Mississippi, Alabama, and Maryland). Except for Maryland, these states have low median incomes and receive more federal spending through Social Security and income assistance programs.

### **FEDERAL SPENDING IN VIRGINIA VARIES WIDELY BY LOCALITY, PRIMARILY DUE TO MILITARY SPENDING**

Most federal spending in Virginia occurs in Northern Virginia and Hampton Roads. Of the 10 localities that received the most federal spending, five are in Northern Virginia and four in Hampton Roads, with Richmond being the exception (Table 1).

These 10 localities account for two-thirds of federal spending in the state but just 40 percent of the state's population. Just two localities—Fairfax and Arlington—together received one-third of all federal spending in the state in 2010 (\$47 billion).

**Table 1: Top 10 Localities Received Two-Thirds of All Federal Spending in Virginia (2010)**

Locality	Total federal spending (\$ billions)	Percent of statewide total	Largest category of federal spending	Military as percent of total federal spending in locality
Fairfax County	\$31.2	23%	Military	60%
Arlington County	15.9	12	Military	50
Norfolk	6.3	4	Military	68
Richmond City	6.3	5	Transportation	6
Newport News	5.7	4	Military	78
Virginia Beach	5.5	4	Military	63
Alexandria City	5.5	4	Federal employees	26
Loudoun County	4.8	4	Military	65
Prince William County	4.4	3	Military	68
Hampton City	3.2	2	Military	47
Total for top 10 local governments	\$88.8	65%		

Note: 2010 dollars. Numbers may not add due to rounding.

Source: JLARC staff analysis of 2010 CFFR data.

Military spending was the largest category of federal spending in most of the top 10 localities, where it generally accounted for more than half of all federal dollars. Northern Virginia is home to the Pentagon and a number of large military contractors, while Hampton Roads has several major military installations, including Norfolk Naval Station.

Military spending in localities was larger in total than any other category, but it was concentrated in particular localities. Social Security spending, in contrast, was more evenly distributed across localities (Figure 8). Social Security was the largest category of federal spending in most localities (77 of 134 localities statewide). Military spending was largest in 28 localities, and health care spending was largest in 25 localities.

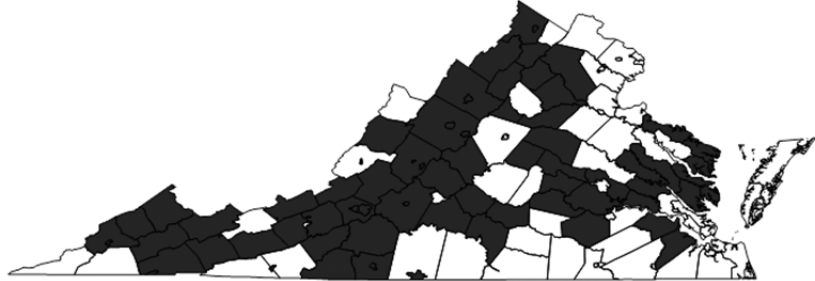
Federal spending varies widely across localities even on a per person basis. Average federal spending per person ranged from less than \$3,500 per person in Roanoke County, James City County, Frederick County, and Greensville County to more than \$70,000 per person in Arlington County (Table 2). In 8 of the 10 localities receiving the most federal spending per person, military spending was the largest category of federal spending. Social Security spending was the largest category of federal spending in 7 of the 10 localities receiving the least federal spending per person.

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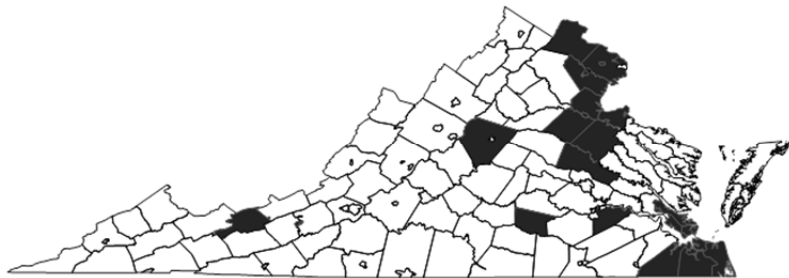
**Figure 8: Social Security Is the Largest Source of Federal Spending in Most Localities**

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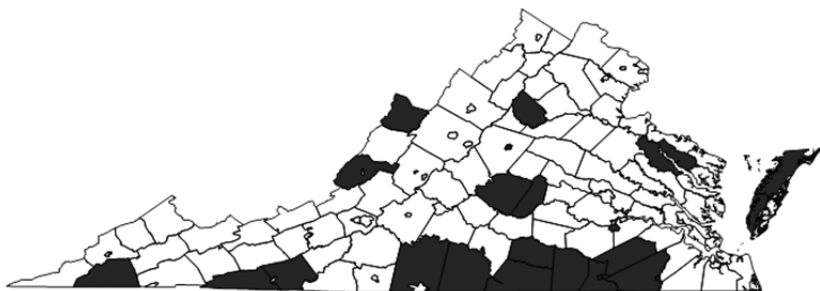
Localities Where **Social Security** is the Largest Category



Localities Where **Military Spending** is the Largest Category



Localities Where **Health Care Spending** is the Largest Category



Note: Shaded localities indicate localities where the largest category of federal spending is military, Social Security, or health care spending.

Source: JLARC staff analysis of 2010 CFFR data.

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Across localities, the variation in types of federal spending reflects differences in demographic characteristics. In localities where the population is older, Social Security spending tends to be higher. In localities where the poverty rate is high, federal spending on health care and income assistance tends to be high. Areas with high military spending usually have a younger and more highly educated population.

**Table 2: Military Is Largest Category of Federal Spending in Localities Receiving the Most Federal Spending per Person**

**Local Governments Receiving the Most Federal Funds**

<b>Top 10 localities</b>	<b>Population in 2010</b>	<b>Federal spending per person</b>	<b>Largest category of federal spending</b>
Arlington County	207,627	\$76,361	Military
Prince George County	35,725	46,135	Military
King George County	23,584	39,826	Military
Alexandria City	139,966	39,045	Federal employees
Manassas City	37,821	32,568	Military
Newport News City	180,719	31,534	Military
Richmond City	204,214	30,739	Transportation
Fairfax County	1,081,726	28,878	Military
Norfolk City	242,803	25,887	Military
Williamsburg City	14,068	24,670	Military
<b>Average of top 10</b>	<b>216,825</b>	<b>\$37,564</b>	

**Local Governments Receiving the Least Federal Funds**

<b>Bottom 10 localities</b>	<b>Population in 2010</b>	<b>Federal spending per person</b>	<b>Largest category of federal spending</b>
Spotsylvania County	122,397	\$4,627	Military
Greene County	18,403	4,623	Social Security
Rockingham County	76,314	4,506	Social Security
Augusta County	73,750	4,276	Social Security
Chesterfield County	316,236	4,121	Social Security
Henrico County	306,935	4,094	Social Security
Greensville County	12,243	3,396	Health
Frederick County	78,305	3,377	Social Security
James City County	67,009	3,313	Federal Employees
Roanoke County	92,376	3,142	Social Security
<b>Average of bottom 10</b>	<b>116,397</b>	<b>\$3,948</b>	

Note: Reported in 2010 dollars.

Source: JLARC staff analysis of 2010 CFFR data.



## Virginia State Government Receives Less Federal Funds per Person Than Any Other State

### In Summary

Approximately seven percent of federal spending in Virginia goes directly to the state and local governments, which use these funds to provide services to residents. The amount of federal funds received by the state government is lower per person in Virginia than in any other state. Virginia ranks low on this measure primarily because Virginia has fewer residents enrolled in Medicaid, due to relatively strict eligibility rules and the state's low poverty rate. Still, the state government relied on federal funds for 20 percent (\$9 billion) of its spending in 2012. Nearly half of federal funds received were for health care, primarily Medicaid. Virginia used about \$4.4 billion of its state funds in 2013 to satisfy the cost-sharing requirements imposed by the 10 largest federal programs. On average, local governments in Virginia relied on federal funds to a lesser degree than the state government, and those with higher poverty rates tended to receive more federal funds per person. Most federal funds received by local governments were for education programs.

#### Intergovernmental Grants

All together, federal funds to the state government amounted to \$13 billion, \$9 billion of which were intergovernmental grants.

The focus of this chapter is intergovernmental grants, which are revenues that the federal government shares with state and local governments.

Other federal funds that go to state agencies on behalf of individuals, such as Pell Grants and Section 8 housing vouchers, are not covered in this chapter.

The federal government provides funds to state and local governments to advance federal policy priorities and to help stabilize the economy. This funding structure takes advantage of the capacity of state and local governments to distribute resources more efficiently than the federal government could. The federal funds received by state and local governments have a substantial impact on state and local spending levels and priorities.

State and local governments use federal funds to provide services to their residents and to help offset the decline in their other revenue sources during an economic downturn. To receive federal funds, state and local governments must fulfill certain obligations, such as regulatory and cost-sharing requirements.

#### STATE GOVERNMENT RELIED ON FEDERAL FUNDS FOR 20 PERCENT OF SPENDING IN 2012

Although they make up only about seven percent of all federal spending in Virginia, federal funds to the state government are a substantial source of revenue. Virginia state government used \$9 billion in federal funds in 2012 to support programs in several major categories including health care, income assistance, education, labor and employment training, and transportation.

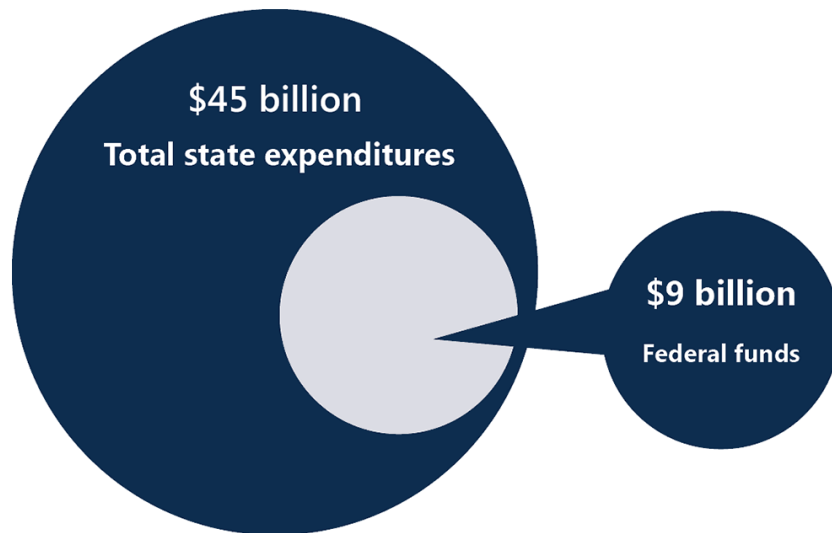
**American Reinvestment and Recovery Act – State Fiscal Stabilization Fund**

During the most recent economic recession, Virginia received \$1 billion from the fiscal stabilization program for education, which was established under the American Reinvestment and Recovery Act. These funds were used to fill a shortfall for educational programs.

**Reliance on Federal Funds Was Mostly Stable Over Past Decade But Increased Because of Recent Recession**

The \$9 billion in federal funds received by Virginia state government in 2012 was 20 percent of the state’s total spending of \$45 billion (Figure 9). The proportion of state spending from federal funds has remained fairly steady over time, except during the recent recession, when it rose to slightly above 23 percent (Figure 10). Federal funds are a larger proportion of state expenditures during a recession because federal assistance to states increases as other sources of state revenue, such as income taxes and sales taxes, decrease. From 2001 to 2012, federal funds received per person in Virginia increased by 47 percent, adjusted for inflation (Figure 11). The increase was fueled primarily by growth in the Medicaid program (43 percent of the increase) and to a lesser extent in the highway planning and construction program (13 percent of the increase). The recent decline from 2011 to 2012 is partly a result of the expiration of various stimulus programs.

**Figure 9: Federal Funds to State Government Accounted for 20 Percent of Total State Spending in 2012**

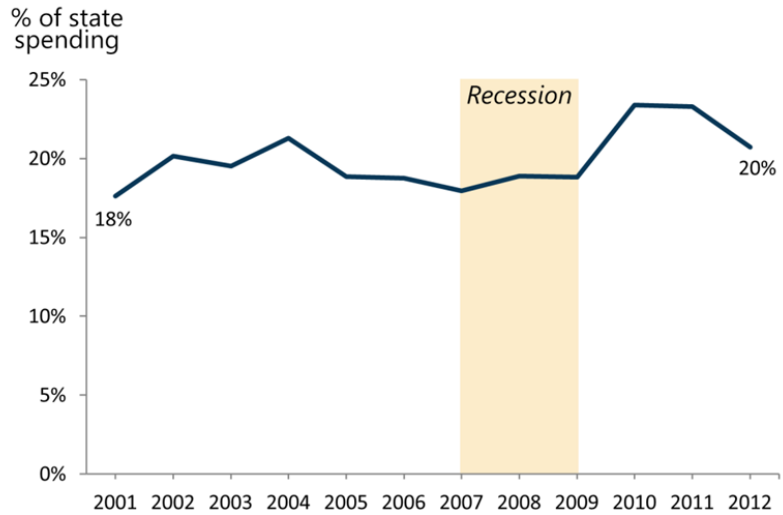


Note: Total state expenditures include other categories of federal funds that are not considered grants to states, such as Pell Grants, Section 8 housing vouchers, SNAP benefits, and Unemployment Insurance payments.

Source: JLARC staff analysis of data from the Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts, and the Commonwealth Accounting and Reporting System.



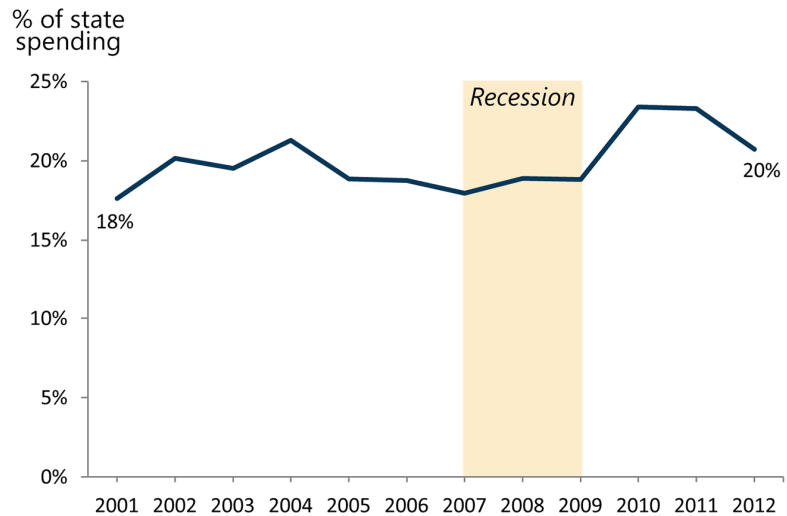
**Figure 10: Federal Funds to State Government as Share of Total State Spending Was Stable Prior to Recent Recession**



Note: Federal funds to state governments increased after the recent recession as federal stimulus dollars were obligated and subsequently expended by states. This chart measures expenditures, not obligations; hence the lag.

Source: JLARC staff analysis of data from the Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts, and the Commonwealth Accounting and Reporting System.

**Figure 11: Federal Funds to State Government Increased by Almost 50 Percent per Person Since 2001**



Source: JLARC staff analysis of data from the Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts.

### Federal Medical Assistance Percentage

Federal funds for Medicaid declined from \$4.4 billion in 2011 to \$3.6 billion in 2012 because the temporary increase in the Federal Medical Assistance Percentage—the federal matching amount—was discontinued. The federal government currently funds 50 percent of the cost of Virginia’s Medicaid program.

### Federal Income Assistance Programs Administered by State and Local Governments

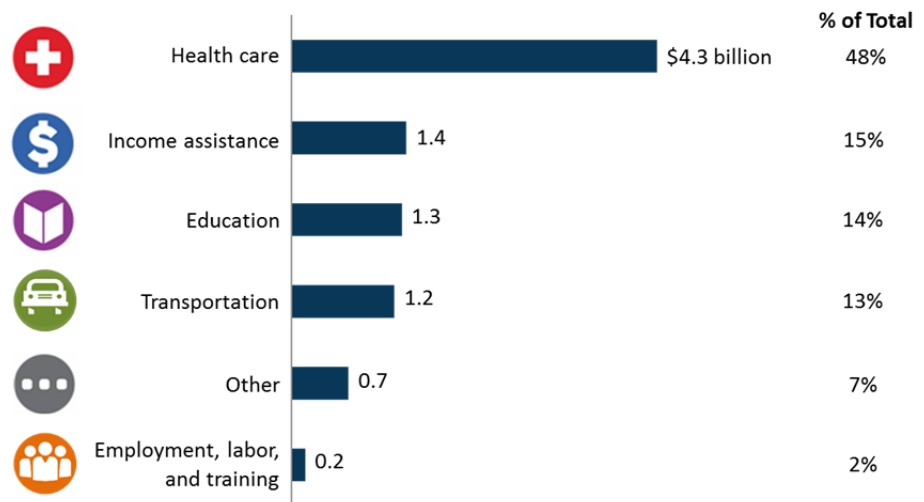
Income assistance programs included in this chapter are those that provide administrative funding to states and localities, rather than directly to individuals. Examples include the National School Lunch Program and Temporary Assistance for Needy Families.

## Health Care Is Largest Category of Federal Funds Received by State Government

Virginia state government receives federal funds to support programs in several major categories—health care, transportation, education, income assistance, and employment. Of those, health care was by far the largest category, accounting for 48 percent (\$4.3 billion) of the total in 2012 (Figure 12). Most of these funds were for Medicaid. All other categories of federal funds were small by comparison. The next largest category—income assistance—accounted for 15 percent of all federal funds received by Virginia state government.

Federal funds received by Virginia state government come from more than 700 federal programs. While most programs individually account for a small share of the total, Medicaid represented 40 percent of the \$9 billion in federal funds received by the state government in 2012. After Medicaid, highway planning and construction was the next largest program, at about 13 percent (Figure 13). Highway planning and construction was the largest program until 1987, when it was surpassed by Medicaid. Because of the growth in health care costs, funding for Medicaid is now more than three times larger than the highway program.

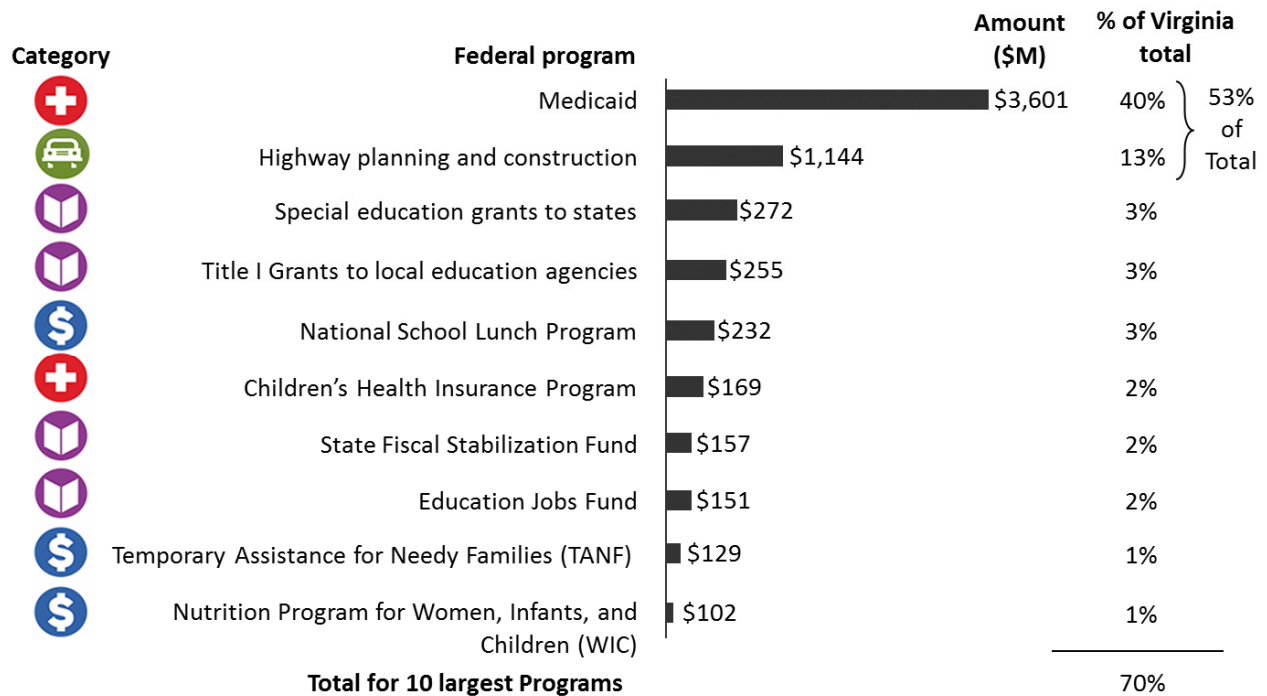
**Figure 12: Federal Funds to Virginia State Government Are Used Primarily for Health Care Programs**



2012 Virginia federal funds total: \$9 billion

Source: JLARC staff analysis of data from the Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts.

**Figure 13: Two Largest Federal Programs Accounted for More Than Half of the Federal Funds Received by Virginia State Government in 2012**



Source: JLARC staff analysis of data from the Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts.

### Virginia State Government Receives Less Federal Funds per Person Than Any Other State Government

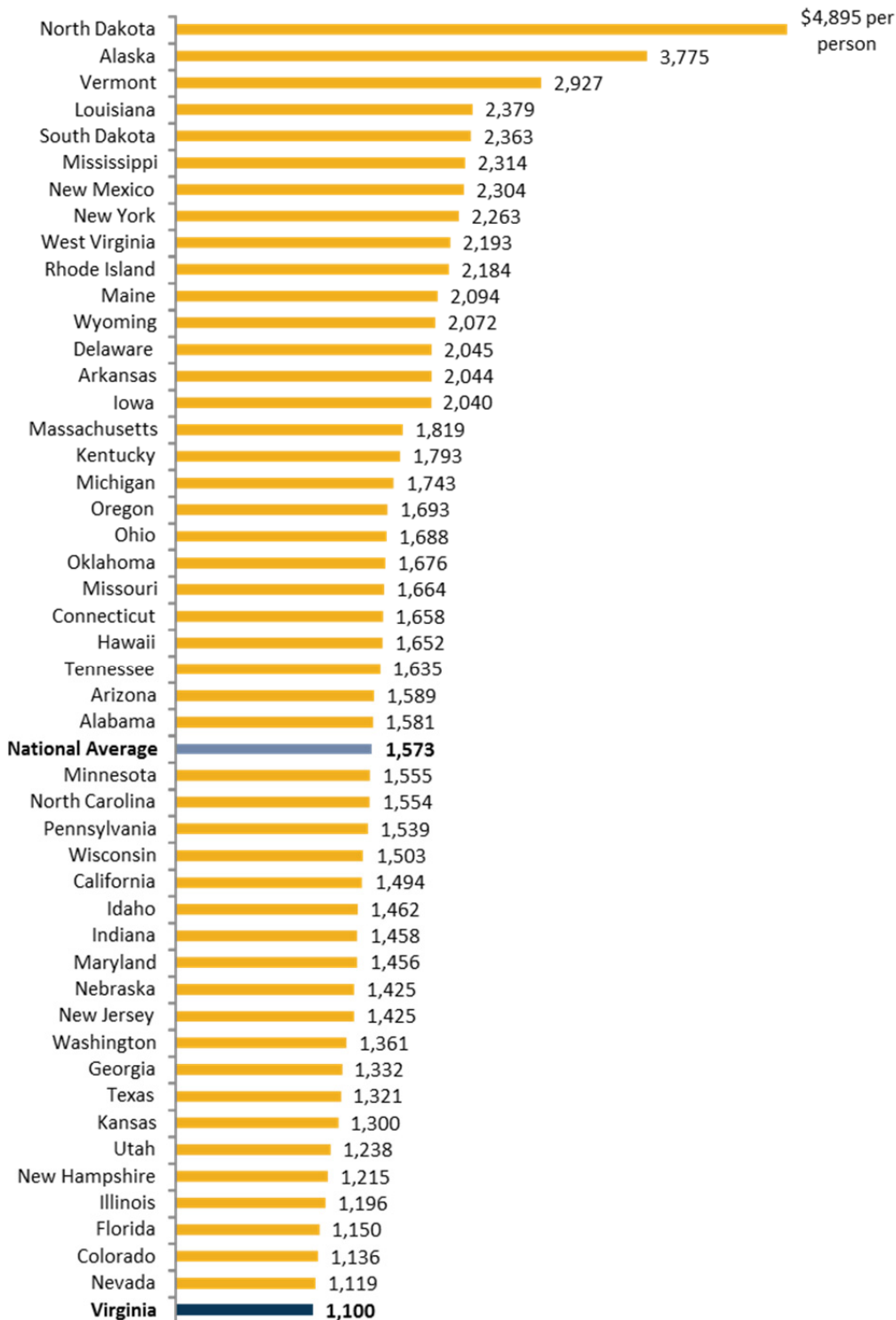
Even though Virginia ranks near the top among states in total federal spending per person, the subset of federal spending that goes to Virginia state government is lower than for any other state (Figure 14). The amount of federal funds received by Virginia state government in 2012 was 30 percent lower than the national average (\$1,100 vs. \$1,573 per person). The state has consistently ranked low on this measure over time.

#### JLARC Report on Federal Grant Funds

Virginia's low ranking on federal grant funds was the subject of a JLARC report: *Review of Virginia's Activity in Maximizing Federal Grant Funding* (2003).

Virginia state government receives less federal funds than other states mainly because of Virginia's strict eligibility criteria for Medicaid and because the amount paid to income assistance program recipients is relatively low (Figure 15). In the health care category, Virginia received 40 percent less than the national average (\$526 vs. \$882 per person). In the income assistance category, Virginia received 30 percent less than the national average (\$165 vs. \$237 per person). In most other categories, Virginia state government received about the same amount of federal funds as the national average.

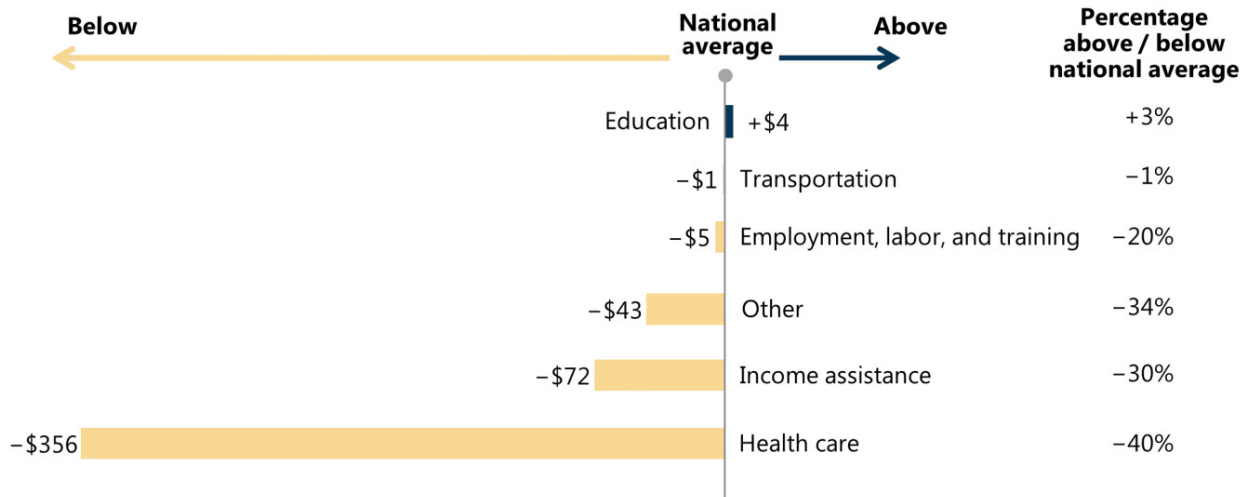
**Figure 14: Virginia State Government Receives Less Federal Funds per Person Than Any Other State (2012)**



Note: Data was not available for Montana and South Carolina.

Source: JLARC staff analysis of data from the Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by each state.

**Figure 15: Virginia State Government Received Less Federal Funds for Health and Income Assistance Than the National Average (2012)**



Source: JLARC staff analysis of data from the Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts.

Medicaid accounted for 72 percent of the difference between Virginia’s federal funds per person and the national average in 2012. Compared to other states, a relatively small proportion of the Virginia population qualifies for Medicaid, because the state has the eighth lowest poverty rate and because program eligibility rules have a relatively low income threshold. In Virginia, working adults with children are not eligible for Medicaid unless their income is less than 30 percent of the federal poverty level. Childless adults are not eligible for Medicaid unless they are disabled or elderly. The services covered by Medicaid and the rates paid to doctors in Virginia are comparable to most states, so these factors do not account for Virginia’s relatively low spending per person for Medicaid.

The Temporary Assistance for Needy Families (TANF) program accounted for another six percent of the difference between federal funds per person in Virginia and the national average in 2012. This is primarily due to low payment amounts per recipient and the state’s low poverty rate. Virginia’s TANF payment for a single-parent household of three was between \$292 and \$389 as of July 2012, compared to the national average of \$435.

### **Over 11 Percent of Total State Funds Were Used to Meet Cost-Sharing Requirements in FY 2013**

Many federal programs require states to contribute state or local funds in order to receive federal funds. Cost-sharing obligations mean that states have less flexibility to spend state funds on their own policy priorities. To satisfy these cost-sharing requirements,

Virginia state government used about \$4.5 billion of its general and special funds in FY 2013 just for the 10 largest programs (Table 3). Many smaller programs also have cost-sharing requirements, so this amount underestimates the total state funds used to meet federal requirements. Most of the state funds devoted to cost-sharing are for Medicaid (\$4 billion), which requires a 50 percent match.

The amount of state matching funds as a proportion of federal funds received has increased over time because of the growth of Medicaid, which has a high match rate. In a 1980 study, JLARC found that federal funds from the largest 10 programs required state agencies to spend an average of 30 cents for every dollar received. In FY 2013, state agencies spent, on average, about 70 cents for every federal dollar received for the 10 largest programs.

**Table 3: Cost-Sharing Requirements for Virginia’s 10 Largest Federal Grant Programs Require the State to Spend Approximately 70 Cents for Every Federal Dollar Received (2013)**

<b>Program</b>	<b>Federal funds (\$ millions)</b>	<b>State agency match<sup>a</sup> (\$ millions)</b>	<b>Amount spent by state agency per federal dollar</b>
Medicaid	\$4,013	\$3,977	\$0.99
Highway Construction	1,049	162	0.15
Special Education (Parts B and C)	282	9 <sup>c</sup>	0.03
Title I Education Grants	264	No Match <sup>b</sup>	–
National School Lunch Program	216	6	0.03
FAMIS (Children’s Health Insurance Program)	191	103	0.54
Temporary Assistance for Needy Families	158	128	0.81
Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)	99	No Match	–
Supplemental Nutrition Assistance Program (SNAP) Administrative Assistance Grant	98	46	0.47
Education Jobs Fund Program	59	No Match <sup>b</sup>	–
<b>Total</b>	<b>\$6,429</b>	<b>\$4,431</b>	<b>\$0.69</b>

<sup>a</sup> Table does not include maintenance of effort requirements, except for TANF. State spending may be greater than match amounts.

<sup>b</sup> Relevant state agency reported that program does not have a match, but does have a maintenance of effort requirement, which has been met every year.

<sup>c</sup> This matching amount pertains only to Part C – Infants and Families portion of the Special Education grants. There is no matching requirement for part B, but there is a maintenance of effort requirement, which has been met every year.

Note: Because 2013 Statewide Single Audit data was unavailable, the above programs are estimated to be the largest 10 programs in 2013 based on historical trends.

Source: JLARC staff analysis of data provided by the Virginia Department of Planning and Budget.

### Federal Funds to Local Governments

Local governments receive federal funds either directly from the federal government or indirectly through the state or other entities.

In 2012, about \$1.9 billion in federal funds spent by local governments was classified as indirect funds (most of which was passed through from the state) and \$0.5 billion was classified as direct funds from the federal government.

## VIRGINIA LOCAL GOVERNMENTS RELIED ON FEDERAL FUNDS FOR CLOSE TO NINE PERCENT OF LOCAL SPENDING IN 2012

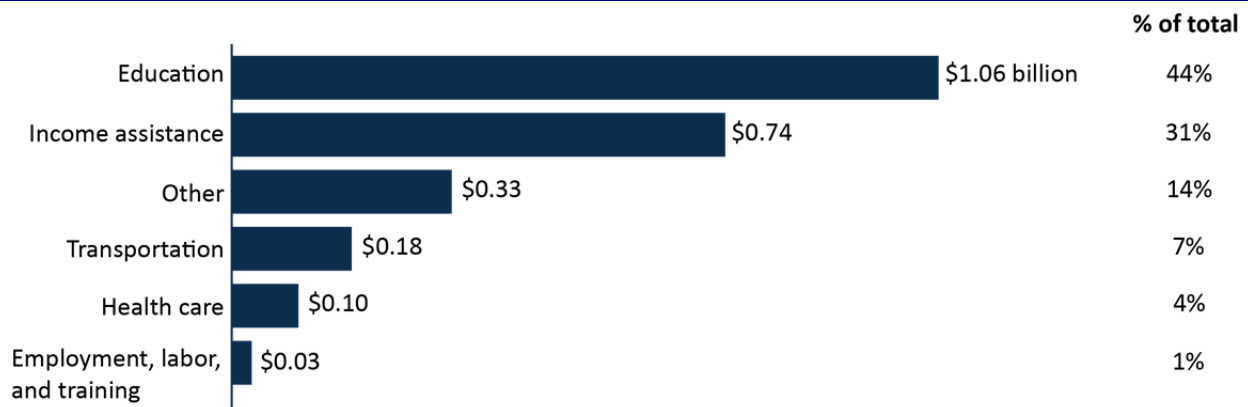
In 2012, Virginia local governments received \$2.4 billion in federal funds, which accounted for almost nine percent of total local spending. On average, local government budgets rely on federal funds to a lesser degree than the state government budget does. Localities use federal funds to support the same types of programs as the state, but funds are distributed differently among types of programs at the local level.

### Education and Income Assistance Programs Account for Most Federal Funds Received by Local Governments

Education and income assistance programs accounted for 75 percent of federal funds received by Virginia local governments in 2012 (Figure 16). Education programs represented 44 percent of federal funds received by local governments. The largest education programs for which local governments received funds are the Special Education and Title I programs and the Education Jobs Fund, which was established as part of the Recovery Act and expired in 2012.

Income assistance programs accounted for another large proportion—31 percent—of the federal funds received by local governments. The largest federal income assistance programs administered by local governments are National School Lunch, Supplemental Nutrition Assistance, Temporary Assistance for Needy Families, and the School Breakfast programs.

**Figure 16: Three-Fourths of Federal Funds to Local Governments Are Used for Education and Income Assistance**



2012 Virginia Local Government Federal Funds Total: \$2.4 Billion

Source: JLARC staff analysis of data from the Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts.

## Amount of Federal Funds per Person Varies Widely Across Localities, Depending on Levels of Poverty

The amount of federal funds per person received by local governments varies significantly, from a low of \$27 in Tazewell County to a high of \$770 in Richmond (Table 4). Federal funding for certain education and income assistance programs is based partly on poverty rates. Local governments in areas with higher poverty rates tend to receive more federal funds per person (Figure 17).

**Table 4: Top 10 Local Governments in Federal Funds per Person Receive Six Times as Much as Bottom 10**

10 Local Governments Receiving the Most Federal Funds	
Locality	Per person amount
City of Richmond	\$770
City of Petersburg	758
Rappahannock County	744
Cumberland County	655
Charlotte County	645
City of Roanoke	618
City of Winchester	616
City of Danville	607
Buchanan County	603
City of Franklin	593
<b>Average of Highest Local Governments</b>	<b>\$661</b>
10 Local Governments Receiving the Least Federal Funds	
Locality	Per person amount
Goochland County	\$144
City of Emporia	136
Roanoke County	134
Fauquier County	131
Loudoun County	122
Powhatan County	114
City of Lexington	93
City of Williamsburg	84
Pulaski County	29
Tazewell County	21
<b>Average of Lowest Local Governments</b>	<b>\$101</b>

Note: Omitted cities of Norton, Falls Church, and Fairfax because these jurisdictions are either outliers or may share many government functions with encompassing or neighboring jurisdictions (counties).

Source: JLARC staff analysis of data from the Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts.

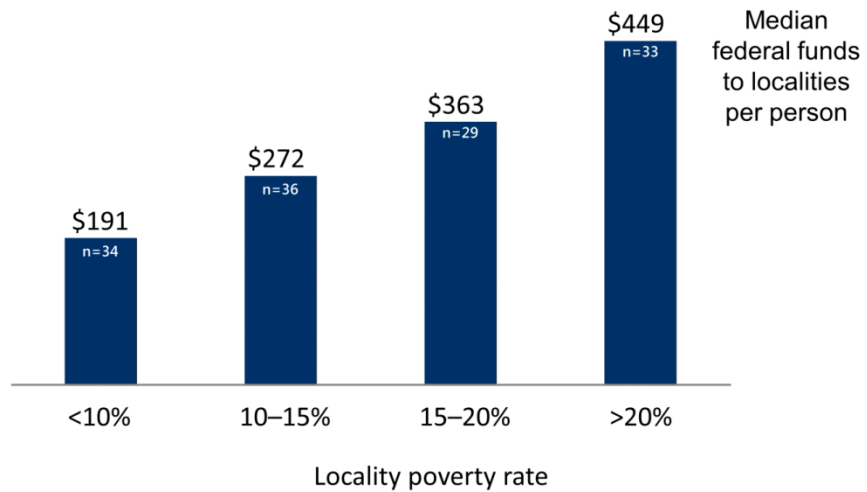


Federal funds for capital projects such as roads, water treatment plants, and other infrastructure, may also partly explain the wide variation across localities. These funds to local governments, which can be large and concentrated over a short period of time, create temporary spikes in federal spending for the affected areas.

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**Figure 17: Local Governments With Higher Poverty Rates Tend to Receive More Federal Funds Per Person**

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Source: JLARC staff analysis of data from Federal Audit Clearinghouse Schedule of Expenditures of Federal Awards (2012), compiled by the Virginia Department of Accounts.

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## Half of Virginia Residents Are Direct Recipients of Federal Spending

### In Summary

Close to half of all Virginia residents are direct recipients of federal spending, either through assistance programs, retirement benefits (Social Security), or federal employment. The number of individuals who participate in income assistance programs and Medicaid is larger than the number of retirees or federal employees. However, federal spending on assistance programs is far lower than the amount spent on retirement benefits such as Social Security and Medicare. In Virginia and nationwide, people over 65 receive a large share of federal spending. Virginia differs from most states in that a larger percentage of individuals who receive federal payments are in high-income households, because of the state's large number of federal employees. The percentage of Virginia residents who are direct recipients of any type of federal payment is the same as the national average, because the higher than average number of federal employees and military personnel is offset by a lower than average number of recipients of income assistance and Medicaid.







Federal spending can be measured by the amount of dollars received, as in Chapters 1 and 2, but it can also be measured by the number of individuals who receive federal spending. This chapter focuses on the number and characteristics of Virginia residents who directly receive federal payments. Direct payments to individuals represent approximately half of all federal spending in Virginia.

### **CLOSE TO HALF OF ALL VIRGINIA RESIDENTS RECEIVE A DIRECT PAYMENT FROM THE FEDERAL GOVERNMENT**

An estimated 3.8 million Virginia residents, or nearly half (47 percent), received at least one type of federal direct payment in 2012, either from assistance programs, retirement payments, or salary and wages (Figure 18). These three groups of recipients do not overlap much. This estimate excludes the payments made to Virginia residents through procurement contracts and the many corporations in Virginia that provide goods and services to the federal government. Roughly 200,000 individuals are employed by these contractors.

Virginia's percentage of state residents receiving direct federal payments is the same as the national average. The large number of military and federal civilian employees in Virginia is offset by the relatively small number of residents who participate in assistance programs. The state ranks second (behind Maryland) in the percentage of the population that are federal employees, and third

**Figure 18: Income Assistance Programs Have the Largest Number of Recipients, but Majority of Federal Payments to Individuals Goes to Retirees**

	Recipients (millions)	Total spending (\$ billions)
Income assistance programs and Medicaid	 1.8	 \$8.8
Medicare and Social Security	 1.4	 \$33.7
Federal or military employee pay and health care	 1.1	 \$23.5
	Total 3.8 million (unduplicated)	\$66 billion

Note: Total counts recipients once, even if they receive more than one type of federal payment.

Source: JLARC staff analysis.

(behind Alaska and Hawaii) in the percentage that are on active military duty, but 46th in the percentage of the population receiving income assistance or Medicaid. This is due primarily to Virginia's relatively strict Medicaid eligibility rules and to the state's low poverty rate, which results in a smaller percentage of the population being eligible for assistance programs. Overall, Arkansas has the largest percentage of residents receiving federal payments (58 percent), and New Hampshire has the smallest (36 percent).

A greater share of federal spending in Virginia goes to high income households than in most other states. The median income of all households receiving any type of federal payment in Virginia was about \$50,000, below only Alaska, Hawaii, and Maryland. In these four states, 21 to 22 percent of people who receive a federal payment live in households with income above \$100,000. This percentage of high-income recipients, which is twice the national average, is due to a higher than average percentage of federal employees and a lower than average percentage of recipients of income assistance.

### **INCOME ASSISTANCE PROGRAMS AND MEDICAID REACH ONE-FOURTH OF VIRGINIA RESIDENTS**

Several federal programs provide direct assistance to individuals with low incomes. Nearly one in four Virginia residents (23 percent) received a benefit from at least one federal assistance program in 2012. Most assistance is for specific purposes, such

as buying food or home heating oil, providing access to health care, or paying for college, although some programs provide cash that can be used for any purpose. Supplemental Nutrition Assistance Program (SNAP) and Medicaid are the largest assistance programs, each serving more than one million individuals in Virginia in 2012 (Table 5). Although Medicaid payments go to health care providers, the payments provide a direct benefit to individuals.

Children are more likely than adults to receive benefits from assistance programs because eligibility for some programs—including SNAP, Medicaid, the Earned Income Tax Credit, Temporary Assistance for Needy Families (TANF), and the Special Supplemental Nutrition Assistance Program for Women, Infants, and Children (WIC)—depends partly on the presence of children in the household. Further, households with children have lower income on average, because adults with young children tend to be younger and have less work experience than other adults. Approximately one in three children in Virginia participated in federal assistance programs in 2012.

**Table 5: Nearly One-Fourth of Virginians Received Direct Federal Benefits From Assistance Programs in 2012**

<b>Program</b>	<b>Number of recipients</b>	<b>Percent of population</b>	<b>Total federal spending (\$ millions)</b>
SNAP	1,340,000	16.4%	\$1,213
Medicaid	1,150,000	14.0%	4,245
Free or reduced price lunch	740,000	9.1%	205
Earned Income Tax Credit (refundable portion)	550,000	6.7%	1,121
Energy Assistance	230,000	2.8%	69
Pell Grants	190,000	2.3%	793
TANF	190,000	2.3%	158
WIC	170,000	2.1%	98
Supplemental Security Insurance	150,000	1.9%	891
<b>Total (unduplicated)</b>	<b>1,830,000</b>	<b>22.9%</b>	<b>\$8,793</b>

Note: Excludes unemployment benefits, federal housing assistance, and a number of small programs.

Source: JLARC staff analysis of statistical summaries on program websites, and 2012 Current Population Survey data.

Approximately \$9 billion in total federal spending in Virginia was paid through assistance programs in 2012. Medicaid accounted for close to half of this amount. Although most federal spending for assistance programs is for benefit payments, some portion pays for state administrative costs.

### **MORE THAN 90 PERCENT OF VIRGINIA SENIORS RECEIVE A FEDERAL PAYMENT**

The second largest category of direct recipients of federal payments is individuals age 65 and older. Social Security and Medicare are by far the largest of these programs, each paying benefits to more than 1.2 million Virginia residents in 2012 (Table 6). Unlike assistance programs, these programs deliver payments to beneficiaries who make contributions during their working lives and receive benefits when they retire. The programs were designed as a safety net for the elderly, but eligibility generally does not depend on income.

About one in six Virginia residents (17 percent) received a payment from Social Security, Medicare, or federal retirement programs in 2012. Of the state’s population 65 and older, an estimated 94 percent participated in at least one of these programs, and the vast majority participated in both Social Security and Medicare.

Although fewer people received benefits from Social Security and Medicare than from income assistance programs, total federal spending for retirement benefits was nearly four times larger (\$34 billion compared to \$9 billion). Average benefits per recipient are much higher for retirement programs than for assistance programs.

**Table 6: About One in Six Virginians Received Retirement Benefits in 2012**

<b>Program</b>	<b>Number of recipients</b>	<b>Percent of population</b>	<b>Total federal spending (\$ millions)</b>
Social Security	1,350,000	16.5%	\$16,586
Medicare	1,227,000	15.0%	8,345
Federal & military retirement	220,000	2.7%	8,784
<b>Total (unduplicated)</b>	<b>1,360,000</b>	<b>17.1%</b>	<b>\$33,715</b>

Note: Includes disability and survivor benefits.

Source: JLARC staff analysis of Social Security and Medicare program websites; data from the Department of Taxation, and 2012 Current Population Survey data.

## ONE MILLION VIRGINIA RESIDENTS RECEIVE WAGES OR BENEFITS FROM FEDERAL AND MILITARY EMPLOYMENT

### Estimating the Number of Federal Employees in Virginia

The U.S. Office of Personnel Management counts federal employees according to where they work rather than where they live. The number of federal employees who live in Virginia is much larger than the number who work in Virginia. Many workers commute from Virginia to federal offices in D.C.

The estimates reported in this chapter are based on state of residence and are from the Current Population Survey. The numbers are similar to estimates based on W-2 wage data from the Virginia Department of Taxation.

In part because of its proximity to Washington D.C., Virginia has a larger share of federal and military employees than almost any other state. More than 10 percent of Virginia's four million workers are federal employees or active military (Table 7). Only Maryland, Hawaii, and Alaska have a comparable percentage of federal employees in their workforce, and only in those states and Virginia do federal workers outnumber state employees. The number of federal employees in Virginia is about twice as large as the number of state employees. About 750,000 Virginia residents received military health care in 2012. The number of individuals receiving military health care is much larger than the number of military employees, because health care recipients include dependents and retirees.

Compared to other state residents, federal civilian employees have much higher household incomes and education levels. Median household income for federal employees in 2012 was \$125,000, compared to \$73,000 for other Virginia households. Twice as many federal employees have a bachelor's degree as other adults in the state (61 vs. 31 percent).

Households with active military members had somewhat lower income but similar education levels. Median income for military households was \$62,000 compared to \$75,000 for all non-military households statewide. Military and non-military households were equally likely to have at least a bachelor's degree.

**Table 7: One Million Virginians Were Federal or Military Employees or Received Military Health Care Benefits in 2012**

Program	Number of recipients	Percent of population	Total federal spending (\$ millions)
Federal employment	320,000	3.9%	\$12,399
Tricare (military health care)	760,000	9.3%	1,018
Active military	130,000	0.8%	8,813
Veterans compensation	120,000	1.5%	1,226
<b>Total (unduplicated)</b>	<b>1,080,000</b>	<b>13.5%</b>	<b>\$23,456</b>

Note: The overall count includes about 19,000 disabled federal employees and military. Counts do not include dependents of federal employees who receive federal health care, due to data limitations.

Source: JLARC staff analysis of the 2012 Current Population Survey and the Defense Manpower Data Center.

A substantial share of federal spending goes to federal and military employees, although the total number of individuals is smaller than the number of seniors and recipients of means-tested assistance. In 2012, \$23 billion went to earnings and health care for federal and military employees in Virginia, less than the \$34 billion spent on Social Security and Medicare but more than twice the amount spent on income assistance programs.



## Federal Spending Has Substantial Impact on Virginia Economy and Revenues

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### In Summary

Given its breadth and magnitude, federal spending has a substantial impact on Virginia's economy and population. The full effect of federal spending encompasses more than just the direct impact on state and local governments, individuals, contractors, and federal employees. Federal spending also impacts the economy indirectly, when it generates secondary changes in income. Federal spending also helps generate a sizeable amount of state income and sales taxes. Most recent research suggests that the total impacts of federal spending are moderate to large at the state level. Recent budget cuts resulting from sequestration appear to have had adverse effects on employment in Virginia. Over the next few years, however, federal spending in the state is expected to begin growing again, as Virginia's aging population places greater demands on programs such as Social Security and Medicare.

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The impacts of changes in federal spending on Virginia's economy are not captured entirely by the dollar amount of the direct change. The indirect effects, or secondary impacts, can make the total impact larger or smaller than the initial impact. Federal spending also affects state tax revenue. Reviewing how these effects work is useful for understanding the likely impacts of federal spending on the state's economy. Because of Virginia's reliance on federal spending, reductions in spending and shifts in spending priorities may have a larger impact in Virginia than in most other states.

### **FEDERAL SPENDING HAS DIRECT, INDIRECT, AND TAX EFFECTS**

The total impact of federal spending on the state economy in 2012 may be greater than the \$136 billion in federal funds spent in Virginia. The amount spent to secure a military contract or to pay Medicare providers, for example, is used to purchase more goods and services that can lead to more jobs. This can, in turn, produce more tax revenue for the state. These indirect and tax effects appear to be significant and suggest that Virginia's economy may be more reliant on federal spending than Chapters 1 and 2 indicate.

### **Federal Spending Has Direct Economic Effects in the Short Run**

The direct effects of federal spending are the primary, immediate increases in employment and demand for goods and services that are generated when the spending occurs. For example, when the federal government provides funds for a private contractor to build an aircraft carrier in Virginia, the contractor employs workers to build the carrier. There is a net increase in employment if some of the workers were not already employed. The increased income of

the newly employed also generates a new increase in demand for goods and services.

Most types of federal spending would produce similar direct effects. For example, federal funds to administer nutrition programs or education programs enable states and localities to hire eligibility workers and teachers. Federal transfer payments to individuals, such as Social Security benefits to retirees or income assistance to low-income individuals, directly increase the demand for goods and services.

Reductions in federal spending also have direct effects. When the federal government decreases funding for military procurement, contractors are likely to lay off workers. Similarly, a decrease in federal funds to states and localities for education or income assistance programs could cause states and localities to reduce employment. If some of the laid-off workers could readily find other employment, the net employment effect would be smaller than the initial reduction in employment.

### **Indirect Effects of Federal Spending Appear to Have Sizeable Impact on Economy**

Indirect effects of federal spending can enhance direct effects in the short run. For example, an increase in Social Security payments causes beneficiaries to increase their demand for goods and services, which can lead to additional employment as local businesses hire people to meet the increase in demand. The newly hired, in turn, increase their spending as their income goes up. The indirect effect would therefore compound the direct increase in demand.

Indirect effects do not always enhance direct effects, but can partly offset them instead. For example, when federal funds are used to build new military hardware, the hired contractors may shift some employees from another project to the new contract, reducing output on the other project.

The total of direct and indirect effects is sometimes referred to as a fiscal multiplier. The available research literature does not enable a consistent, precise estimate of the total effects of federal spending in Virginia. Still, most recent empirical research suggests that, at the state level, the fiscal multiplier is greater than one, which means indirect effects tend to enhance direct effects in the short run. Of 12 recent studies that examined the effects of federal spending on states and localities, nine found large or moderate impacts and three found no impacts (Table 8). Research suggests that impacts are likely to be larger when the economy is below full employment, as it is during a recession, when an increase in govern-

#### **Numeric Example of Multiplier**

A multiplier of 1.5 on Social Security benefits means that \$1,000 in benefits generates \$1,500 in income throughout the economy.

If a retiree receives \$1,000 in benefits and spends \$800 on rent, and the landlord spends \$400 of the extra income upgrading the electrical system, and the electrician spends \$200 of the additional income for a vacation, and the hotel owner spends \$100, the total increase in economic activity is the sum of all spending, or \$1,500.

ment spending is likely to increase employment and overall demand.

**Table 8: Most Recent State- and County-Level Studies Find Federal Spending Affects Employment and Output**

	Type of comparison	Key result	Source
<b>Large impact</b>	Federal grant spending across states	"The state spending multiplier is about 3.4, and \$54,350 of spending generates an additional job."	Reingewertz 2012
	Federal highway grants across states	"The cumulative effect of [federal] grants on highway spending over the 2009-2011 period is roughly two dollars per dollar of grants."	Leduc & Wilson 2014
	Federal spending across counties	"Government spending has a local income multiplier of 1.88 and an estimated cost per job of \$30,000 per year."	Serrato 2011
	Medicaid stimulus across states	"A state's receipt of a marginal \$100,000 in Medicaid outlays results in an additional 3.8 jobs per year, 3.2 of which are outside the government, health, and education sectors."	Chodorow-Reich et al. 2012
	Military spending across states	"When relative per-capita government purchases in a region rises by 1 percent of regional output, relative per-capita output in that region rises by roughly 1.5 percent."	Nakamura & Steinsson 2014
	Stimulus spending across states	Recovery Act spending in its first year yielded about eight jobs per million dollars spent, or \$125,000 per job.	Wilson 2012
<b>Moderate impact</b>	Federal contract spending across counties	"A shock of \$48,000 creates at least one job per year locally."	Mendel 2013
	Highway stimulus funding across states	Stimulus spending increased employment nationally by an estimated 816,000 jobs.	Conley & Dupor 2012
	Stimulus spending across counties	"One additional job was created by each \$107,000 in stimulus spending." Impacts are larger for income assistance and infrastructure programs. No impacts for education grants.	Feyer & Sacerdote 2012
<b>No effect</b>	"Cash for Clunkers" program across cities	"Almost all of the additional [auto] purchases under the program were pulled forward from the very near future; the effect of the program . . . is almost completely reversed . . . only seven months after the program ended."	Mian & Sufi 2012
	Federal spending across states	"Fiscal spending shocks appear to significantly dampen corporate sector investment and employment activity."	Cohen, Coval, & Malloy 2011
	Federal spending during the New Deal (1930-1940) across states	"The effects of government spending on payrolls and employment in manufacturing and the broader economy were generally very small and slightly negative."	Fishback & Kachanovskaya 2011

Note: Appendix D lists full study citations.

Source: JLARC staff literature review.

## Tax Effects of Federal Spending Account for 18 to 30 Percent of General Fund Revenue

Federal spending plays a substantial role in generating state taxes and is estimated to account for between \$2.6 billion and \$4.5 billion of general fund revenue (Table 9). Federal spending helps generate state tax revenue in several ways. Some is paid to Virginia workers as salaries and wages, which are subject to the state individual income tax. Procurement contracts contribute to the profitability of Virginia businesses, some of which are subject to the corporate income tax. Recipients of direct federal payments use these funds to purchase goods and services, which can be subject to the state sales tax.

**Table 9: Federal Spending Accounts for an Estimated 18 to 30 Percent of General Fund Revenue (2012)**

Federal spending source in Virginia	State tax revenue (\$ millions)	
	Low estimate	High estimate
Federal employees and military personnel	\$1,000	\$1,400
Federal retirees	280	420
Employees of federal contractors	500	900
State and local employees paid with federal grants	40	60
Medicare and Medicaid providers	<u>100</u>	<u>240</u>
<b>Total state individual income taxes paid by recipients of federal spending</b>	<b>\$1,920</b>	<b>\$3,020</b>
State corporate income taxes paid by federal contractors	\$130	\$240
Sales taxes on goods & services purchased by recipients of direct federal payments	\$600	\$1,200
<b>Total state taxes generated by federal spending</b>	<b>\$2,650</b>	<b>\$4,460</b>
Total general fund revenue	\$14,938	\$14,938
<b>% general fund revenue from federal spending</b>	<b>18%</b>	<b>30%</b>

Note: The wide range in revenue estimates reflects uncertainty due to data limitations.

Source: JLARC staff estimates based on aggregate W-2 and 1099 data from Virginia Department of Taxation, and Census Bureau Consolidated Federal Funds Report.

State income taxes paid by federal employees and military personnel are the largest source of tax revenue from federal spending, producing \$1 billion or more in general fund revenue annually, based on roughly \$25 billion in state taxable income. Employees of federal contractors are also a large source of state revenue, paying \$500 million or more in state income taxes. This amount may underestimate taxes paid by such workers, because it does not account for subcontractors and independent consultants working on federal contracts. Federal contractors pay a large percentage of state corporate income taxes, but corporate income taxes account for less than 10 percent of general fund revenue. A substantial amount of Virginia's sales tax revenue is from purchases by federal employees and contractors and by recipients of Social Security and income assistance programs.

### **FEDERAL SPENDING DECLINED IN VIRGINIA SINCE 2010 BUT IS EXPECTED TO GROW AGAIN IN A FEW YEARS**

Virginia's heavy reliance on federal spending raises concerns about the impact that federal budget cuts may have on the state economy. Sequestration has already led to a decrease in federal spending in Virginia, and its impact on discretionary programs such as military procurement is expected to continue for several more years. The downward trend is then expected to reverse, as Virginia's aging population and increases in health care costs require greater federal spending on non-discretionary programs like Social Security and Medicare. Future growth may be lower in areas where military contract spending is high.

### **Recent Decline in Federal Spending Has Had Adverse Impact on Virginia Economy**

Federal spending in Virginia has declined since 2010 due to sequestration and the withdrawal of stimulus funding. Sequestration reduced military contracts in Virginia by about 20 percent between 2011 and 2013 (from \$44 billion to \$35 billion). The phase-out of stimulus funding, primarily for Medicaid and local education programs, has reduced federal funds to state and local governments by more than \$2 billion.

Three recent studies used simulation models to estimate the impact of budget cuts due to sequestration on the Virginia economy. All found sizable adverse impacts. These simulation studies assume that federal spending has indirect effects that enhance direct effects on the economy in the short run, an assumption consistent with the recent empirical studies summarized in Table 8.

A 2013 analysis projected a loss of 154,000 jobs in Virginia due to sequestration, equivalent to four percent of the state's workforce, within two years of the cuts. The job loss projection for Virginia is

#### **Sequestration**

The Budget Control Act of 2011 set spending caps for most discretionary federal programs for each year through 2021. The caps, adjusted by subsequent legislation, reduce total federal spending less than 3 percent compared to baseline projections, but amount to almost 10 percent of discretionary spending. The caps reduce spending roughly equally between defense programs and non-defense discretionary programs.

Mandatory spending, which is nearly twice as large as discretionary spending, is unaffected by the caps and will continue to grow.

**Impact of federal cuts in Virginia: Three studies**

**Fuller (2013). The Economic Impact of Sequestration Budget Cuts to DOD and Non-DOD Agencies**

Prepared for the Aerospace Industries Association.

Stephen Fuller is a professor of public policy at George Mason University.

**Chmura Economics & Analytics (2014). Defense Spending Impact: Virginia FY 2012**

Prepared under contract with Commonwealth of Virginia, funded in part by DOD Office of Economic Adjustment.

Chmura is an economic research consulting firm in Richmond, VA.

**Third Way (2013). Cheating the Future: The Price of Not Fixing Entitlements**

Third Way is a privately funded policy institute in Washington, D.C.

second only to California, but the job loss in Virginia would be larger as a share of the state's workforce. Two-thirds of the projected job loss in Virginia is attributable to cuts in military spending. The vast majority of the projected loss would occur in the private sector; only a small proportion would be federal government jobs (Fuller, 2013).

A second model projected job losses from cuts in military procurement only, by locality and by occupation. This study projected the loss of 75,000 jobs between FFY 2012 and FFY 2017 in Virginia. The largest proportion of job loss would occur in Northern Virginia, where the occupations with the largest reductions would include management analysts, software developers, and engineers. In Newport News, the largest procurement reduction would be in shipbuilding, and the occupations losing the most jobs would include welders and metal workers (Chmura, 2014).

A 2013 study of sequestration produced a smaller estimate, a projected job loss of 86,000 in Virginia in 2014. The majority of the job loss projected by this analysis is due to cuts in non-military spending (Third Way, 2013).

The recent behavior of Virginia's economy is generally consistent with the predictions of these models. The recent reductions in federal spending in Virginia have likely contributed to the state's slower economic growth. Gross state product in Virginia grew by 1.1 percent in 2012, less than all but eight states and less than half the national growth rate. For the 12 months ending March 2014, total employment in Virginia was unchanged, while it grew in 46 states. Virginia's employment decline was largest in the professional and business services, the sectors most likely to be affected by the procurement cuts.

### **Federal Spending in Virginia Is Expected to Grow Again Mainly in Non-Discretionary Programs**

Over the next decade, the Congressional Budget Office (CBO) projects increases in total federal spending nationally, driven by Social Security, Medicare, Medicaid, and interest payments on the federal debt, all areas unaffected by sequestration. Increases in these programs reflect an aging population, the expansion of federal health insurance subsidies, a continuing increase in health care costs per beneficiary, and a projected rise in interest rates.

In Virginia, federal spending on Social Security, Medicare, and Medicaid will increase because, like the U.S., the state has an aging population and increasing health care costs per beneficiary. In the next few years these increases will probably be larger than the reduction in military contracts, so that total federal spending in

the state will likely begin to rise again. Nevertheless, the reduction in military contracts will adversely affect some sectors of the state economy, especially the professional, scientific, and technical services industry, and manufacturing. The reduction in defense spending will be felt primarily in Northern Virginia and the Hampton Roads area.

### **HIGH LEVELS OF FEDERAL GOVERNMENT DEBT COULD REDUCE ECONOMIC GROWTH IN LONG RUN**

Nationally, the recession and stimulus spending produced a large increase in federal deficits, which caused the federal debt to double from 35 percent of U.S. gross domestic product (GDP) in 2007 to 72 percent in 2013. The phase-out of stimulus spending, the economic recovery (although slow), and sequestration have stabilized federal debt as a share of GDP, but the Congressional Budget Office projects that the federal debt will reach 78 percent of GDP by 2024 and, under current laws governing spending, could reach 100 percent of GDP by 2038. The U.S. debt has surpassed 100 percent of GDP only once, in 1945 and 1946.

Interest rates have remained low partly because of a weak economy and monetary policy actions by the Federal Reserve. According to economic theory, if the federal debt begins to grow much faster than the economy, at some point investors may require higher returns to purchase additional government bonds and securities, increasing interest payments and thereby deficits. Higher interest rates on government bonds would push up interest rates on private borrowing. A higher cost of borrowing overall would reduce businesses investment, which would reduce the capital stock, productivity, and incomes.

In Virginia, the long-run impacts of federal spending are likely to be felt both through rising interest rates and through potential changes in spending. If federal spending continues to shift from defense and other discretionary areas to health care and Social Security, the defense-related sectors of Virginia's economy may contract, causing Virginia's economy to grow more slowly than the national economy. To the extent the shifts in federal spending occur gradually, lower growth may happen slowly, giving the state's highly skilled workforce some time to adjust. Federal spending may become a smaller share of the state's economy, but Virginia's proximity to Washington D.C. ensures a continuing large impact of federal spending.





## Study Mandate

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### 2013 SESSION HOUSE JOINT RESOLUTION NO. 635

*Directing the Joint Legislative Audit and Review Commission to study the amount of federal revenue that Virginia receives at the state and local level annually, by functional area, and determine its importance and impact. Report.*

Agreed to by the House of Delegates, February 4, 2013  
Agreed to by the Senate, February 19, 2013

WHEREAS, the Commonwealth is home to many major military installations, including the Pentagon and the naval port in Hampton Roads; and

WHEREAS, the Commonwealth is home to tens of thousands of Virginians who work for the federal government in the Washington metropolitan area; and

WHEREAS, a significant number of private sector jobs in Virginia are dependent on companies with federal government contracts; and

WHEREAS, Virginia is the twelfth largest state as measured by population, eleventh when measured by gross domestic product, and tenth when measured by per capita gross domestic product; and

WHEREAS, in 2008, \$118.5 billion of federal funds flowed into Virginia as grants, wages, and salaries and as direct payments to individuals as well as in the form of procurement expenditures; and

WHEREAS, the Governor's Budget Bill introduced in the 2013 Session contains \$6.7 billion and \$7.0 billion, respectively, in federal funds in each year of the biennium, which will be appropriated for operating expenses; and

WHEREAS, as the United States Congress and the President make decisions that will continue to affect both the federal budget and federal deficit, there remain numerous uncertainties that could substantially impact Virginia and its localities; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Joint Legislative Audit and Review Commission be directed to study the amount of federal revenue that Virginia receives at the state and local level annually, by functional area, and determine its importance and impact.

In conducting its study, the Joint Legislative Audit and Review Commission (JLARC) shall review all sources of Virginia revenue that are due to federal government spending, including grants, wages and salaries, direct payments to individuals, and procurements as well as the indirect benefits to individuals, companies, and state and local governments.

All agencies of the Commonwealth shall provide assistance to JLARC for this study, upon request.

The Joint Legislative Audit and Review Commission shall complete its meetings for the first year by November 30, 2013, and for the second year by November 30, 2014, and the Chairman shall submit to the Division of Legislative Automated Systems an executive summary of its findings and recommendations no later than the first day of the next Regular Session of the General Assembly for each year. Each executive summary shall state whether the Commission intends to submit to the General Assembly and the Governor a report of its findings and recommendations for publication as a House or Senate document. The executive summaries and reports shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports and shall be posted on the General Assembly's website.

## Research Activities and Methods

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JLARC staff conducted the following primary research activities for this review:

- quantitative analysis of total federal spending, federal funds received by state and local governments, and federal funds received directly by individuals (Table B-1);
- structured interviews with staff from state and federal agencies and with economists; and
- a review of the academic research literature on the impact of federal spending.

### **MEASURING THE SIZE AND TYPE OF TOTAL FEDERAL SPENDING**

To determine the size of federal spending in Virginia, JLARC staff used detailed data from the U.S. Census Bureau and the website [USASpending.gov](http://USASpending.gov). The Consolidated Federal Funds Report (CFFR) was used to determine federal spending by category and program for all states from 1983 to 2010. Census Bureau staff responsible for the CFFR were interviewed to better understand the data sources used and assumptions made in compiling the data.

The CFFR was discontinued in 2010, so detailed data was not available for 2011 or 2012. To estimate statewide federal spending in Virginia for 2011 and 2012, data was downloaded from [USASpending.gov](http://USASpending.gov). Data from [USASpending.gov](http://USASpending.gov) was complete for procurement and intergovernmental assistance, but direct payments were incomplete, and salary data was not available. Missing amounts for 2012 were obtained where available from federal agency websites. This included military retirement and disability (from the Department of Defense), civilian retirement and disability (from the U.S. Office of Personnel Management), SNAP payments (from the U.S. Department of Agriculture), and excess Earned Income Tax Credits (from the Internal Revenue Service). For other categories with missing data, 2010 amounts were used for 2012. Because the most recent reliable detailed data were available for 2010, these data were used for the analyses of spending by category.

Dollar amounts were adjusted for inflation to enable comparisons over time. The GDP chain price index from the Bureau of Economic Analysis was used to convert amounts to 2012 dollars.

Population data from the U.S. Census Bureau was used as the denominator for calculating per person amounts. The Census Bureau publishes annual population estimates for both states and localities.

**Table B-1: Main and Ancillary Data Sources Used in JLARC Analysis**

<b>Main Data Sources Used in JLARC Analysis</b>		
<b>Data Set/Source</b>	<b>JLARC Staff Analysis</b>	<b>Year(s)</b>
Consolidated Federal Funds Report	Total federal spending (state and local levels) (Chapter 1).	1983-2010
USASpending.gov	Total federal spending at state level. (Chapter 1).	2011-2012
Schedule of Expenditure of Federal Awards	Federal funds received by state and local governments (Chapter 2).	2001-2012
Current Population Survey	Counts of recipients for certain federal programs. Unduplicated counts of recipients of any federal payment (Chapter 3).	2012
Program websites	Counts of recipients for most federal assistance programs, Social Security, & Medicare (Chapter 3).	2012
W-2 and 1099 data from Virginia Department of Taxation	Counts of employees of federal contractors, federal employees and state income tax withholding amounts (Chapter 3). State taxable income for revenue estimates (Chapter 4).	2012
<b>Ancillary Data Sources Used in JLARC Analysis</b>		
<b>Data Set/Source</b>	<b>JLARC Staff Analysis</b>	<b>Year(s)</b>
Bureau of Economic Analysis	Inflation adjustment (Chapters 1 and 2).	1983-2012
Bureau of Economic Analysis regional data	Gross State Product (Chapter 1).	1983-2012
Internal Revenue Service Statistics of Income	Total federal taxes paid (Chapter 1).	2012
U.S. Census Bureau, Weldon Cooper Center	Population, state and locality (Chapters 1 and 2).	1983-2012
U.S. Census Bureau Small Area Income/Poverty Estimates	Poverty rates by locality (Chapters 1 and 2).	2010, 2012
Commonwealth Accounting Reporting System	Total state spending (Chapter 2).	2001-2012
Auditor of Public Accounts Annual Comparative Report on Local Government Revenues and Expenditures	Total local spending (Chapter 2).	2012

Source: JLARC staff analysis.

## MEASURING FEDERAL FUNDS RECEIVED BY VIRGINIA STATE AND LOCAL GOVERNMENTS

JLARC staff analyzed Schedule of Expenditures of Federal Awards (SEFA) data from the Federal Audit Clearinghouse to determine how much federal grant funds the state and Virginia local governments receive. The U.S. Office of Management and Budget requires all entities receiving more than \$500,000 in total federal awards for a given year to complete a single audit with a SEFA. Because entities receiving under \$500,000 in federal funds do not need to complete a single audit, this analysis may slightly undercount total federal intergovernmental grants received by the state government.

Categories from the Catalog of Federal Domestic Assistance (CFDA) were consolidated to group related programs into six functional areas: Health, Education, Income Security, Employment and Training, Transportation and Other (Table B-2).

Programs were assigned to categories primarily based on the category identified in the catalog's functional index using each program's four-digit CFDA code. Programs identified in the catalog as

**Table B-2: Catalog of Federal Domestic Assistance Functional Areas**

CFDA Functional Area	JLARC Revised Functional Area
Education	Education
Employment, Labor, and Training	Employment, Labor, and Training
Health	Health
Food and Nutrition	
Housing	Income Assistance
Income Security and Social Services	
Transportation	Transportation
Agricultural	
Business and Commerce	
Community Development	
Consumer Protection	
Cultural Affairs	
Disaster Prevention and Relief	
Energy	Other
Environmental Quality	
Information and Statistics	
Law, Justice, and Legal Services	
Natural Resources	
Regional Development	
Science and Technology	

Source: JLARC staff analysis of 2013 CFDA.

non-grants were dropped. If a code did not appear in the catalog or if it was assigned in the catalog to more than one category, it was assigned to the category where the first two-digits of the code occurred most frequently (Table B-3). For example, the highway planning and construction grant program (CFDA #20.205) appeared in both “transportation” and “disaster prevention and relief” categories, but the two-digit CFDA code most often classified programs beginning with the digits “20” as transportation. A manual check of the largest 50 programs—90 percent of grant funds classified using two-digit CFDA codes—was conducted and corrections were made where necessary.

**Table B-3: Two-Digit CFDA Code Functional Areas**

Two-Digit CFDA Code	Most Frequent Functional Area
12	
19	
39	
77	Education
84	
85	
91	
17	
30	Employment, Labor, and Training
34	
64	Health
93	
14	
57	Income Assistance
94	
10	
11	
15	
16	
21	
33	
44	
45	Other
47	
59	
66	
81	
89	
90	
95	
97	
20	Transportation

Source: 2013 CFDA and 2012 SEFA

Special entities or local authorities, such as housing authorities, that could be ascribed to a locality based on their names were assigned to a city or county. Virginia towns were assigned to counties according to the Federal Information Processing Standard (FIPS).

The total amount of intergovernmental grants expended was compared to total state spending to calculate federal grant funds as a percentage of total state spending. State spending data was collected from the Virginia Department of Accounts (DOA) and the Virginia Department of Planning and Budget (DPB). DOA staff provided total state expenditure data from 2001 to 2013 as well as detailed state agency expenditure data for 2012. DPB staff provided estimated state matches for the ten largest federal programs.

On-site visits and phone conversations with staff from DOA, DPB, and the Census Bureau provided the opportunity to ask questions about measurement, methodology, and use of the data.

Population data for per capita analyses across states was gathered from the U.S. Census Bureau annual population estimates. Poverty rates were obtained from the U.S. Census Bureau Small Area Income and Poverty Estimates program.

National average spending per person for functional categories and programs was calculated by dividing the category or program total national spending by the total U.S. population in 2012.

## **MEASURING INTERGOVERNMENTAL GRANT ASSISTANCE TO LOCAL GOVERNMENTS IN VIRGINIA**

The same procedure used for determining which programs to keep and for assigning those programs to functional categories at the state level was used for Virginia localities. Local population counts for 2012 came from Census Bureau population estimates compiled by the Weldon Cooper Center.

The Virginia Auditor of Public Accounts (APA) provided data on total spending by locality in its annual Comparative Report on Local Government Revenues and Expenditures.

## **ESTIMATING THE NUMBER OF INDIVIDUALS RECEIVING DIRECT FEDERAL PAYMENTS**

Estimates of the number of individuals receiving federal payments for the programs and categories shown in Chapter 3 came from program websites. The two exceptions are counts of federal employees living in Virginia and recipients of veteran's compensation; these counts came from the 2012 U.S. Census Bureau's Current Population Survey (CPS).

CPS data was used to estimate the number of individuals receiving any direct federal payment, in order to get unduplicated counts of recipients. The analysis was done first for the categories of income assistance and Medicaid, Medicare and Social Security, and federal and military employees. The unduplicated counts for each of these categories was then unduplicated again to get a single statewide estimate of the number of Virginia residents receiving any direct federal payment.

Virginia Department of Taxation staff analyzed individual W-2 and 1099 form data to provide aggregate estimates of the number of federal employees, contractors, and retirees residing in Virginia in 2012. Individuals generally pay taxes in the state where they live, so employees living in Virginia will have W-2 forms with Virginia taxable income. Department of Taxation staff counted unique employee W-2s for federal agencies and the largest federal contractors using agencies' Federal Employer Identification Numbers. Counts of retirees were based on 1099 forms with Virginia taxable income issued by federal agencies. The number of federal employees estimated from Tax data was close to the CPS estimate.

### **MEASURING THE ECONOMIC IMPACTS OF FEDERAL SPENDING**

To determine the impact of federal spending cuts due to sequestration on Virginia jobs and GDP, JLARC staff reviewed three analyses, which are summarized in Chapter 4. One analysis is based on a defense contract model for Virginia developed by Christine Chmura of Chmura Economics and Analytics and Steven Fuller of George Mason University. Drs. Chmura and Fuller were interviewed to understand the model and to obtain information on economic impacts of federal spending. (The model is available online at [www.chmuraecon.com/dodimpact](http://www.chmuraecon.com/dodimpact).) Economists at the Weldon Cooper Center were consulted for additional information about direct and indirect effects of federal spending.

JLARC staff also identified and reviewed 12 empirical studies conducted since 2011 estimating the impacts of federal spending at the state and local level. These studies, summarized in Chapter 4, used national data and were not specific to Virginia.

Estimates of state tax revenue generated by federal spending are based primarily on state taxable income data from the Virginia Department of Taxation. These amounts were multiplied by effective tax rates published in the Department of Taxation's annual report. JLARC staff made a number of assumptions to produce the estimates, and the results are presented as ranges to reflect that uncertainty.

Appendix  
**C**

## Federal Spending by Virginia Locality

**Table C-1: Federal Spending by Virginia Locality**

Locality	Federal Spending (2010 \$ millions)	Federal Spending per Person (2010 \$)	Federal Inter-governmental Assistance (2012 \$ millions)	Federal Inter-governmental Assistance per Person (2012 \$)	Percent of Local Spending Federal	Poverty Rate
Accomack County	\$495.5	\$14,941	\$12.2	\$363	15%	19.9%
Albemarle County	658.3	6,652	17.3	170	6	9.4
Alleghany County	100.4	6,181	6.5	407	13	13.3
Amelia County	80.8	6,365	2.5	199	9	12.5
Amherst County	204.7	6,327	7.7	237	11	14.5
Appomattox County	92.4	6,168	4.3	284	13	16.5
Arlington County	15,854.6	76,361	55.5	252	6	8.0
Augusta County	315.4	4,276	16.3	221	11	9.9
Bath County	46.3	9,789	1.3	272	8	11.5
Bedford County	403.0	5,869	13.4	192	10	9.9
Bland County	104.4	15,305	2.7	392	16	15.4
Botetourt County	252.3	7,611	5.3	160	7	7.6
Brunswick County	168.7	9,674	5.3	304	14	24.8
Buchanan County	266.8	11,071	14.5	603	19	23.0
Buckingham County	108.7	6,338	8.2	473	23	23.0
Campbell County	378.9	6,909	13.6	247	11	14.4
Caroline County	246.1	8,623	6.1	210	9	12.1
Carroll County	190.8	6,351	7.2	242	10	19.6
Charles City County	58.0	7,999	2.3	319	12	13.3
Charlotte County	129.7	10,309	8.1	645	23	18.5
Chesterfield County	1,303.1	4,121	62.5	194	7	7.3
Clarke County	127.4	9,076	2.2	154	7	8.6
Craig County	31.3	6,030	1.4	273	12	13.5
Culpeper County	260.5	5,580	11.5	241	10	10.9
Cumberland County	56.8	5,649	6.6	655	25	17.3
Dickenson County	168.5	10,598	7.5	477	14	21.3
Dinwiddie County	159.6	5,699	7.0	246	10	13.1
Essex County	89.4	8,021	3.3	299	12	15.7
Fairfax County	31,238.1	28,878	243.2	219	6	6.0
Fauquier County	465.1	7,134	8.7	131	4	6.9
Floyd County	102.2	6,687	3.0	196	10	14.1



Locality	Federal Spending (2010 \$ millions)	Federal Spending per Person (2010 \$)	Federal Inter-governmental Assistance (2012 \$ millions)	Federal Inter-governmental Assistance per Person (2012 \$)	Percent of Local Spending Federal	Poverty Rate
Fluvanna County	142.0	5,526	3.8	147	7	8.8
Franklin County	302.4	5,384	12.2	216	10	14.1
Frederick County	264.5	3,377	14.7	183	7	8.8
Giles County	144.0	8,328	8.6	491	21	12.7
Gloucester County	258.2	7,005	7.0	191	8	9.7
Goochland County	113.7	5,237	3.0	144	7	7.4
Grayson County	120.5	7,756	5.9	382	16	19.4
Greene County	85.1	4,623	3.6	189	8	9.5
Greensville County	41.6	3,396	6.0	494	30	25.5
Halifax County	378.9	10,456	16.3	449	18	20.1
Hanover County	897.8	8,990	16.9	167	6	6.5
Henrico County	1,256.7	4,094	71.7	228	8	10.1
Henry County	322.2	5,950	16.0	297	15	17.6
Highland County	23.4	10,067	1.1	498	15	15.0
Isle of Wight County	265.8	7,537	7.6	209	8	9.3
James City County	222.0	3,313	15.5	223	8	8.4
King & Queen County	51.5	7,422	3.5	469	18	13.8
King George County	939.2	39,826	5.0	210	9	7.4
King William County	94.3	5,917	4.1	256	12	8.4
Lancaster County	170.6	14,976	3.6	315	13	13.6
Lee County	505.4	19,753	14.9	581	27	28.4
Loudoun County	4,776.5	15,294	40.7	122	3	4.0
Louisa County	210.4	6,345	9.3	276	11	11.7
Lunenburg County	93.4	7,231	4.2	327	15	27.3
Madison County	86.6	6,508	3.0	223	9	13.0
Mathews County	94.7	10,546	2.0	223	9	10.4
Mecklenburg County	433.3	13,241	7.9	245	11	19.9
Middlesex County	101.1	9,224	2.0	183	9	14.8
Montgomery County	660.2	6,995	20.5	215	13	23.3
Nelson County	147.9	9,845	5.4	358	15	14.1
New Kent County	96.9	5,256	3.3	169	7	6.7
Northampton County	147.1	11,874	7.3	583	18	22.5
Northumberland County	134.6	10,919	2.7	215	9	14.7
Nottoway County	281.5	17,760	7.7	483	22	23.3
Orange County	267.7	7,995	6.9	203	9	10.0
Page County	200.6	8,345	5.7	234	11	15.6
Patrick County	147.0	7,948	n/a	n/a	n/a	n/a
Pittsylvania County	395.7	6,231	17.5	278	14	14.5
Powhatan County	139.7	4,981	3.2	114	5	7.1
Prince Edward County	170.4	7,294	6.3	268	14	23.7

<b>Locality</b>	<b>Federal Spending (2010 \$ millions)</b>	<b>Federal Spending per Person (2010 \$)</b>	<b>Federal Inter-governmental Assistance (2012 \$ millions)</b>	<b>Federal Inter-governmental Assistance per Person (2012 \$)</b>	<b>Percent of Local Spending Federal</b>	<b>Poverty Rate</b>
Prince George County	1,648.2	46,135	11.4	319	13	8.7
Prince William County	4,426.5	11,011	89.2	212	7	6.7
Pulaski County	275.8	7,908	1.0	29	1	16.6
Rappahannock County	66.3	8,986	5.5	744	26	10.6
Richmond County	70.4	7,613	2.0	211	9	20.3
Roanoke County	290.3	3,142	12.5	134	5	7.4
Rockbridge County	114.3	5,124	7.7	349	14	12.5
Rockingham County	343.9	4,506	16.1	208	9	10.8
Russell County	272.1	9,415	11.6	402	14	18.3
Scott County	305.1	13,165	10.4	443	18	21.3
Shenandoah County	284.7	6,780	13.1	306	15	11.4
Smyth County	295.2	9,165	11.1	347	14	19.0
Southampton County	128.4	6,914	4.4	234	9	16.7
Spotsylvania County	566.3	4,627	29.6	238	9	8.5
Stafford County	837.1	6,491	28.4	214	8	5.5
Surry County	52.4	7,420	2.3	326	9	12.9
Sussex County	111.5	9,227	4.7	387	15	23.0
Tazewell County	438.7	9,733	1.2	27	1	21.4
Warren County	211.1	5,618	6.6	174	8	11.0
Washington County	390.9	7,123	28.2	509	23	13.9
Westmoreland County	189.7	10,867	6.0	339	16	17.6
Wise County	508.1	12,259	16.6	406	16	25.6
Wythe County	263.0	8,998	15.3	519	20	16.9
York County	682.6	10,427	21.3	321	11	6.9
Alexandria City	5,465.0	39,045	46.4	315	8	8.6
Bedford City	105.4	16,940	n/a	n/a	n/a	n/a
Bristol City	268.4	15,051	8.4	473	12	21.1
Buena Vista City	61.1	9,192	1.2	171	5	19.0
Charlottesville City	842.8	19,385	24.4	541	12	24.2
Chesapeake City	1,748.9	7,870	90.9	398	12	10.4
Colonial Heights	163.8	9,409	5.3	300	8	10.5
Covington City	120.9	20,283	1.8	282	8	15.9
Danville City	503.8	11,701	26.3	607	17	25.9
Emporia City	92.9	15,674	0.8	136	3	25.6
Fairfax City	1,031.5	45,711	1.5	63	2	6.8
Falls Church City	1,196.5	97,027	2.0	156	3	3.1
Franklin City	118.6	13,820	5.2	593	15	20.8
Fredericksburg City	440.1	18,121	10.1	386	10	15.7
Galax City	109.5	15,555	2.9	404	10	22.8
Hampton City	3,200.3	23,286	56.8	409	11	16.5

<b>Locality</b>	<b>Federal Spending (2010 \$ millions)</b>	<b>Federal Spending per Person (2010 \$)</b>	<b>Federal Inter-governmental Assistance (2012 \$ millions)</b>	<b>Federal Inter-governmental Assistance per Person (2012 \$)</b>	<b>Percent of Local Spending Federal</b>	<b>Poverty Rate</b>
Harrisonburg City	232.7	4,757	15.1	296	12	37.5
Hopewell City	214.2	9,481	12.0	524	14	18.9
Lexington City	121.6	17,265	0.7	93	4	24.0
Lynchburg City	979.1	12,957	34.3	445	14	23.8
Manassas City	1,231.8	32,568	14.6	367	10	10.7
Manassas Park City	36.4	2,548	4.0	272	9	8.6
Martinsville City Are	230.9	16,704	7.0	501	13	27.2
Newport News City	5,698.8	31,534	85.6	467	13	16.4
Norfolk City	6,285.5	25,887	130.6	531	16	22.6
Norton City	70.9	17,906	7.1	1695	40	18.1
Petersburg City	449.9	13,878	25.1	758	20	25.8
Poquoson City	62.0	5,106	2.3	187	6	5.3
Portsmouth City	2,334.9	24,440	57.4	589	17	19.5
Radford City	212.3	12,938	3.4	202	9	34.2
Richmond City	6,277.3	30,739	160.9	770	19	26.2
Roanoke City	1,295.2	13,348	61.0	618	19	20.1
Salem City	381.7	15,390	3.7	146	4	11.9
Staunton City	279.5	11,770	5.7	231	7	16.7
Suffolk City	943.0	11,148	31.3	362	11	11.9
Virginia Beach City	5,534.8	12,637	138.0	308	10	9.1
Waynesboro City	193.9	9,230	6.5	303	9	15.2
Williamsburg City	347.1	24,670	1.2	84	3	23.0
Winchester City	386.6	14,756	16.7	616	17	16.4

Note: Total federal spending is calculated with 2010 data because that was the most recent complete data available.

Source: 2010 CFFR and 2012 SEFA

## Recent Studies of the Impact of Federal Spending on State and Local Economies

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- Chodorow-Reich, Gabriel, Laura Feiveson, Zachary Liscow, and William Woolston. 2012. "Does State Fiscal Relief During Recessions Increase Employment? Evidence from the American Recovery and Reinvestment Act." *American Economic Journal: Economic Policy* 4(3): 118–45.
- Cohen, Lauren, Joshua Coval, and Christopher Malloy. 2011. "Do Powerful Politicians Cause Corporate Downsizing?" *Journal of Political Economy* 119: 1015–60.
- Conley, Timothy, and William Dupor. 2012. "The American Recovery and Reinvestment Act: Solely a Government Jobs Program?" Ohio State University.
- Feyrer, James, and Bruce Sacerdote. 2012. "Did the Stimulus Stimulate? Real Time Estimates of the Effects of the American Recovery and Reinvestment Act." NBER Working Paper 16759.
- Fishback, Price, and Valentina Katchanovskaya. 2011. "In Search of the Multiplier for Federal Spending in the States During the New Deal." NBER Working Paper 16561.
- Leduc, Sylvain, and Daniel Wilson. 2014. "Are State Governments Roadblocks to Federal Stimulus? Evidence from Highway Grants in the 2009 Recovery Act." Federal Reserve Bank of San Francisco, Working Paper 2013–16.
- Mendel, Brock. 2013. "The Local Multiplier: Theory and Evidence." Harvard University Department of Economics.
- Mian, Atif, and Amir Sufi. 2012. "The Effects of Fiscal Stimulus: Evidence from the 2009 Cash for Clunkers Program," *Quarterly Journal of Economics* 127(3): 1107–42.
- Nakamura, Emi, and Jón Steinsson. 2014. "Fiscal Stimulus in a Monetary Union: Evidence from US Regions." *American Economic Review* 104(3): 753–92.
- Reingewertz, Yaniv. 2011. "Identifying the Effect of Government Spending: Evidence from Political Variation in Federal Grants." George Washington University.
- Serrato, Juan Carlos Suarez, and Philippe Wingender. 2014. "Estimating Local Fiscal Multipliers." Stanford Institute for Economic Policy Research.
- Wilson, Daniel J. 2012. "Fiscal Spending Jobs Multipliers: Evidence from the 2009 American Recovery and Reinvestment Act." *American Economic Journal: Economic Policy* 4(3): 251–82.

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