What Everyone Should Know about Their State’s Budget

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Introduction

Our “What everyone should know about their state’s budget” web tool explores why states vary in their revenues and public spending. It does so by applying a common framework to all major functional categories in state and local government budgets. The framework breaks spending per capita into different drivers that include policy choices about who is eligible for services and how much recipients get, as well as background conditions, such as the demographics and cost of living in a state.

This framework demonstrates that, although some spending drivers are within policymakers’ control, others are not. For example, a state may spend more than average on K–12 education based on the number of school-age children in the population, a factor arguably beyond the control of any policymaker. Another state may spend less because a large share of its school-age children are enrolled in private school. These factors are largely uncontrollable but can make per capita spending look very different across states, even when spending per recipient—the amount a state spends for each child enrolled in public school, for example—may not vary much.

Yet policymakers are not fully beholden to demographics. They can control how many teachers will be hired and what teachers, administrators, counselors, and other education employees will be paid, although, in some cases, these decisions will depend on labor market conditions or what all employers (public and private) must pay to attract workers of a given education level in that state. In other cases, however, payroll costs will reflect policy determinations about the right amount of salary and wages.

The goal of this exercise is not to say whether a state is making good or bad budget and policy choices. Rather, it is to provide citizens and their elected representatives with information beyond the usual per capita comparisons so that they may engage in an active and informed conversation about what individuals want from state and local governments and how much they are willing to pay for it.

Approach

The United States is a large and diverse country, and the nation’s 50 states reflect this breadth and diversity. Nevertheless, each state’s taxes and spending can be broken down into the same basic factors. Tax collections are a base multiplied by a rate, and spending is how many people are receiving a good or service (caseloads) multiplied by the cost of serving each person.
Caseloads, in turn, reflect demographics, or how many people are potentially eligible for a public service; eligibility rules; and a participation rate, or how many choose to take up benefits or receive the service based on an individual choice or administrative determination. Similarly, spending per person served depends on costs (especially for labor) and service levels (or how many teachers, fire fighters, and administrators per person), as well as the interplay between those two factors.

More specifically, the basic framework is as follows:

\[
\frac{\text{spending}}{\text{capita}} = \frac{\text{recipients}}{\text{capita}} \times \frac{\text{spending}}{\text{recipient}}
\]

\[
\frac{\text{recipients}}{\text{capita}} = \frac{\text{eligible}}{\text{capita}} \times \frac{\text{recipients}}{\text{eligible}} (\text{take-up rate})
\]

\[
\frac{\text{eligible}}{\text{capita}} = \frac{\text{potentially eligible}}{\text{capita}} (\text{demographics}) \times \frac{\text{eligible}}{\text{potentially eligible}} (\text{eligibility rate})
\]

\[
\frac{\text{spending}}{\text{recipient}} = \frac{\text{unit}}{\text{recipient}} \times \frac{\text{spending}}{\text{unit}}
\]

\[
\frac{\text{spending}}{\text{unit}} = \frac{\text{payroll}}{\text{unit}} + \frac{\text{nonpayroll}}{\text{unit}}
\]

We define these terms as follows:

- **Spending** is total state and local spending (including federal funds) on the functional category in question.

- **Recipients** are individuals or families who receive the government program or service, such as public school pupils, public college and university students, and Medicaid beneficiaries.

- **Eligible** is the group that the government decides is able to receive the service or benefit; in some cases, such as public safety, the entire population is eligible because state and local governments do not exclude anyone from services.

- **Potentially eligible (demographics)** is the universe of people who could receive the service or benefit based on their demographic profile before the state sets eligibility rules.

- **Units** are the level of service or public good that the state or local government is providing, such as public school teachers or miles of roadway or public transit.
- **Payroll** is salaries and wages annualized to a full year based on the number of months in which workers in the category are typically employed (10 months for K–12 education, higher education, and natural resources; 12 months for all other categories).

- **Nonpayroll** is total spending minus payroll spending.

We also provide data on outcomes by functional category where available.

### Total Spending and Payroll

For state and local government spending, we rely primarily on the US Census Bureau’s Census of Governments Annual Survey of State and Local Government Finances for fiscal year 2012, as revised and released on October 23, 2015.¹ For state and local government employment and payroll, we draw from the US Census Bureau’s Census of Governments Government Employment and Payroll survey for full-time equivalent employees in March 2012.²

We use the Census of Governments data because it is the most comprehensive, reliable, and timely data available for all 50 states and the District of Columbia. It applies uniform concepts and definitions to budgets and financial statements prepared by the more than 90,000 state and local governments in the United States to arrive at a consistent data source going back to the early 1950s. We rely on fiscal 2012 data because they are based on all states and localities rather than a sample of local governments as the data were in 2011, 2013, and 2014.

The Census of Governments data are organized by functional category rather than by program. Our analysis covers current expenditures (E), construction (F), and other capital outlays (G) in the following categories:³

- K–12 education
- Higher education
- Highways
- Public transit
- Police
- Corrections
- Fire
- Housing and community development (referred to as “housing” in our tool)
- Parks
- Natural resources
- Utilities (electricity, water, and gas)
- Government administration (referred to as "administration" in our tool)

However, we supplement Census of Governments data in the health and social services functional categories with administrative information on the following major programs:

- Medicaid and Children’s Health Insurance Program (CHIP)
- Temporary Assistance for Needy Families (TANF)
- Child Care and Development Fund (CCDF)

All total population data are taken from the US Census Bureau’s midyear population estimates.⁴
Spending Categories

The following sections break down the decompositions and data sources for individual functional categories.

Elementary and Secondary Education (K–12)

For total spending, we focus on the Census of Governments functional category Elementary and Secondary Education (12). We also provide information on Other Education (21) and Libraries (52) in the Data Depot.

Our potentially eligible population includes all young people who could attend public school. For this calculation, we use census data on the population of each state between ages 5 and 18.5

There is no distinction between the eligible and potentially eligible population in our analysis because states do not restrict public school attendance. (There is also little variation in compulsory education laws or the ages at which states require children to be enrolled in school.)

Our measure of recipients reflects two take-up or participation decisions: children under age 19 who are enrolled in any school and pupils enrolled in public as opposed to private school.6 Note that the Census Bureau classifies homeschooled students as attending private schools.

Units of service are total employees in public elementary and secondary education. We do not break out instructional versus non-instructional employees, but these data are available in our Data Depot.

We also provide information on public school outcomes, specifically mathematics and reading scores on the National Assessment of Educational Progress for 4th and 8th graders in 2011 and 2013.7

Higher Education

Our total spending measure includes the Census Bureau functional categories Higher Education Auxiliary Enterprises (16), Higher Education – Other (18) and Student Assistance (J19).
To reflect state support for higher education, we subtract student tuition and fees captured in the Census of Governments functional category Higher Education – Other Charges (A18).

The potentially eligible population is all 18- to 24-year-olds in a state plus net migration between states. The eligible population is the same as the potentially eligible population for our purposes, although colleges and universities certainly impose their own selection criteria.

As in K–12 education, we consider two take-up decisions: whether to attend any institution of higher education and whether to attend a public versus a private college or university. We also provide data on two- versus four-year enrollments in our Data Depot.

Our units of service are total employees in public higher education. Data on instructional versus noninstructional employees are also available in our Data Depot, as are data on outcomes or degrees conferred by postsecondary institutions.

Highways

Our analysis relies on the Regular Highways (44) and Toll Highways (45) Census Bureau functional categories. As in higher education, we subtract charges (A44 and A45) from both categories.

The potentially eligible population in this category is the population over driving age in a given state.

The eligible population is the number of people over legal driving age with driver’s licenses from that state. It is worth noting however, that this does not account for individuals who live in one state with a license from another.

Recipients are vehicle miles traveled, a measure of how many miles individuals have driven in total over the highways in the state. The number of miles each driver chooses to drive is the take-up rate. Units of service provided are vehicle lane miles. We also have data on highway employees in our Data Depot.

Our outcome is traffic congestion in major metropolitan areas as calculated by the Texas A&M Transportation Institute.
Public Transit

Our analysis focuses on the Census of Governments functional category Transit Utilities (97) net of user charges (A95). The potentially eligible and eligible populations are unlinked passenger trips, or the number of individual trips on transit.\textsuperscript{16} Recipients are total passenger miles.\textsuperscript{17} Units of service are transit way miles, or the miles of public transportation route in a state (either bus or train).\textsuperscript{18} We also have data on transit employees in our Data Depot.

Police

Analysis in this section includes the Census of Governments functional category Police Protection (62). The potentially eligible population is the same as the eligible population, which is the total population of a state.

Recipients of police services are proxied by the crime rate.\textsuperscript{19} We consider eight felony “index offenses” (murder, rape robbery, aggravated assault, burglary, larceny/theft, motor vehicle theft, and arson).\textsuperscript{20} Units of service are the number of police employees. We also provide information on sworn officers (with powers of arrest) versus nonsworn employees for comparison in our Data Depot.

Corrections

We include the Census of Governments functional categories Correctional Institutions (04) and Other Corrections (05) in our analysis. These codes capture spending on state prisons, local jails, youth correctional facilities, and probation and parole programs. As with police, the potentially eligible and eligible populations include all persons residing in a state.

Recipients are all people under correctional control, including prison and jail inmates, parolees, and people on probation in a state.\textsuperscript{21} Units of service are the number of employees of the correctional system. Outcomes are measures of crowding in state correctional facilities. To obtain these measures, we considered the custody population, or the population physically in a prison or jail, in each state as a percentage of its operational capacity measure, or the number of inmates deemed appropriate based on staffing and services.\textsuperscript{22}
**Fire**

Our analysis focuses on the Census of Governments functional category Local Fire Protection (24). This category excludes state forest-fire protection and suppression because these activities fall under the Census Bureau's natural resources functional category. As with police and corrections, the potentially eligible and eligible populations are the entire population of the state because no one is excluded from receiving this service. Employees are the relevant unit of service. We also provide information on firefighters versus nonfirefighters for comparison in our Data Depot.

**Medicaid and CHIP**

Our Medicaid spending data are from the Medicaid and CHIP Payment and Access Commission based on data submitted to the Centers for Medicare & Medicaid Services through Form CMS-64. Although data by enrollment group are available in our Data Depot, we focus on total spending for the analysis. Our spending data are from fiscal year 2011; no 2012 data were available because of a data problem cited on the Centers for Medicare & Medicaid Services’s website. These expenditure figures account for all Medicaid expenditures for both institutionalized and noninstitutionalized populations.

The potentially eligible population is the noninstitutionalized population under 200 percent of the federal poverty level (FPL). Potentially eligible population and eligible population estimates come from the Transfer Income Model, version 3 (TRIM3), a microsimulation model designed to simulate major tax, transfer, and health programs. We use a two-year average (2010–11) to reduce margins of error while maintaining a link to our fiscal year, 2011. These numbers are only estimates, however, and they have a margin of error, especially in small states. This is because the distribution of characteristics that determine eligibility may not be the same in the sampled population as in the state. This may affect state rankings.

Our recipient data are based on administrative data for calendar year 2010. However, the administrative data were adjusted under the TRIM3 project to exclude people in institutions and to exclude people who are not eligible for full-scope coverage, for consistency with the TRIM3 eligibility estimates. Both the eligibility and recipient figures refer to the “average month” of the year.
Temporary Assistance for Needy Families

Expenditure data come from the US Department of Health and Human Services (HHS) and include total assistance and nonassistance expenditures, based on federal TANF spending and state maintenance-of-effort expenditures. The data exclude transfers from TANF to CCDF and state CCDF maintenance-of-effort spending (because these are captured in our CCDF data). They also exclude solely state-funded benefits. The exclusion of solely state-funded benefits means that some states may have more generous state-funding spending programs than reflected in our data.28

Our potentially eligible population is noninstitutionalized persons in a family with one or more related children under age 18 with family incomes less than 200 percent of FPL.29 Eligible population estimates again come from TRIM3. The eligibility counts include families who are eligible for regular monthly cash aid from either federal TANF funds or a state-funded program; the eligibility figures do not include families eligible for only a small “worker supplement” benefit. We use an average of data for calendar year 2011 and calendar year 2012 to approximate fiscal year 2012 and to minimize margin of error in these estimates. However, it is important to note that eligibility numbers are only estimates, and they have a margin of error. This may affect state rankings.

The recipient figures are based on administrative data and do not include families whose benefits are paid for by a solely state-funded program, because those statistics are not collected at the federal level; thus, to the extent that states have a solely state-funded program, participation rates will be understated. Both the eligibility and recipiency data reflect the “average month” of the year.

Child Care and Development Fund

Expenditure data are from HHS and include TANF transfers. Our expenditure data are the sum of the state numbers provided for mandatory, matching, discretionary and maintenance-of-effort spending.30

Our potentially eligible population is noninstitutionalized persons in a family with one or more related children under age 18 with family income less than 200 percent of FPL.31 The data are based on the two-year average from 2011 and 2012 and exclude the institutionalized population.

We constructed the eligible population category based on TRIM3 estimates of state-level eligibility. The eligibility estimates reflect whether families appear to satisfy the technical criteria for eligibility (based on age of children, parent employment or student status, and income); some families identified as eligible may not want to use nonparental child care. We use average eligibility data for calendar year
2011 and calendar year 2012 to approximate fiscal year 2012 and to minimize margin of error in these estimates. These numbers are only estimates, however, and they have a margin of error. This may affect state rankings.

Recipient data are from the program's administrative data. Units in this area are the total number of child care providers receiving CCDF funds according to HHS data.\(^3\) These numbers are only estimates, however, and they have a margin of error. This may affect state rankings.

**Housing and Community Development**

Expenditure data are from the US Census of Governments Housing and Community Development (50) function and encompass all spending on public housing, rental assistance, and homeownership promotion as well as urban renewal, rural redevelopment, and commercial area revitalization. The potentially eligible population includes households below 30 percent and between 30 and 50 percent of area median income, corresponding to “extremely low” and “very low” income eligibility criteria for federal housing assistance.\(^3\) There is no eligible category given the lack of information on state-specific eligibility rules.

Recipient data are from the program's administrative data. Units in this area are the total number of child care providers receiving CCDF funds according to HHS data.\(^3\) As with the Medicaid and TANF data, the CCDF eligibility and recipient data are average monthly counts.

Recipients are individuals receiving state or federal public housing assistance either through rental assistance or public housing.\(^3\) Although we would like to obtain data on state program recipients only, these data are not available. But given that federal intergovernmental revenues constitute 75 percent of total state and local spending in this area, federal eligibility criteria provide a reasonable approximation of who is receiving state programs. Units of service are employees per capita.

**Parks**

Expenditures in this area come from the Census of Governments functional category Parks and Recreation (61). As in the public safety categories, we consider the entire state population to be potentially eligible and eligible for services as well as recipients of services. Units of service are employees per capita.
Natural Resources

Expenditures data come from the Census of Governments functional category Other Natural Resources (59). In previous years, four codes spanned the natural resource function: Agriculture (54), Fish and Game (55), Forestry (56), and Other Natural Resources (59). By 2012, however, the US Census Bureau condensed them down to just one. As for the public safety categories, we consider the entire state population to be potentially eligible and eligible for services. Population is also the relevant measure of recipients.

Utilities

We present expenditure data separately for the Census of Governments functional categories Sewerage (80), Solid Waste Management (81), Water Supply (91), Electric Supply (92) and Gas Supply (93). In each category, spending includes outlays for the purchase or construction of utility facilities, interest on utility debt, and production or acquisition and distribution of goods and services to the general public or other governments.

As for higher education and highways, we subtract charges (A) from each category. All three of the categories in the recipient decomposition, as in natural resources, are the population of the state, and employees per capita are the units of service.

Note that states with zero or very low spending, charges, and employees for utilities may lack major public utilities, perhaps relying on private companies instead. Anomalies in the way states report data to the Census Bureau could also affect counts.

When decomposing spending into payroll and nonpayroll, we subtract fees or charges from nonpayroll spending even though many states may use revenue to pay for employee costs. We do this to show payroll spending by state.

Administration

Expenditure data come from the Census of Governments functional categories Other (03, 30, 89) and General Government (23, 25, 26, 29, 31). As for utilities, we consider potentially eligible and eligible
populations as well as recipients to be the whole state population and employees per capita to be units of service.

For outcomes of administration, we consider Gallup 2013 Trust in Government figures. 35
Notes


3. The US Census Bureau’s Census of Governments classifies expenditures by government organization function (for example, Elementary and Secondary Education) and attaches a code to that category (for Elementary and Secondary Education the code is 12). Before the “12,” the Census of Governments places any one of a number of letters, representing the type of expenditure being discussed (E12 represents current operations expenditures on Elementary and Secondary Education; F12 is Construction). For more information, see US Bureau of the Census, Government Finance and Employment Classification Manual (Washington, DC: US Bureau of the Census, 2006), http://www2.census.gov/govs/pubs/classification/2006_classification_manual.pdf.


25. Enrollment groups are the aged (age 65 and older), disabled (people under 65 reported as eligible because of a disability), adults (ages 19 to 64), and children (age 18 and younger, with a few 19-year-olds based on state programs). Disabled children are in the disabled group, and disabled elderly are in the elderly group. Florida, Kansas, Maine, Maryland, Montana, New Mexico, New Jersey, Oklahoma, Texas, and Utah provide only 2010 data adjusted to 2011 spending levels.

26. The institutionalized population is defined by the US Census Bureau as, “People who are primarily ineligible, unable, or unlikely to participate in the labor force while residents of institutional group quarters. The institutionalized population is persons residing in institutional group quarters such as adult correctional facilities, juvenile facilities, skilled-nursing facilities, and other institutional facilities such as mental (psychiatric) hospitals and in-patient hospice facilities.” See “Institutionalized Population,” American FactFinder, accessed January 10, 2017, http://factfinder.census.gov/help/en/institutionalized_population.htm.


29. Related children in a family include own children and all other children under 18 years old in the household who are related to the householder by birth, marriage, or adoption. The count reflects a summation of persons in all family types, including primary and subfamilies. This is a broader definition of “family” than is generally used for eligibility purposes. However, it reflects all persons in a household who could benefit from additional resources. “CPS Table Creator,” US Bureau of the Census, Current Population Survey Annual Social and Economic Supplement, 2011–12 (Two-Year Average), accessed June 24, 2016, http://www.census.gov/cps/data/cpstablecreator.html.


31. Although childcare subsidies generally only go to children under 13 years of age, older children with special needs may also use child care. Related children in a family include own children and all other children under 18 years old in the household who are related to the householder by birth, marriage, or adoption. The count reflects a summation of persons in all family types, including primary and subfamilies. This is a broader definition of “family” than is generally used for eligibility purposes. However, it reflects all persons in a household who could benefit from additional resources. “CPS Table Creator,” US Bureau of the Census, Current Population Survey Annual Social and Economic Supplement, 2011–12 (Two-Year Average), accessed June 24, 2016, http://www.census.gov/cps/data/cpstablecreator.html.

32. We use this broad definition of potential eligibility even though the program has a statutory limit of 85 percent of state median income and parents or guardians generally have to be working, in school, or looking for work. “FY 2012 Final Data Table 7 – Number of Child Care Providers Receiving CCDF Funds,” US Department of Health and Human Services Department, Office of the Administration for Children and Families, Office of Family Assistance, published October 8, 2014, accessed January 10, 2017, http://www.acf.hhs.gov/programs/occ/resource/fy-2012-ccdf-data-table-7.

33. Data from the Urban Institute’s Housing Finance Policy Center. The data are counts of renter households in each county for the three single-year ACS files (2011-2013). These data include each household's percent of area median income (AMI), a measure used by HUD to account for income relative to the median income in an area. We count the number of households who make less than 50 percent of AMI, divided into “very low”, or 31 percent to 50 percent, and “extremely low”, who make between 0 and 30 percent of AMI. For the full data used by the Housing Finance Policy Center, see http://www2.census.gov/acs2013_3yr/pums/.

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