GOVERNMENT FINANCE IN ARIZONA, WITH A FOCUS ON EDUCATION

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SUMMARY

Government tax and nontax revenue provides support for services that are the responsibility of the public sector. While debate over the appropriate size of the public sector will rage ad infinitum, many agree that there is a role for public funding of some programs, such as public education. The Arizona Constitution states that "… the legislature shall make such appropriations, to be met by taxation, as shall insure the proper maintenance of all state educational institutions, and shall make such special appropriations as shall provide for their development and improvement." The concept of public support for education dates back to Adam Smith's *Wealth of Nations* (1776) in which concerns are expressed about the quality of education and additional direct parent-funded merit pay is suggested.

This report examines the fiscal structure of the state of Arizona with particular interest in whether the tax structure is sufficient to provide revenue to support the quality of education that Arizonans desire. The analysis encompasses a review of fiscal policy in Arizona historically and a comparison of tax collection intensity in Arizona with other states, particularly nine moderate-to-conservative states with a growing population.

The historical analysis reveals that legislative action has significantly eroded the tax base of the state, leaving policymakers with limited revenue to address growing funding needs of education and other programs. At the same time, in sharp contrast to the contentions of the tax-cut proponents, there is no evidence that the tax base/rate reductions have accelerated the state's economic growth. The tax cuts did reduce government revenue, limiting the growth of Arizona's public sector while favoring primarily high-income taxpayers, arguably at the expense of lower-income households who could have benefited from public programs, including higher-quality education opportunities.

The cross-state comparison reveals that the state's legacy of tax cuts has resulted in a very low revenue base when compared with even some of the most conservative states like Florida, Texas, and Utah. Per capita state and local government tax revenue adjusted for the cost of living was 25 percent less than the U.S. average in Arizona in fiscal year 2022, third lowest in the nation. Only the comparison states of Florida and Tennessee had a lower tax burden. In contrast, the comparison states of Nevada and Utah had a tax burden more than 20 percent above Arizona.

The disparity in tax collections between Arizona and many other states is large. To match per capita tax collections adjusted for the cost of living nationally, Arizona's state and local government tax collections in fiscal year 2022 needed to be $13.2 billion higher. Actual tax collections were $38.3 billion. To match the adjusted per capita figure in the comparison states other than Florida and Tennessee required additional tax collections in Arizona ranging from approximately $600 million versus South Carolina to $9.5 billion versus Utah.

Arizona's nontax state and local government revenue also is very low relative to the nation — 38 percent lower on an adjusted per capita basis, third lowest in the nation in fiscal year 2022. Thus, total state and local government revenue expressed on a per capita basis adjusted for the cost of living was far below average — 29 percent less than the U.S. average in FY 2022, **the lowest** in the nation. To match the adjusted per capita figure nationally, Arizona's revenue needed to be $20.8 billion higher. Actual total state and local government revenue was $50.6 billion. The

revenue shortfall in Arizona relative to the comparison states ranged from $2.8 billion versus Tennessee to $25.9 billion versus Utah. The shortfall was $3.4 billion versus Florida and $8.6 billion versus Texas.

The concerted tax-cutting agenda in Arizona, especially since the early 1990s, has led to low appropriations for K-12 and higher education even when compared to some of the most conservative states in the union.

K-12 education revenue from state and local government sources expressed per pupil adjusted for the cost of living was 33 percent less than the U.S. average in Arizona in fiscal year 2022, ranking 48th among the states. Only the comparison states of Florida, Idaho, and Utah were lower. To match the adjusted per student figure nationally, revenue in Arizona needed to be $4.9 billion higher. Actual revenue in Arizona was $9.7 billion. The shortfall relative to comparison states was as high as $4.1 billion versus South Carolina.

Higher education — combined state and local government appropriations for public universities and community colleges — in Arizona in fiscal year 2023 also was far below the norm expressed per full-time-equivalent student adjusted for the cost of living. It would have taken additional educational appropriations of $1.3 billion to match the national average. The actual figure was $2.1 billion. Each of the nine comparison states had a higher adjusted per student amount than Arizona. The shortfall relative to comparison states ranged from $300 million versus South Carolina to $2.3 billion versus Tennessee. The shortfall was approximately $800 million versus both Florida and Texas.

Based on the educational research literature, school funding is indeed necessary to achieve positive student outcomes, but increasing funding alone may not be sufficient to guarantee those outcomes. The effectiveness of any funding increase hinges on how those resources are used. Teacher quality, in part dependent on teacher salaries, is one important consideration.

Education is not the only public program in need of additional funding. Chapter 8 of this report provides numerous other examples. Considerable impediments designed to prevent any increases in taxes in the state of Arizona are in place. The makeup of the Arizona Legislature remains conservative; Proposition 208, passed by Arizona voters in 2008, requires a two-thirds majority in each chamber of the Arizona Legislature to raise taxes; and Proposition 132, passed by Arizona voters in 2022, amended the Arizona Constitution to require any initiative measure, referendum measure, or constitutional amendment that raises taxes to be passed by at least 60 percent of the voters.

Despite these impediments, numerous options are available to voters to increase government revenue in Arizona, with many noted in the January 2018 Office of the University Economist report *Options for Raising State Government Revenue in Arizona*.[1] Three primary avenues are discussed in Chapter 10 of the following report: a clawback of a small portion of the recent individual income tax cut; an augmentation of Proposition 301, passed by voters in 2000, that increased the state's sales tax rate, with the revenue dedicated to public education; and increases in the tobacco products and alcoholic beverages taxes.

[1] https://ccpr.wpcarey.asu.edu/sites/default/files/revoptions01-18.pdf

CHAPTER 1: INTRODUCTION

The geographic focus of this paper is Arizona. In addition to comparing Arizona to itself over time, Arizona is compared to the national average, to all states, and to a subset of 10 states that includes Florida, Georgia, Idaho, Nevada, North Carolina, South Carolina, Tennessee, Texas, and Utah. Each of the nine comparison states receives net in-migration and politically is either a "red" state or a "purple" state. Conservative states generally collect lesser amounts of state and local government revenue than less-conservative states. Since state and local governments must balance their budgets annually, less revenue means less money to spend.

Description of Data

The primary dataset used to compare government revenues and expenditures by state is produced by the U.S. Department of Commerce's Census Bureau. Its *Annual Survey of State and Local Government Finances* (https://www.census.gov/programs-surveys/gov-finances.html) reports revenue, expenditure, and related data by fiscal year (FY); the latest data for FY 2022 (July 1, 2021 to June 30, 2022) were released at the end of October 2024. By state, finance data are shown separately for the state government, for the total of all local governments (counties, municipalities, school districts, and special districts) in the state, and for the sum of the state government and local governments. The combined state and local government data must be used to compare states, since the responsibility to raise revenue and to provide services for a particular program may be assigned to state government in one state and to local governments in another state.

As part of the *Annual Survey of State and Local Government Finances*, the Census Bureau collects state government finance data each year for each state, though data were not collected in fiscal years 2001 and 2003. A complete census of local governments is conducted in years ending in 2 and 7. In other years, a survey of local governments is undertaken by state; thus, sampling error exists in these years. The finance data go back to the early 1960s for broad categories of revenues and expenditures. For most categories, the data series begins with FY 1977, but for some categories data are not available prior to FY 1993.

The Census Bureau differentiates between "general" revenue and "general" expenditure and those of government utilities, liquor stores, and insurance trusts. The analysis in this paper is limited to general revenue and general expenditure.

By state, the revenue data include monies received from the federal government as well as from "own-source" revenue raised by state and local governments. The latter is the focus in this report. Own-source revenue is divided into numerous categories of taxes, current charges (user fees), and other sources (such as interest earnings and sale of property).

The Census Bureau's expenditure data are not tabulated by source of funding, so it is not possible to determine the amount of funding originating at the state and local government level for the various public functions — the expenditure data include revenue received from the federal government. Expenditures are divided into numerous categories. For most categories, the Census Bureau combines capital outlays and spending for current operations. Capital outlays are expenditures for the construction of buildings, roads, and other improvements, as well as expenditures for the purchase or lease of equipment, land, and existing structures. Current

operations expenditures generally represent ongoing spending, including salaries, employee benefits, and purchased services and supplies. For those categories for which current operations expenditures are reported separately from capital outlays, current operations spending is the preferred unit of analysis.

The main source of Arizona-specific state government finance data is the Arizona Joint Legislative Budget Committee (JLBC, https://www.azjlbc.gov/). The accounting system used by the JLBC is different from that used in other states and by the Census Bureau, such that the JLBC data cannot be compared to other states. The JLBC separately reports appropriations for the general fund, appropriations for other state government funds, and unappropriated funding coming from the federal government and other sources than state government. Total authorized spending is the sum of general fund appropriations, other fund appropriations, and unappropriated funding.

Using the JLBC's data, Arizona state government's general fund is the main focus in this report for several reasons:

- It is by far the largest of the many state government funds, accounting for more than three-fourths of state government's total appropriations in FY 2025.
- The Arizona Legislature has the greatest discretion over the general fund. The purposes of most of the other funds are specific in nature, with narrowly defined revenue sources.
- Nearly all of the tax reductions passed since the early 1990s have reduced general fund revenue.
- Budget shortfalls have been specific to the general fund, with monies transferred from other funds in order to help balance the general fund.

General fund revenue data from the JLBC extend from FY 1971 to FY 2024. General fund expenditure data run from FY 1979 to FY 2025, with the FY 2025 data representing appropriations.

Education Data

Since public education is the largest single responsibility of state and local governments across the nation, reports that provide more detail on public education finance than in the *Annual Survey of State and Local Government Finances* are available.

The Census Bureau's *Annual Survey of School System Finances* (https://www.census.gov/programs-surveys/school-finances.html) provides more detailed finance data for public elementary and secondary (K-12) education. These data are also presented on a fiscal year basis by state. The expenditure totals are nearly identical to those in the *Annual Survey of State and Local Government Finances*. Considerable detail is available by source of revenue and by type of spending. For some categories, these data go back to the late 1970s. School enrollment figures also are provided.

As in the *Annual Survey of State and Local Government Finances*, the revenue data in the *Annual Survey of School System Finances* includes federal funding. Instead of total revenue, combined state and local government revenue for K-12 education is the focus in this report. In

the *Annual Survey of School System Finances*, capital outlays are fully separated from noncapital expenditures, which primarily consist of current operations.

Similar, though less detailed, K-12 education finance data are available from the U.S. Department of Education's National Center for Education Statistics (NCES) in its *Digest of Education Statistics* (https://nces.ed.gov/programs/digest/). Summary data from this source extend back to FY 1912.

The State Higher Education Executive Officers Association (SHEEO) provides annual data on higher education revenue by state in its *State Higher Education Finance* report (https://shef.sheeo.org/). (Since data for the District of Columbia are not available prior to FY 2011, the national totals for all years exclude the district.) The data series runs from FY 1980 to FY 2023 and includes a full-time-equivalent (FTE) enrollment figure by state. All public institutions of higher education (that is, community colleges through universities) are included. The main focus in this paper is "educational appropriations" made by state and local governments. "Total educational revenue" consists of "educational appropriations" and "net tuition."

In the JLBC's reporting of general fund appropriations, several budget units (state agencies) are related to education. The primary units are the Department of Education (K-12 education), community colleges, and universities, with the latter including the Arizona Board of Regents.

The JLBC provides a separate accounting of K-12 education funding in Arizona, which is quite complex. The general fund is the largest of several sources of funding.

Standardizing Data to Compare States

With states varying so widely by size, the finance data must be standardized in order to make state-to-state comparisons.

Population or Caseload

One common adjustment is to divide the revenue and expenditure figures by population, producing per capita data. Population estimates as of July 1 are produced annually by the U.S. Department of Commerce's Census Bureau. To estimate a fiscal year figure, the average of the July 1 estimates for two years is calculated.

For some programs, a caseload figure specific to a particular program, such as the number of people enrolled in AHCCCS (the Arizona Health Care Cost Containment System, the state's version of Medicaid) is superior to population as an adjustor. K-12 enrollment and higher education FTE enrollment are used to adjust education revenue and expenditure data in this report.

Population or caseload is the preferred adjustor for expenditure data.

Personal Income

Another common adjustment to the revenue and expenditure data is to use personal income, which is produced by the U.S. Department of Commerce's Bureau of Economic Analysis (BEA,

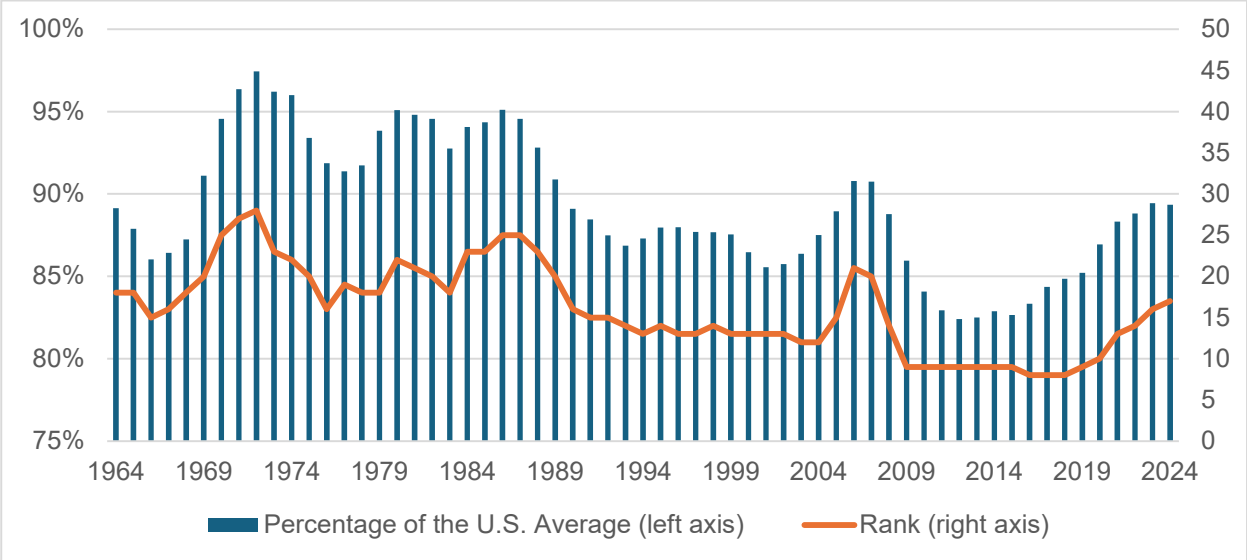
https://www.bea.gov/). Personal income is the income received by all persons from all sources. The BEA provides quarterly estimates of personal income, allowing fiscal year figures to be calculated. In this paper, the finance data are expressed as a percentage of personal income; another common way to express the finance data is per $1,000 of personal income.

The personal income measure inherently incorporates inflation, population, and the cost of living. In addition, it is a measure of prosperity. As such, it incorporates the ability of taxpayers to pay taxes that is not present in the per capita measure and generally is the preferred adjustor for revenue data. However, since states must balance their budget annually and since population or caseload is the preferred method to adjust expenditure data, per capita/per student revenue is widely used in this paper.

Per capita personal income (PCPI) varies widely by state and local area, even after differences in the cost of living are considered. Chart 1-1 provides a calendar year time series of Arizona's PCPI relative to the national average, not adjusted for the cost of living. Arizona's PCPI relative to the national average peaked in the early 1970s at only a little below average (likely about average after adjusting for the cost of living). It remained relatively high through the mid-1980s, but has been substantially lower since then.

In addition to this long-term downtrend, cyclicality in Arizona's PCPI relative to the U.S. average also is obvious in Chart 1-1. Arizona's PCPI relative to the nation generally declines during economic downturns and rebounds during economic expansions. The timing of economic cycles in Arizona generally is similar to the national average. However, the relative depth of

CHART 1-1
PER CAPITA PERSONAL INCOME, ARIZONA



Note: A rank of 1 represents the lowest percentage among the 50 states and the District of Columbia.

Source: Calculated from data of the U.S. Department of Commerce, Bureau of Economic Analysis.

economic downturns in Arizona have varied widely by cycle, from a much deeper recession in 2008-10 to hardly any slowdown in Arizona in 1970.

The National Bureau of Economic Research (https://www.nber.org/research/business-cycle-dating) dates national economic recessions. Downturns since the 1960s and the effect on Arizona's relative PCPI follow:

- January 1970 through November 1970: Since there was no economic downturn in Arizona, relative PCPI improved.
- November 1973 through March 1975: Arizona's relative PCPI decreased.
- February 1980 through July 1980 and August 1981 through November 1982: These recessions form one recessionary period, during which Arizona's relative PCPI declined only slightly.
- August 1990 through March 1991: the economic slowdown began much earlier in Arizona than the nation, contributing to a significant drop in relative PCPI. Little improvement occurred in Arizona's relative PCPI during the succeeding economic expansion.
- April 2001 through November 2001: Arizona's relative PCPI decreased.
- January 2008 through June 2009: This recession was deeper and lasted longer in Arizona than the nation. A significant drop in Arizona's relative PCPI occurred.
- March 2020 through April 2020: Arizona's relative PCPI continued to rise during this recession that was induced by COVID-19.

In Chart 1-2, the history of PCPI relative to the U.S. average is shown for each of the comparison states. Among the comparison states in the early 1970s, Nevada had a considerably higher PCPI

CHART 1-2
PER CAPITA PERSONAL INCOME,
SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE

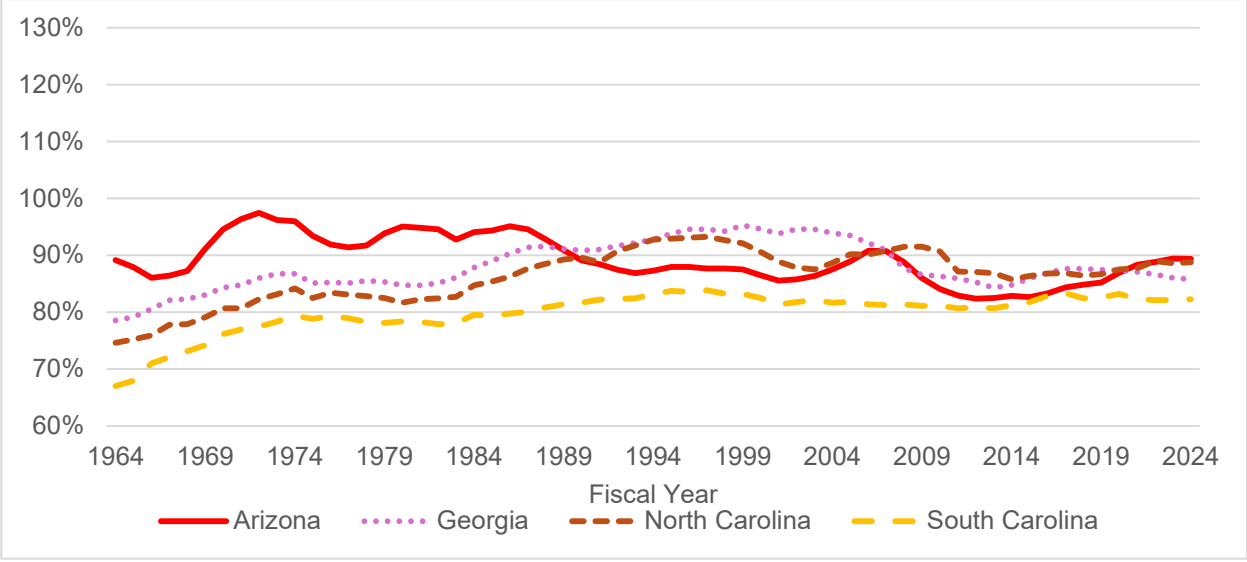


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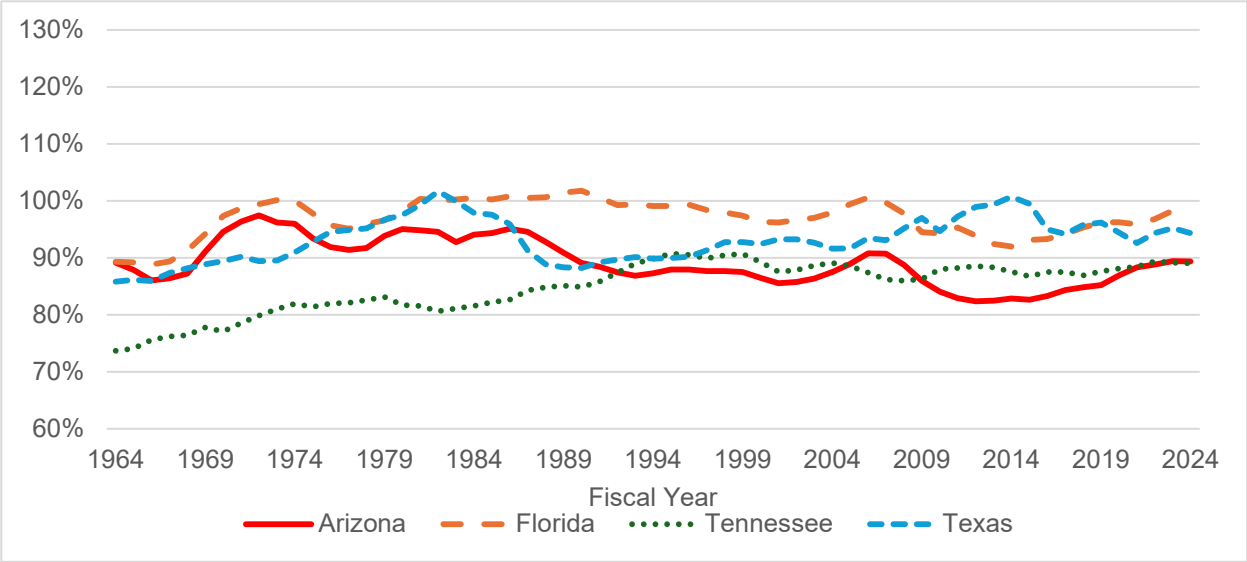
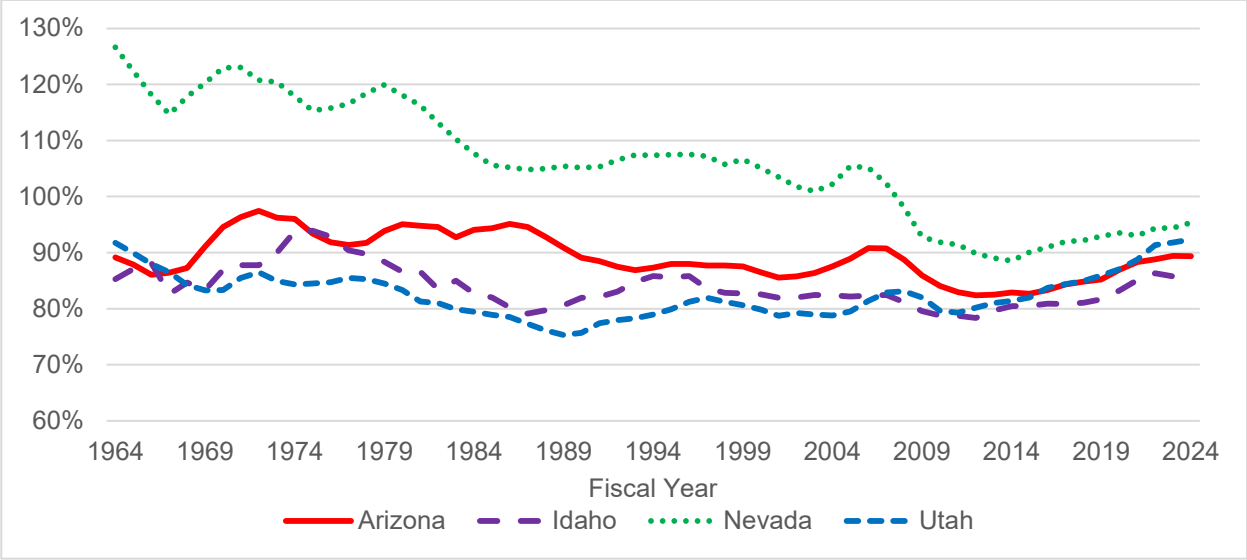
CHART 1-2 (continued)
PER CAPITA PERSONAL INCOME,
SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE





Source: Calculated from data of the U.S. Department of Commerce, Bureau of Economic Analysis.

than Arizona; the only other state with a higher figure was Florida. In FY 2022, Arizona ranked seventh; after adjusting for the cost of living, Arizona was tied for eighth with Georgia, higher than only South Carolina.

It is also possible to incorporate the concept of ability to pay when using per capita or per caseload expenditure data, by expressing spending per recipient per $1,000 of per capita personal income. However, population or caseload without adjusting for PCPI is the better adjustor for expenditures, especially when also adjusted for the cost of living.

If policymakers in a state with below-average prosperity, such as Arizona, limit certain types of expenditures due to the below-average ability of its taxpayers to pay taxes, the result may be to perpetuate the state's low prosperity. States compete with each other (and with other countries) for economic development. The two most important business location factors are the availability and quality of the workforce and the availability and quality of the physical infrastructure. A state that does not adequately prepare its residents for the workforce through K-12 education, higher education, and job training and that provides an inferior physical infrastructure is placing itself at a significant disadvantage in economic development, particularly in terms of competing for high-quality jobs. Arizona receives mediocre ratings in business climate studies.

Total Taxable Resources

An alternative to personal income, infrequently used, is total taxable resources (TTR), also known as tax capacity. The U.S. Department of the Treasury, as required by federal law, produces these estimates annually for each state, but the time series only extends from calendar years 1995 through 2021 (https://home.treasury.gov/policy-issues/economic-policy/total-taxable-resources). TTR is used in some formulas that allocate federal funds by state. The calculation of TTR starts with gross domestic product by state, adding some types of income, such as dividend income and monetary interest, and subtracting various categories, such as employee and employer contributions to social insurance. Some of the categories are published categories of personal income, while others are not published.

Fiscal year TTRs have been calculated from the calendar year estimates, resulting in a time series running from FY 1996 through FY 2021. In conjunction with actual tax revenue (ATR) for those fiscal years, as reported by the Census Bureau's *Annual Survey of State and Local Government Finances*, the effective tax rate (ETR) can be calculated and compared to the national average and other states. The formula is ETR equals ATR divided by TTR.

In FY 2021, per capita TTR was 25.7 percent higher than PCPI nationally. The differential ranged from 7 percent in Mississippi to 62 percent in Delaware. In Arizona, the differential was 19 percent, ranking 34th in the nation and only eighth among the comparison states.

Since TTR exceeds personal income, the effective tax rate is lower using TTR than personal income. However, since the TTR in Arizona is not as much higher than personal income as the U.S. average, the effective tax rate in Arizona relative to the U.S. average is higher when using TTR than when adjusting with personal income. Appendix A provides insight into the effects of using the various standardizations on Arizona's revenue data. Appendix B provides more information on TTR, ATR, and ETR.

Cost of Living

Cost-of-living data are used in this report to adjust per capita revenue and expenditure figures when comparing Arizona to the national average and to other states. Regional price parity (RPP) estimates, reflecting geographic differences in the cost of living, are produced annually by the BEA. However, the earliest data are for calendar year 2008, with the latest for 2023. A fiscal year RPP figure has been estimated as the average of two calendar years (e.g. the average of calendar years 2021 and 2022 are used for fiscal year 2022).

The RPP figures are expressed relative to the national average. As seen in Chart 1-3, they generally do not change much from year to year, though Arizona's figures show more volatility reflecting the cyclical nature of its economy. Arizona's RPP fell from FY 2009 through FY 2012, the result of the state's deep recession and slow economic recovery. From FY 2012 through FY 2022, Arizona's cost of living was approximately 2 percent less than the national average, but it rose to slightly above the national average in FY 2023. In FY 2022 — the latest year of most of the revenue and expenditure data used in this report — among the 10 comparison states, Arizona's RPP of 98.3 was second highest to Florida; the range was from 91.2 in Tennessee to 101.8 in Florida. Adjusting for the cost of living has a variable effect on Arizona's ranks by category adjusted; Arizona frequently ranked lower after the adjustment despite its cost of living being a little less than the U.S. average in most years.

In this report, most of the analysis consists of comparing states to the national average by year. This precludes the need to adjust time series data for inflation. If the focus is to compare revenue or expenditure data measured in dollars in a given state over time, the finance data need to be adjusted for inflation, preferably using the gross domestic product implicit price deflator.

CHART 1-3
COST OF LIVING,
SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE

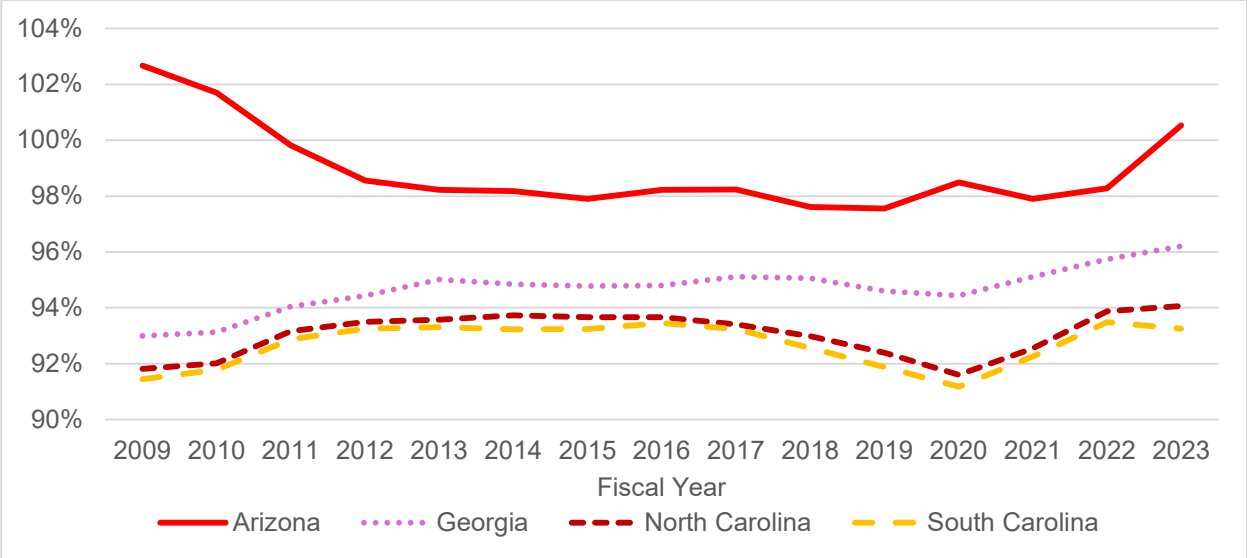


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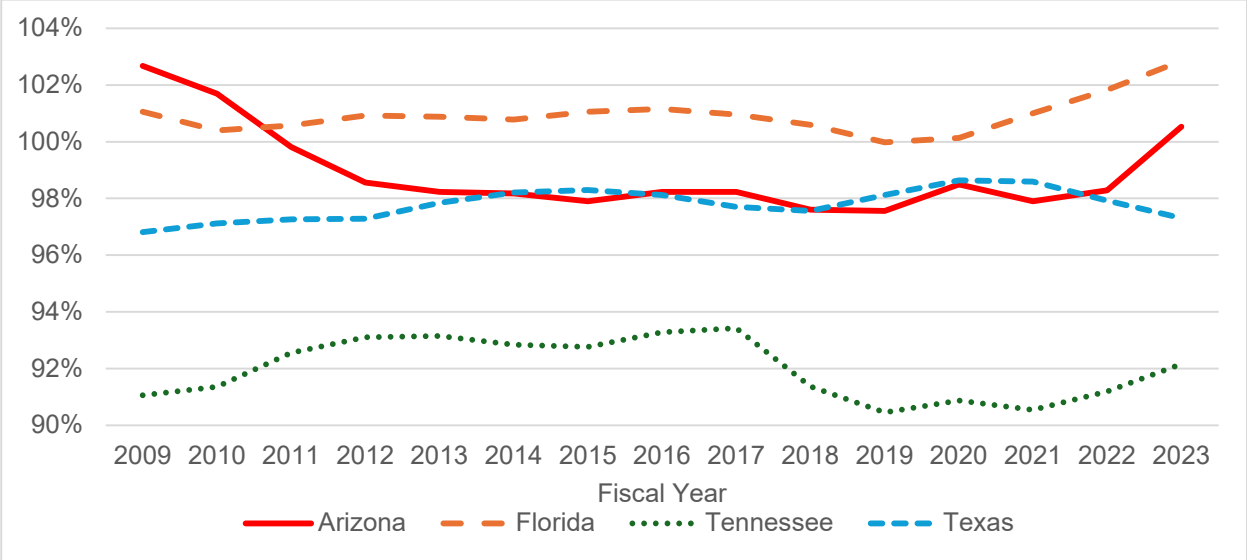
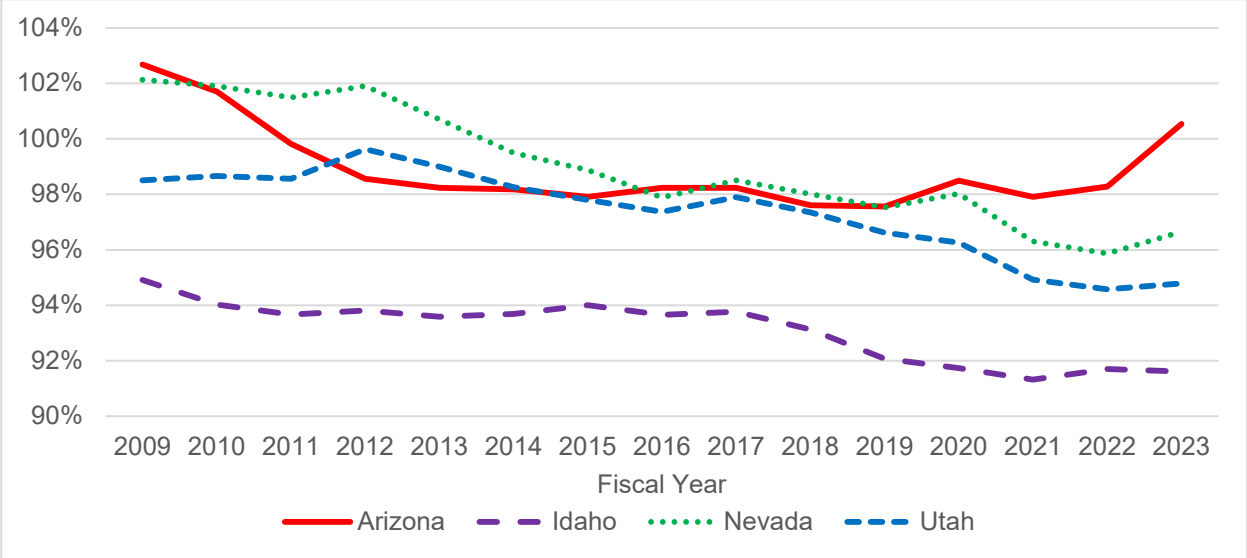
CHART 1-3 (continued)
COST OF LIVING,
SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE





Source: Calculated from data of the U.S. Department of Commerce, Bureau of Economic Analysis (regional price parities).

CHAPTER 2: A PRIMER ON ARIZONA STATE GOVERNMENT FINANCE

This chapter primarily investigates Arizona state government general fund revenues and expenditures using data from the JLBC.

Overview

Government revenues are pro-cyclical, rising during economic expansions and falling during recessions. Revenues in Arizona are unusually cyclical due to the state's highly cyclical economy. General fund revenues have become more cyclical over time due to the narrowing of the tax base and the subsequent high dependence on two cyclical tax sources (the income tax and the sales tax). Revenue cyclicality can be reduced somewhat by broadening the tax base and relying more on nontax revenues and less-cyclical tax sources.

Demand for most public services is not cyclical, but demand for public assistance is countercyclical (rises during an economic recession). As a result of the unmatched cycles in revenue and demand for public services, governments experience cyclical budget surpluses and cyclical budget deficits.

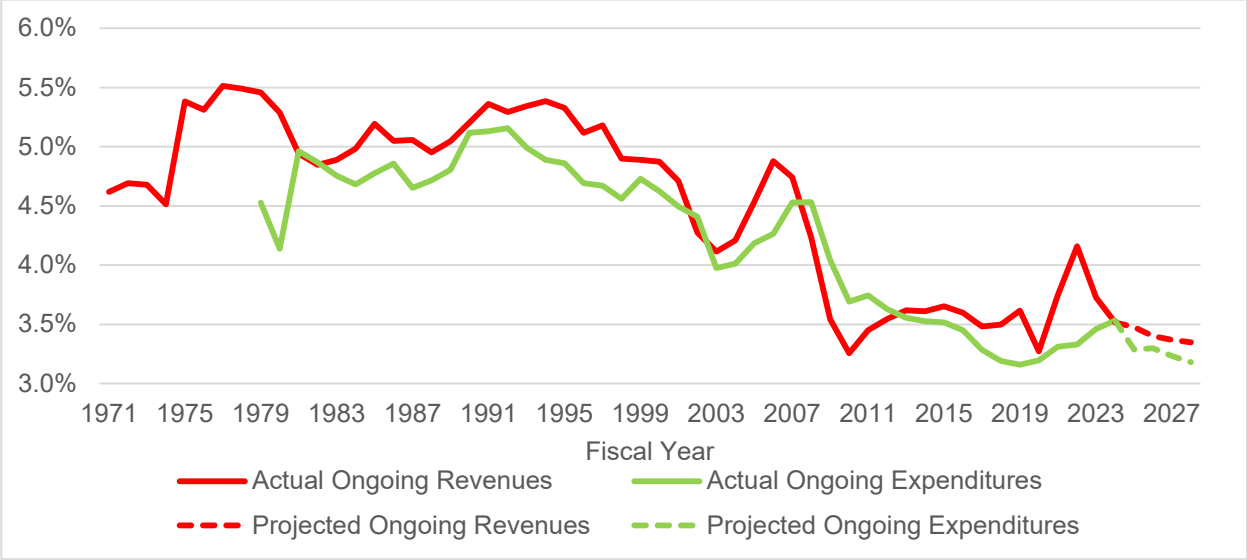
These cyclical deficits are one of two types of public-sector deficits. Cyclical deficits are temporary and largely unavoidable due to economic downturns. The Budget Stabilization (rainy-day) Fund was designed to offset cyclical deficits, but has been underfunded and thus has only been able to reduce the size of cyclical deficits.

The second type of public-sector deficit is a structural deficit. This is an ongoing deficit, the result of policy decisions to reduce revenue without cutting spending, or to increase spending without raising revenue, commensurately. Arizona's general fund has periodically experienced structural deficits. Generally, tax cuts have been implemented during economic expansions. Due to the cyclical strength of revenues during expansions, the tax cuts sometimes have not immediately resulted in a budget deficit. However, the structural deficit is revealed during the next economic downturn.

Arizona currently has a structural deficit, the result of a substantial reduction in tax revenues, mostly due to the implementation of a single tax rate for the individual income tax in fiscal years 2023 and 2024, not accompanied by a similar magnitude of spending reductions. The general fund had a significant deficit in FY 2024 despite a strong economy.

The fluctuations in general fund revenues and expenditures as a percentage of personal income seen in Chart 2-1 are a result of both economic cycles and tax reductions followed later by spending reductions. A strong downward trend in seen in both revenues and expenditures relative to personal income since the early 1990s due to numerous changes in tax law changes that have reduced tax rates and narrowed tax bases. This downtrend is projected to continue even if no further tax law changes are implemented. More detail on the tax cuts is included in Chapter 3.

CHART 2-1
REVENUES AND EXPENDITURES AS A PERCENTAGE OF PERSONAL INCOME, ARIZONA STATE GOVERNMENT GENERAL FUND



Note: The projections assume no additional tax law changes.

Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (actual revenues and expenditures), the U.S. Department of Commerce, Bureau of Economic Analysis (actual personal income), and authors (projections).

Revenue

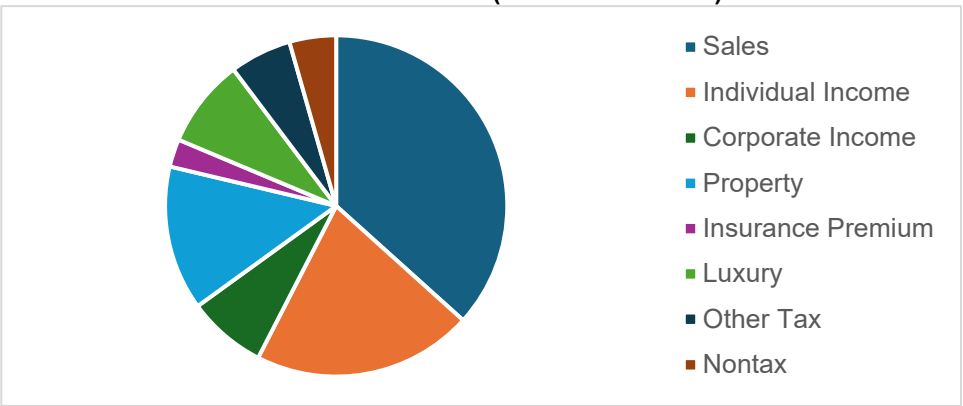
With economic cyclicality and government revenue cyclicality such an issue in Arizona, the cyclicality of the various sources of general fund revenue is an important consideration. The sales tax and the income tax — both the individual and corporate income taxes — are the most cyclical of the major revenue sources, but provide most of the general fund's revenue.

There are two ways of examining the revenue sources used in the general fund: revenue by type as a share of the total, and revenue by type relative to personal income (see Chart 2-1 for overall general fund revenue as a percentage of personal income). Both are affected by tax law changes and by the economic cycle.

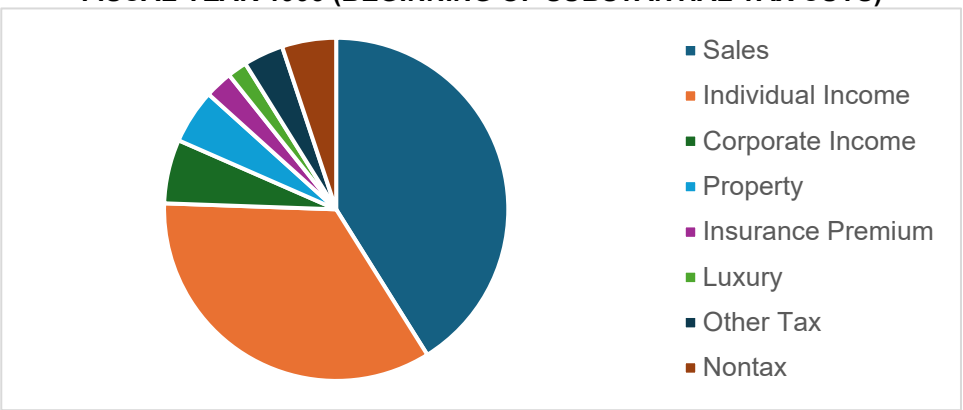
As seen in Chart 2-2, the relative importance of the various sources of general fund revenue has changed considerably over the years. In the early 1970s, the sales tax (technically, the transaction privilege tax) accounted for less than 40 percent of general fund revenue and the income tax (corporate and individual combined) accounted for less than 30 percent of general fund revenue. By FY 1980, the sales tax share exceeded 45 percent and the income tax share rose to more than 30 percent, a result of reductions in property taxes deposited to the general fund in the late 1970s. In 1980, food to be consumed at home was exempted from the sales tax, dropping the sales tax share back below 40 percent. However, the combination of this exemption and the decrease in property tax revenues created a structural deficit. To combat this deficit, an increase in the sales tax rate was implemented in FY 1984, putting the sales tax share of general fund revenue beyond 45 percent.

CHART 2-2
ONGOING REVENUE BY SOURCE AS A SHARE OF THE TOTAL, ARIZONA STATE GOVERNMENT GENERAL FUND

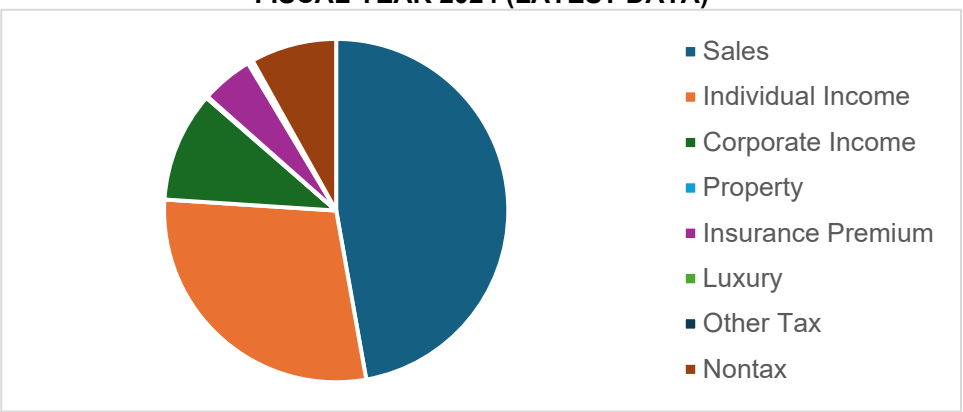
FISCAL YEAR 1971 (EARLIEST DATA)



FISCAL YEAR 1993 (BEGINNING OF SUBSTANTIAL TAX CUTS)



FISCAL YEAR 2024 (LATEST DATA)



Source: Calculated from data of the Arizona Joint Legislative Budget Committee.

Despite the increase in the sales tax rate, a structural deficit remained, which became obvious when Arizona's economic growth rate slowed in the late 1980s. To resolve the structural deficit, income tax rates were increased and spending was reduced. The income tax share of general fund revenue reached 40 percent in FY 1991.

In FY 1993, the first year of implementation of substantial tax cuts following the economic slump of the late 1989s and early 1990s, the sales and income taxes accounted for 82 percent of general fund revenue. The combined income tax and sales tax share of general fund revenue has topped 85 percent in every year since FY 1998 despite decreases in income tax rates, due to tax law changes reducing revenue from other sources. Property tax revenue to the general fund was essentially eliminated in FY 1997, followed soon after by a significant reduction in the vehicle license tax that eliminated this tax as a source of funding for the general fund.

By FY 2024, the proportion of general fund revenue coming from the sales tax had increased to 47 percent from 41 percent in FY 1993 despite no increase in sales tax rates or tax base. The reductions in the income tax had lowered its share to 39 percent.

General fund revenue by source as a percentage of personal income is shown in Chart 2-3. Sales taxes as a percentage of personal income have dropped. While some reductions in sales tax revenue have resulted from tax law changes that have narrowed the tax base, most of the decline in sales tax revenue relative to personal income results from the shift in consumer spending from taxable goods to untaxed services. Despite reductions in individual income tax revenues due to tax law changes, individual income tax revenue as a percentage of personal income experienced little downtrend from the 1990s through the 2010s. The sharp drop in FYs 2023 and 2024 resulted from the switch to a single (and low) tax rate.

Corporate income tax collections are highly volatile from year to year. However, their generally lower percentage of personal income since the 2010s results from a series of significant tax cuts. In contrast, the insurance premium tax has not been cut substantially, accounting for its rather steady share of personal income.

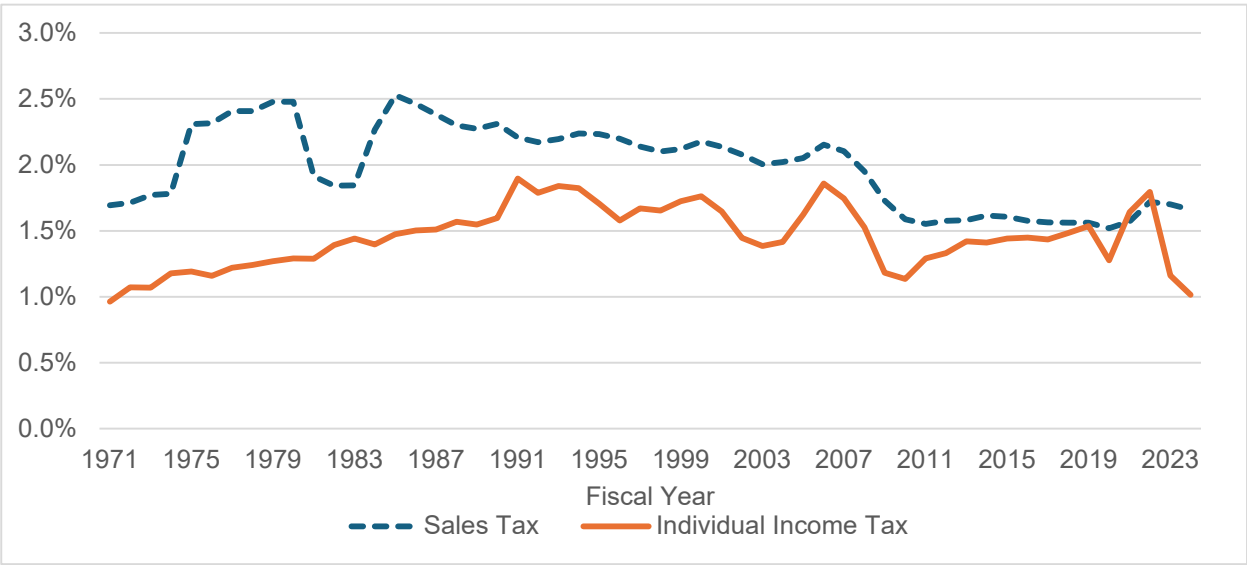
The large reductions in property tax revenue distributed to the general fund in the late 1970s and in FY 1997 are clearly seen as a percentage of personal income in Chart 2-3. Other tax revenue as a percentage of personal income also has declined substantially to an insignificant level. There are multiple reasons for the decline in this category, including

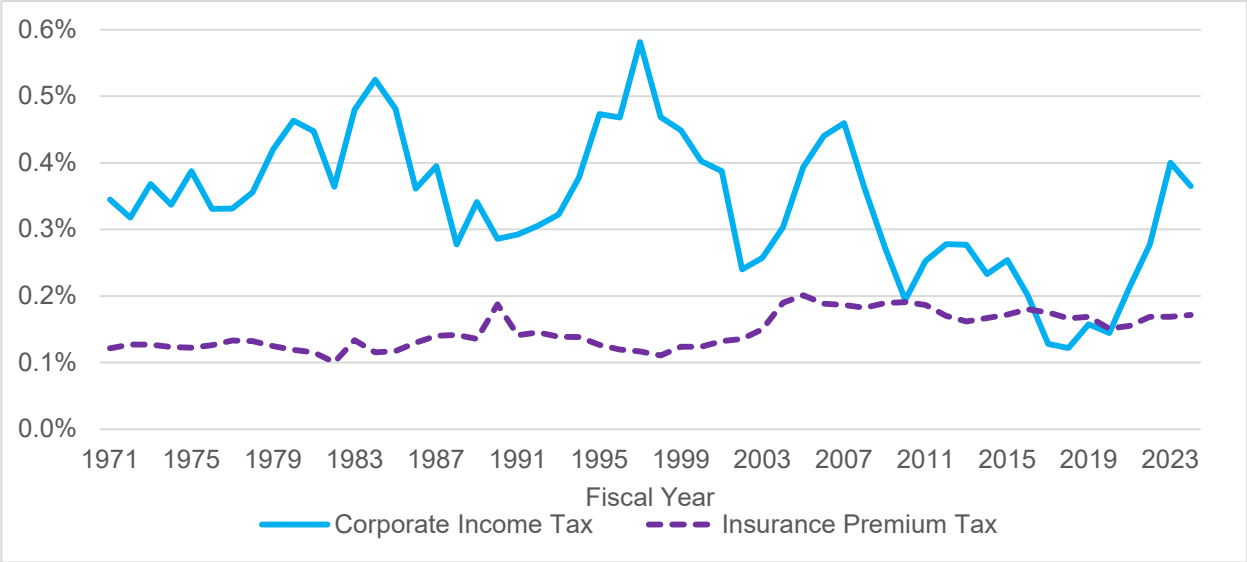
- The aforementioned reduction in the vehicle license tax.
- The cessation of the parimutuel and estate taxes.
- A decline in tobacco consumption.

Nontax sources of revenue have always accounted for a modest share of general fund revenue. Relative to personal income, nontax revenue has been erratic but displays little trend.

Chart 2-4 provides general fund revenue in dollars in FY 2024 by source. The dominance of the sales tax is obvious.

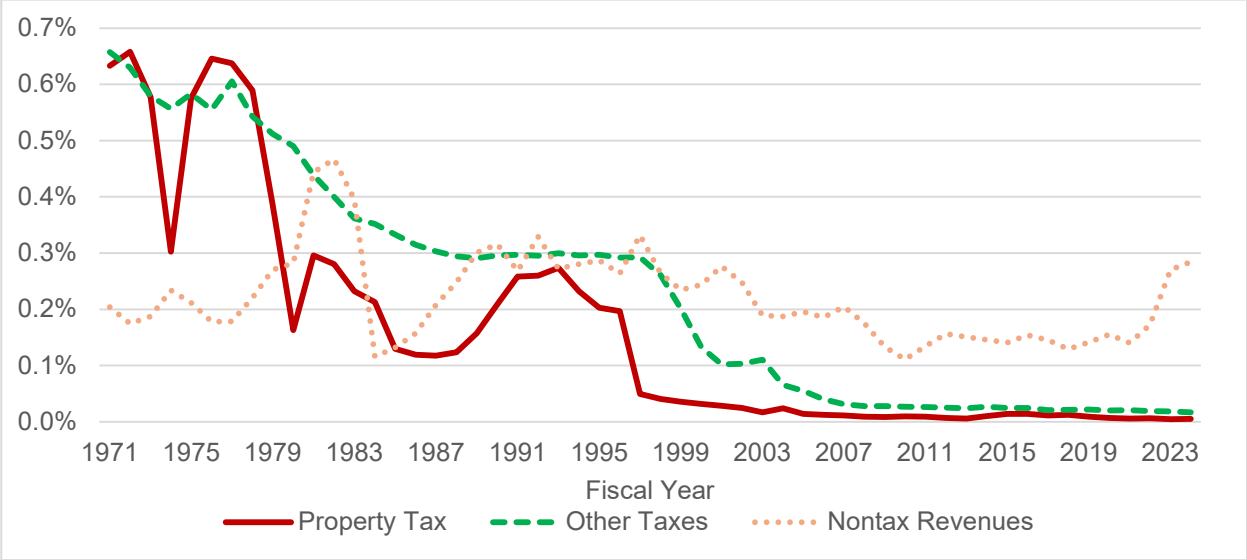
CHART 2-3
REVENUE BY SOURCE AS A PERCENTAGE OF PERSONAL INCOME, ARIZONA STATE GOVERNMENT GENERAL FUND





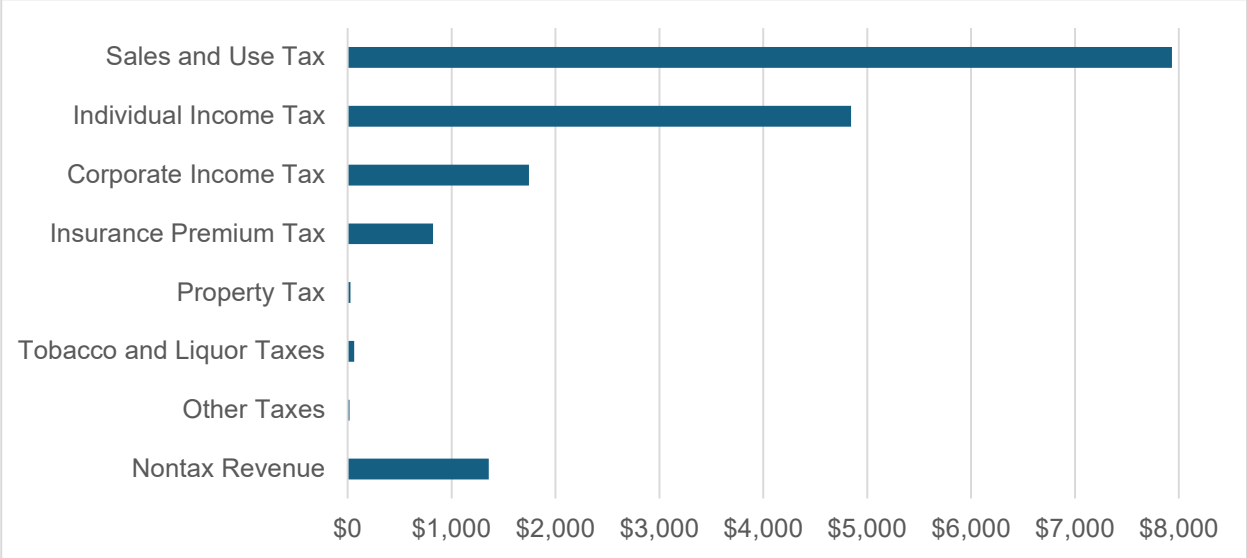
(continued)

CHART 2-3 (continued)
REVENUE BY SOURCE AS A PERCENTAGE OF PERSONAL INCOME,
ARIZONA STATE GOVERNMENT GENERAL FUND



Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (revenues) and the U.S. Department of Commerce, Bureau of Economic Analysis (personal income),

CHART 2-4
REVENUE IN FISCAL YEAR 2024,
ARIZONA STATE GOVERNMENT GENERAL FUND



Source: Arizona Joint Legislative Budget Committee.

Expenditures

As seen in Table 2-1, the general fund accounts for nearly 77 percent of the state government's appropriations in the current fiscal year, but for only 25 percent of the total authorized state government spending.

The uses of general fund revenue has changed over time, as illustrated in Chart 2-5. The earliest data are for FY 1979, when K-12 education accounted for 46 percent of the expenditures, followed by higher education (community colleges and universities combined) at 23 percent and health and social services at 16 percent. Public safety (the Department of Corrections and the Department of Public Safety combined) accounted for less than 6 percent. All other general fund expenditures combined accounted for less than 10 percent of the total.

The K-12 share fell through the 1980s, bottoming out at 37 percent from FYs 1990 through 1993. But its share then gradually rose back to 47 percent in FY 2025. In contrast, higher education's share steadily fell to less than 7 percent in FY 2025. The community college share dropped from 3.7 percent to 0.6 percent and the university share fell from 19.1 percent to 6.0 percent. The health and social services (AHCCCS and the departments of health services, economic security, and later, child safety) share began to rise in the mid-1980s, reaching as high as 30 percent; it is 28 percent in FY 2025. The share of all other general fund expenditures has fluctuated, peaking at more than 15 percent from FYs 1999 through 2002 and again in FYs 2021 and 2022, with lows of less than 6.5 percent in FYs 2011 and 2025. Funding for the School Facilities Board is responsible for much of the erratic nature of the "miscellaneous" category.

As seen in Chart 2-1, total general fund expenditures expressed as a percentage of personal income fell from approximately 5 percent in the 1980s and early 1990s to less than 3.5 percent. Chart 2-6 shows the time series of general fund expenditures expressed as a percentage of personal income for major general fund categories. Of particular note is the decline in educational expenditures, particularly for the universities. In contrast, correctional expenditures as a percentage of personal income rose in the 1980s and has since held largely steady.

Chart 2-7 provides general fund appropriations in dollars in FY 2025 by major category. The dominance of K-12 education is obvious.

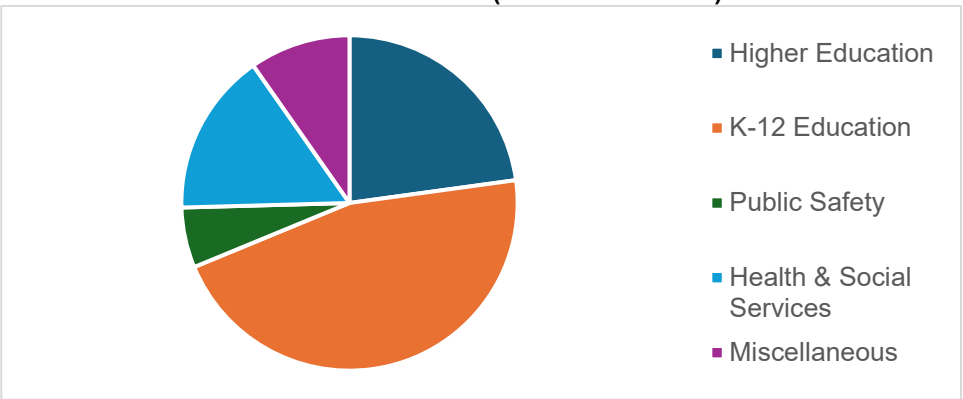
TABLE 2-1
ARIZONA STATE GOVERNMENT AUTHORIZED SPENDING, FISCAL YEAR 2025

	Billions
General Fund Appropriations	$16.18
Other Fund Appropriations	4.96
Total Appropriations	21.14
Other Authorized Spending	42.62
State Government Total	63.76

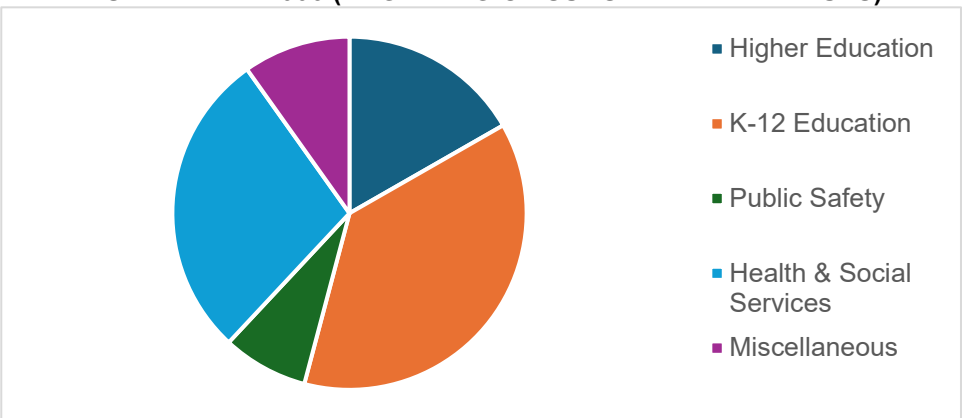
Source: Arizona Joint Legislative Budget Committee.

CHART 2-5
ONGOING EXPENDITURES BY TYPE AS A SHARE OF THE TOTAL, ARIZONA STATE GOVERNMENT GENERAL FUND

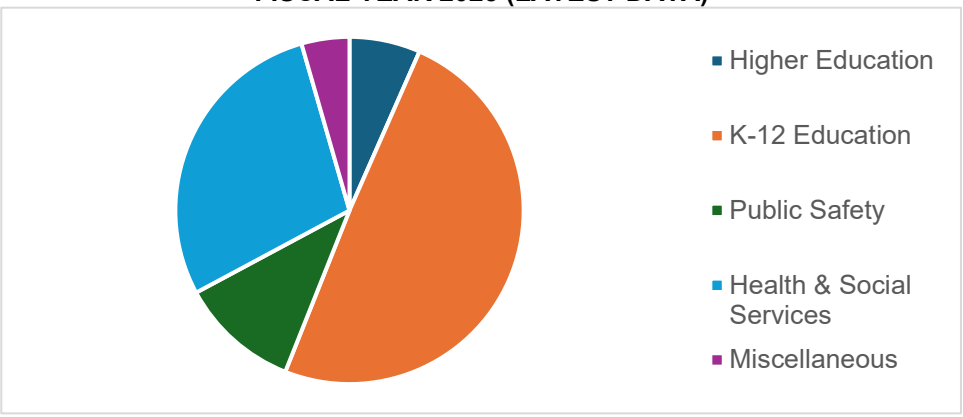
FISCAL YEAR 1979 (EARLIEST DATA)



FISCAL YEAR 1993 (BEGINNING OF SUBSTANTIAL TAX CUTS)

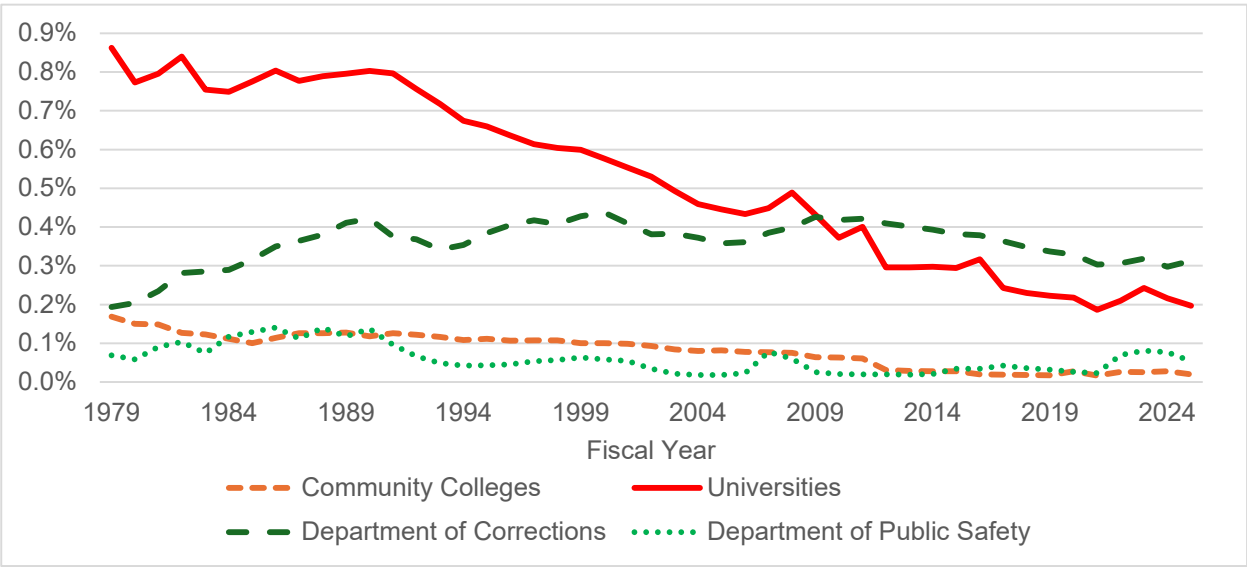


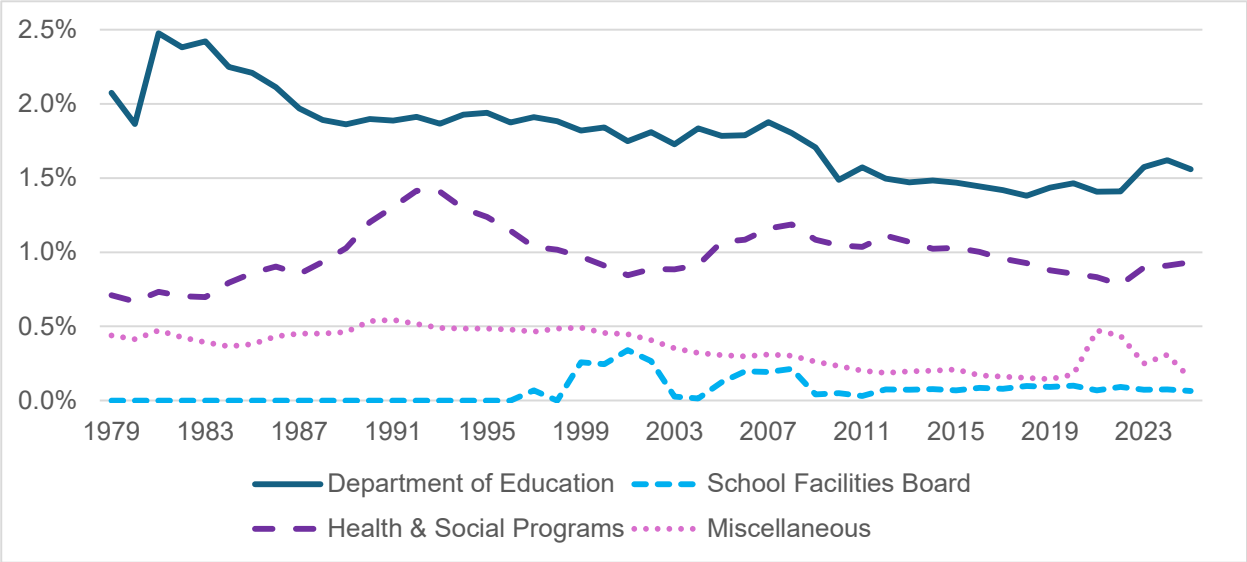
FISCAL YEAR 2025 (LATEST DATA)



Source: Calculated from data of the Arizona Joint Legislative Budget Committee.

CHART 2-6
EXPENDITURES BY TYPE AS A PERCENTAGE OF PERSONAL INCOME, ARIZONA STATE GOVERNMENT GENERAL FUND

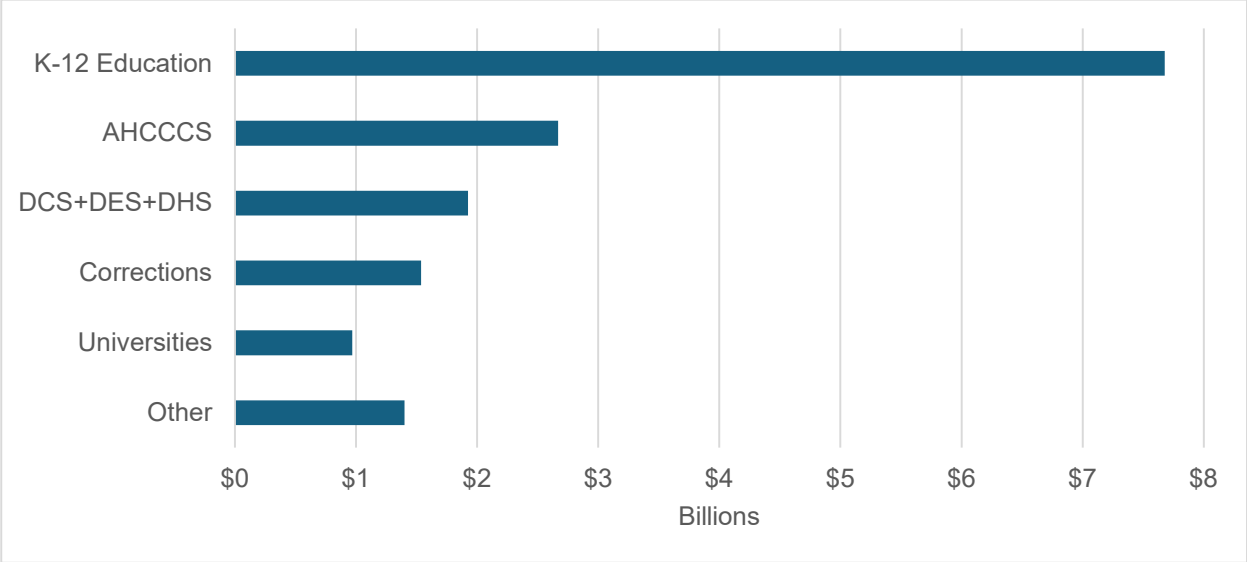




Note: Health and social programs are the sum of the Arizona Health Care Cost Containment System (AHCCCS), the Department of Child Safety, the Department of Economic Security, and the Department of Health Services. The miscellaneous category is the sum of all departments except those related to education, public safety, and health and social programs.

Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (expenditures) and the U.S. Department of Commerce, Bureau of Economic Analysis (personal income),

CHART 2-7
APPROPRIATIONS IN FISCAL YEAR 2025,
ARIZONA STATE GOVERNMENT GENERAL FUND



Note: AHCCCS is the Arizona Health Care Cost Containment System, Arizona's version of the Medicaid program. "DCS+DES+DHS" is the sum of the Department of Child Safety, the Department of Economic Security, and the Department of Health Services

Source: Arizona Joint Legislative Budget Committee.

JLBC Versus Census Bureau Data

While this chapter focuses on finance data from the JLBC, the Census Bureau's state and local government revenue data are examined in Chapter 4 and its state and local government expenditure data are included in Chapter 6. In order to roughly compare the JLBC and Census Bureau data, the figures for FY 2022, the most recent year of Census Bureau data, are used. A direct comparison is not possible due to differing accounting systems that include nonconformity in whether funding is allocated to state or local governments. For example, the Census Bureau considers all funding for K-12 education to be local, while the JLBC assigns a substantial amount to state government.

While the JLBC provides a full accounting of expenditures in its three categories of the general fund, other funds, and unappropriated authorized spending, it reports detailed revenue data only for the general fund. The Census Bureau divides revenues and expenditures as state government or local government, but for state government does not differentiate between the general fund, other funds, or unappropriated spending.

For FY 2022, the Census Bureau reports general state and local government revenue of $83.0 billion in Arizona, of which state government received $61.4 billion. The federal government accounted for 39 percent of the state and local government total and for half of the state government total. The JLBC reported general fund revenue of $17.4 billion.

According to the JLBC, all income tax collected from the individual and corporate taxes is deposited to the general fund, though some of this revenue is distributed to local governments through "urban revenue sharing." Thus, the income tax revenue reported by the JLBC is nearly identical to that reported by the Census Bureau. Since a substantial portion of state government revenue from other sources is deposited to other state government funds, the Census Bureau's revenue figures are far higher than the JLBC figures for the general fund.

The Census Bureau reported total state and local government expenditures of $70.0 billion in FY 2022, of which $41.5 billion was designated as state government expenditures. In contrast, the JLBC reported state government authorized spending as $59.5 billion, with $14.0 billion from the general fund, $5.3 billion from other funds, and $40.2 billion as not appropriated. Much of the difference between the Census Bureau and JLBC figures for state government occurs in the K-12 education category; the Census Bureau assigns all $11.2 billion to local governments, while the JLBC reports $10.3 billion as state government expenditures by the Department of Education.

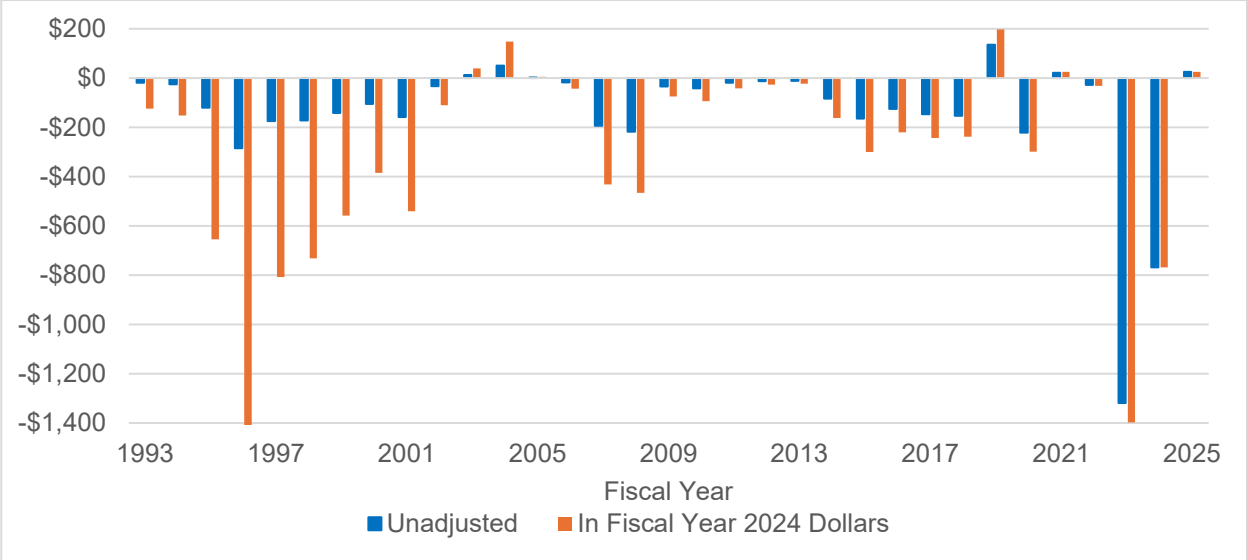
CHAPTER 3: TAX CUTS IN ARIZONA

As discussed in Chapter 2, the Arizona Legislature significantly reduced tax collections for the general fund in the late 1970s, with sharp cuts in property taxes distributed to the general fund and with the elimination of the sales tax on food to be consumed at home. This created a structural deficit. Spending reductions, an increase in the general sales tax rate, and then increases in income tax rates were used to eliminate the structural deficit.

In the early 1990s, the Legislature reversed the increases in the income tax rates, then began to widely reduce tax rates and/or tax bases of nearly all general fund tax sources. Tax reductions have occurred in most years since then, but the magnitude of the tax changes have varied widely by year. These repeated tax cuts have resulted in additional structural deficits that later were resolved fully or partially by spending reductions. This chapter examines the tax reductions since the early 1990s in more detail.

The annual record of the revenue effects to the general fund of tax law changes is displayed in Chart 3-1. The unadjusted figures are those estimated by the JLBC (see the appendix of its *Tax Handbook*, https://www.azjlbc.gov/tax-handbook/). The adjustment to FY 2024 dollars is made as follows for each fiscal year: the unadjusted tax change is expressed as a percentage of personal income, with the result multiplied by personal income in FY 2024.

CHART 3-1
ESTIMATE OF ANNUAL CHANGE IN ARIZONA STATE GOVERNMENT GENERAL FUND TAX REVENUE DUE TO TAX LAW CHANGES, IN MILLIONS OF DOLLARS



Note: The figures in fiscal year 2024 dollars are calculated as personal income in FY 2024 divided by personal income in the year each tax change was made, multiplied by the unadjusted tax change in that year.

Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (estimated nominal value of tax law changes), the U.S. Department of Commerce, Bureau of Economic Analysis (quarterly personal income through FY 2024), and authors (projected personal income in FY 2025).

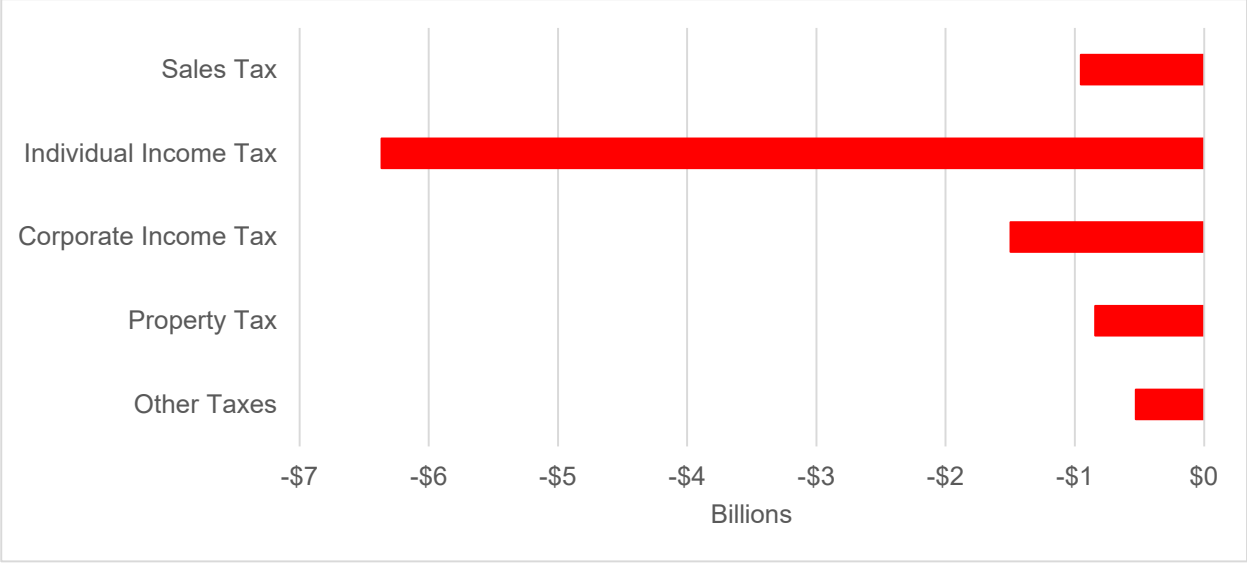
In FY 2024 dollars, a series of significant tax reductions were implemented during FYs 1995 through 2001, with additional large tax reductions in FYs 2007 and 2008 and in FYs 2023 and 2024. In unadjusted dollars, the cumulative effect on general fund revenue in FY 2025 of tax law changes implemented since FY 1993 is a loss of $4.5 billion. Adjusted to FY 2024 dollars, the cumulative loss in FY 2025 is $9.9 billion.

Revenue from the individual income tax has been the most affected by tax law changes, as seen in Chart 3-2. The effects of tax law changes on the various revenue sources is displayed by year in Chart 3-3.

Major tax law changes by tax type follow:

- Individual income tax. This tax has been the target of numerous tax law changes, some of which have resulted in very substantial reductions in general fund revenue. While the form of the tax law changes has varied, the biggest impacts to general fund revenue have come from a series of tax rate reductions that were passed in 1994, 1995, 1997 through 1999, 2006, 2007, and 2021. The latter involved a shift from a graduated income tax rate to a single rate and had the greatest negative impact on general fund revenue of any of the tax law changes. Compared to the tax rates present in the early 1990s, the rate reductions have been much greater for high-income taxpayers than for low-income taxpayers.

CHART 3-2
CUMULATIVE CHANGE IN ARIZONA STATE GOVERNMENT GENERAL FUND TAX REVENUE THROUGH FISCAL YEAR 2025 DUE TO TAX LAW CHANGES SINCE FISCAL YEAR 1993 BY TYPE OF TAX IN FISCAL YEAR 2024 DOLLARS



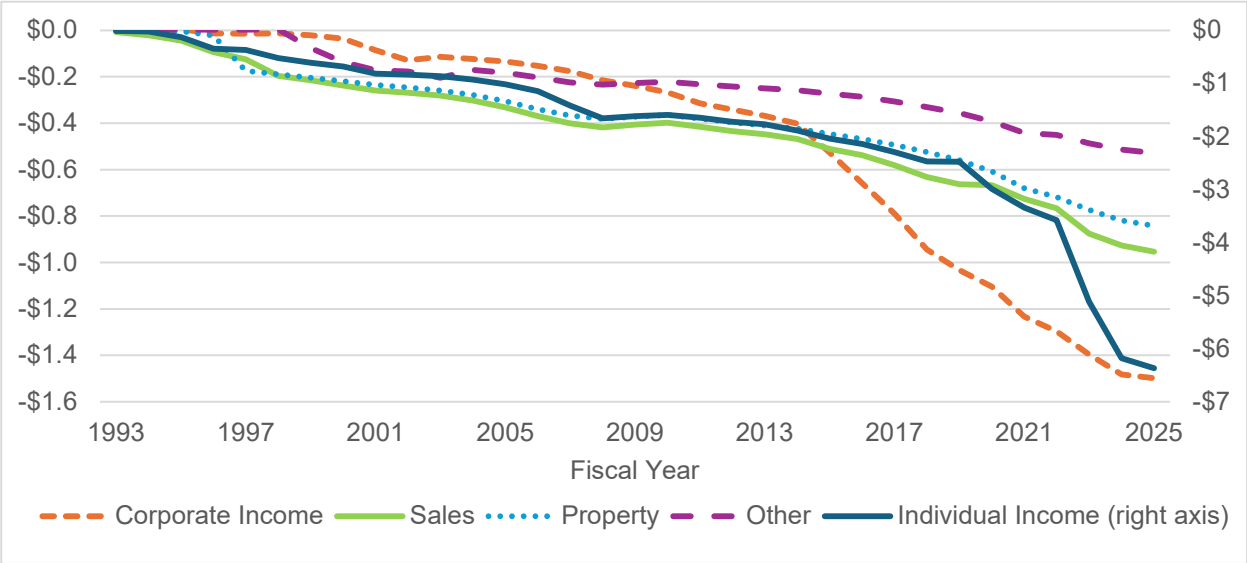
Note: The cumulative change in fiscal year 2024 dollars is calculated as the sum of personal income in FY 2024 divided by personal income in the year each tax change was made, multiplied by the unadjusted tax change in that year.

Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (estimated value of tax law changes) and the U.S. Department of Commerce, Bureau of Economic Analysis (quarterly personal income),

- Corporate income tax. Negative effects on corporate income tax revenue from tax law changes occurred in many years, taking various forms including tax rate reductions and offers of new tax credits. The biggest impact did not occur until fiscal years 2015 through 2018. During this period the tax rate was lowered from nearly 7 percent to 4.9 percent.
- Sales tax. Large revenue reductions were implemented from FYs 1993 through 1998. The nature of most of the tax law changes was to exempt specific goods from the sales tax; elimination of the commercial lease tax was significant.
- Property tax. Property tax reductions implemented in FY 1997 largely removed the property tax as a source of revenue for the general fund.
- Other taxes. The major change to other taxes was the reduction in the vehicle license tax implemented from FY 1999 through FY 2001. Revenue from this tax no longer is deposited in the general fund.

Chart 3-4 shows by year the percentage difference in actual general fund revenue from what would have been realized had no tax law changes occurred. By FY 2024, the difference was nearly 40 percent.

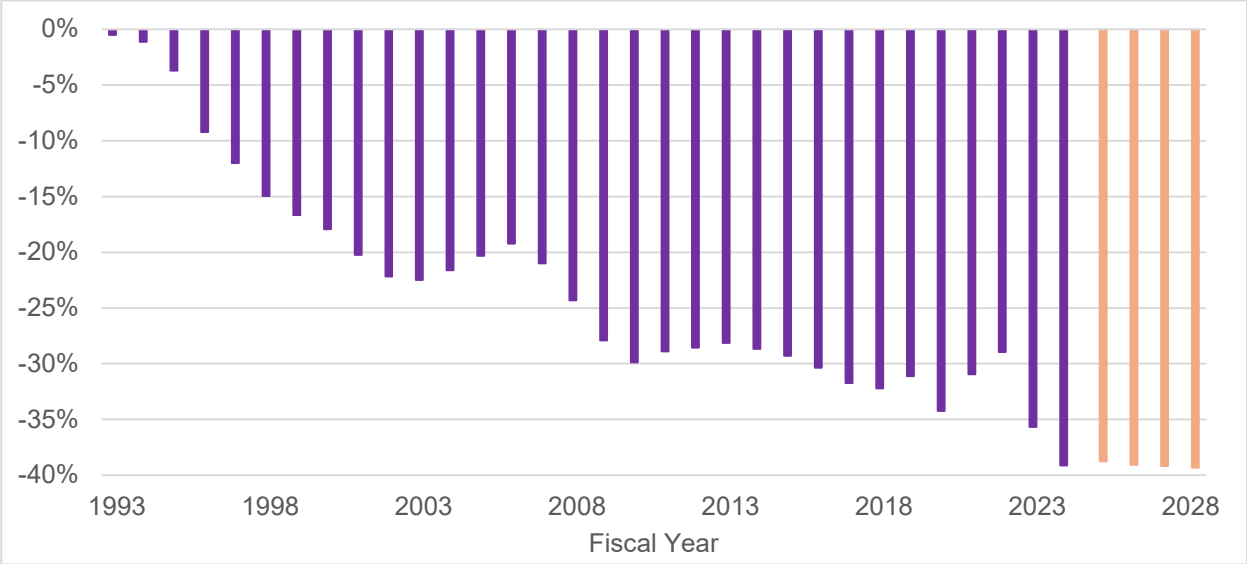
CHART 3-3
CUMULATIVE CHANGE IN ARIZONA STATE GOVERNMENT GENERAL FUND TAX REVENUE DUE TO TAX LAW CHANGES SINCE FISCAL YEAR 1993 BY YEAR AND TYPE OF TAX, IN BILLIONS OF 2024 DOLLARS



Note: The cumulative change in fiscal year 2024 dollars is calculated as the sum of personal income in FY 2024 divided by personal income in the year each tax change was made, multiplied by the unadjusted tax change in that year.

Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (estimated value of tax law changes) and the U.S. Department of Commerce, Bureau of Economic Analysis (quarterly personal income),

CHART 3-4
PERCENTAGE DIFFERENCE IN ARIZONA STATE GOVERNMENT GENERAL FUND REVENUE, ACTUAL REVENUE VERSUS REVENUE WITHOUT TAX LAW CHANGES SINCE FISCAL YEAR 1993



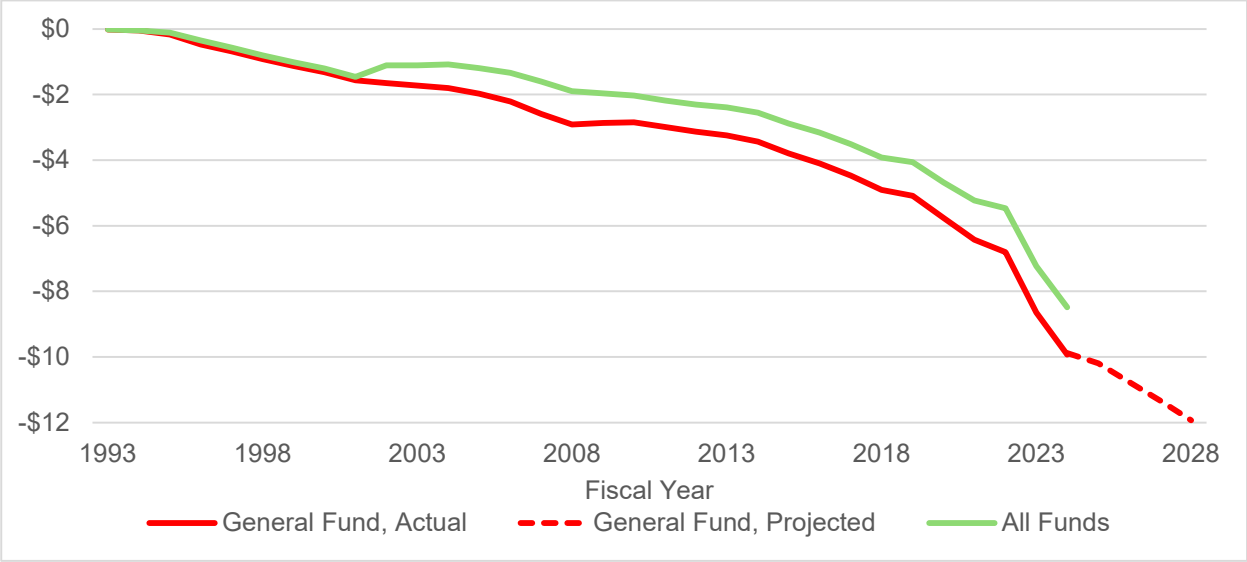
Note: Projected figures in orange assume no additional tax law changes in coming years.

Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (estimated value of tax law changes), the U.S. Department of Commerce, Bureau of Economic Analysis (quarterly personal income), and authors (projections).

In Chart 3-5, the loss of general fund revenue is projected to FY 2028, reaching $11.9 billion, even if no additional tax law changes are implemented through FY 2028. The green line in Chart 3-5 displays the net effect of these legislative tax law changes to the general fund and voter-approved tax increases that benefit funds other than the general fund. Not counting the voter-approved temporary increase in the sales tax rate in 2010, there have been five voter-approved tax increases since 1994. Four of those, from 1994 through 2006, increased tax rates on tobacco products. Revenue from each tax increase was designated to flow to a particular state government fund. The other voter-approved tax increase raised the sales tax rate, with various education funds receiving the revenue. This is by far the greatest revenue producer of the voter-approved measures, raising $1.2 billion in FY 2024, compared to $233 million for the four tobacco tax measures combined.

Actual and projected general fund tax revenue as a percentage of personal income is displayed in Chart 3-6, with a comparison to the percentage of personal income that would have been realized had no tax law changes occurred. Without any tax changes, general fund revenue would have fluctuated with the economic cycle from 4.5 percent to more than 5.5 percent of personal income, with an annual average of 5.2 percent from FYs 1993 through 2024. In contrast, actual revenue has trended down to 3.2 percent of personal income.

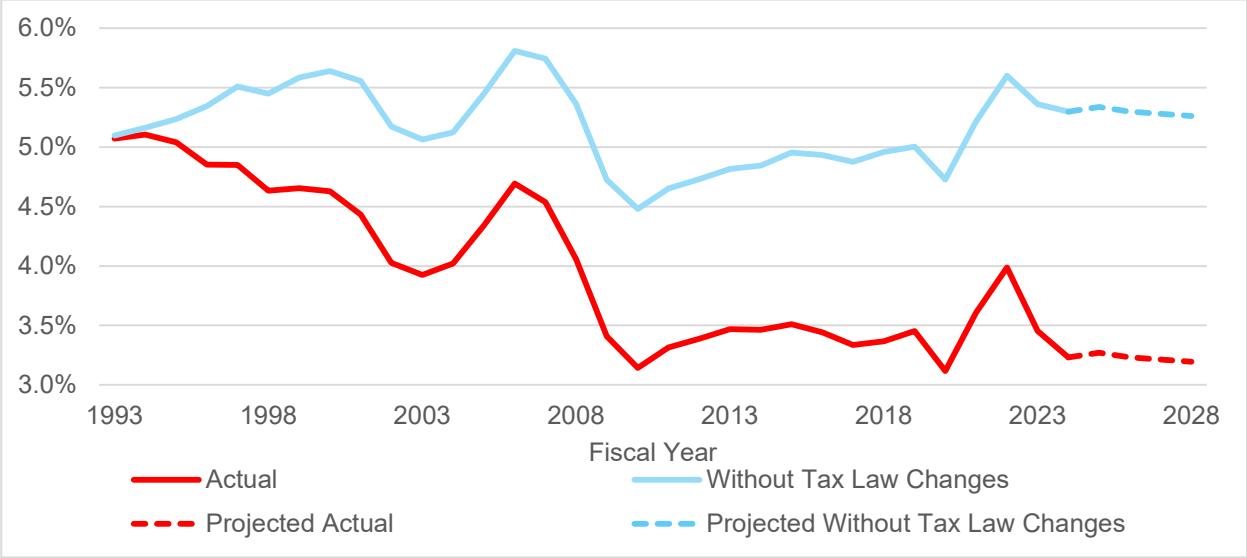
CHART 3-5
CUMULATIVE CHANGE IN ARIZONA STATE GOVERNMENT TAX REVENUE DUE TO TAX LAW CHANGES SINCE FISCAL YEAR 1993 WITH PROJECTIONS TO FISCAL YEAR 2028, IN BILLIONS OF FISCAL YEAR 2024 DOLLARS



Notes: The cumulative change in fiscal year 2024 dollars is calculated as the sum of personal income in FY 2024 divided by personal income in the year each tax change was made, multiplied by the unadjusted tax change in that year. Projected figures assume no additional tax law changes in coming years.

Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (estimated value of tax law changes), the U.S. Department of Commerce, Bureau of Economic Analysis (quarterly personal income), and authors (projections).

CHART 3-6
ARIZONA STATE GOVERNMENT GENERAL FUND TAX REVENUE AS A SHARE OF PERSONAL INCOME



Note: The projections assume no additional tax law changes in coming years.

Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (revenues and estimated value of tax law changes), the U.S. Department of Commerce, Bureau of Economic Analysis (quarterly personal income), and authors (projections).

CHAPTER 4: TAX CUTS, ECONOMIC GROWTH, AND GOVERNMENT REVENUE

Reductions in government revenue in Arizona date back to the late 1960s, with significant reductions made around 1980 in a major set of reforms to the tax code. However, it has been since the early 1990s that the Arizona Legislature has repeatedly reduced tax rates and narrowed tax bases of revenue sources used by state government — particularly of those sources providing revenue to the Arizona state government general fund.

While the rationale for the decreases in tax revenue can be debated, some tax-cut proponents argued that they were essential in establishing and maintaining a "pro-growth" business climate for the state. But various parties over the past 30-plus years generally have preferred to limit growth in general fund spending:

- Voters. Proposition 108, passed in 1992, requires a two-thirds majority in each chamber of the Arizona Legislature to raise taxes.
- Majority conservative legislatures.
- Several governors.

Cutting the general fund revenue rates or tax base was the logical method for achieving the goal. When confronted with concerns from proponents of education spending, the tax-cut faction claimed that the reductions promoted growth and that the result — especially when income taxes were reduced — was the creation of more revenue as a result of "tax-cut induced" growth that would otherwise have not occurred. Some argued that the new revenue would equal or exceed any revenue lost with the original cut.

The basic economic argument behind this position is that high taxes stifle the incentive to work and invest, and lowering them promotes growth and prosperity; incentives for work and investment are created; and so-called "Keynesian animal spirits" are unleashed. In some cases, this enhanced activity can indeed result in more tax dollars collected than before the cuts are enacted. The "Laffer Curve," put forth by Arthur Laffer, illustrates that at near 100 percent tax rates virtually no taxes are collected since economic activity is severely curtailed. Of course, at tax rates near zero little in the way of tax revenue is generated.

A simple illustration of the Laffer-Curve impacts is provided in Table 4-1. Consider a small economy with a maximum potential for production that results in $100 billion in aggregate income. If this income is taxed at a rate of 100 percent there is no incentive to work, no production occurs, no revenue is collected, and there is no financial support for a public sector. As rates are reduced from 100 percent, small incentives for work begin to appear and income grows. When rates fall to 70 percent, the economy grows but remains well short of potential, with $30 billion earned and $21 billion in revenue available to support a public sector that makes up 70 percent of the economy. As rates fall to 40 percent, incomes and revenues continue to rise because the growth in the economy is presumably faster than the reduction of tax rates. In this scenario the public sector is 40 percent of a $70 billion economy. In the example in the table, further reduction in taxes leads to modest additional growth but substantially less revenue for the public sector. At a tax rate of 10 percent, the economy runs at 95 percent capacity but the public sector accounts for only 10 percent. As rates go to zero so does the share of the public sector in the economy.

TABLE 4-1
ILLUSTRATION OF LAFFER-CURVE EFFECTS IN A HYPOTHETICAL ECONOMY

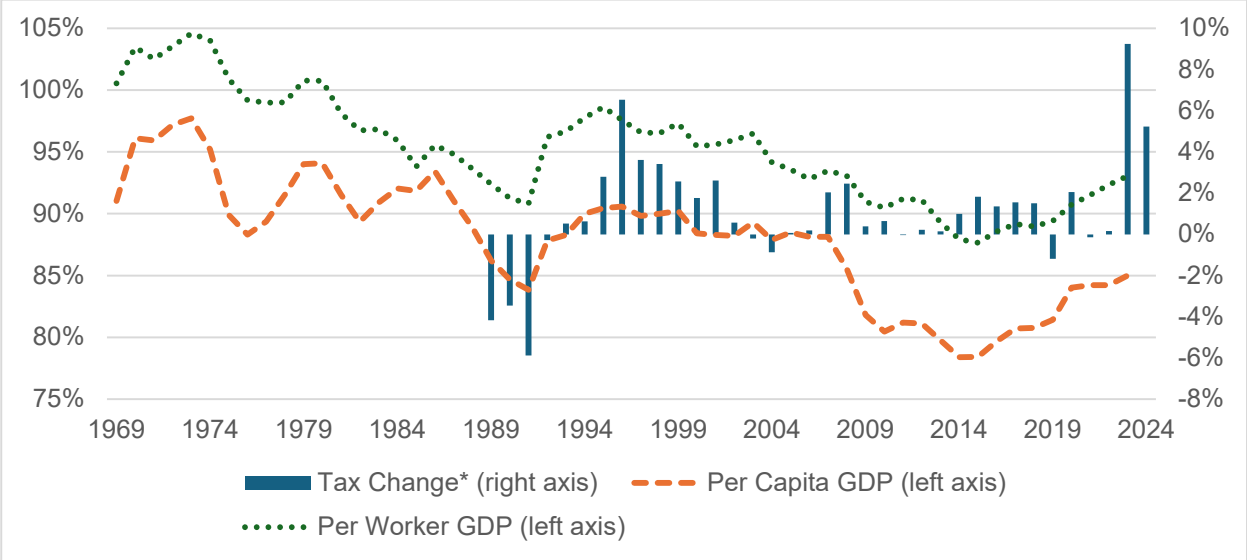
Tax Rate	Gross Income (Billions)	Revenue (Billions)	Public-Sector Share
100%	$0	$0.0	0%
90	20	18.0	90
80	25	20.0	80
70	30	21.0	70
60	40	24.0	60
50	55	27.5	50
40	70	28.0	40
30	85	25.5	30
20	90	18.0	20
10	95	9.5	10
0	100	0.0	0

The tabular illustration is designed to illustrate the maximum potential of the Laffer effect — suggesting that maximum deployment of resources and full output (income) only occurs with a rate of zero taxation. It could be argued that an economy could reach its full potential with a modest positive tax rate in place — acknowledging that a small public sector is necessary to support public goods like education, transportation, health, and public safety that are actually required for maximum resource allocation. Regardless, the table illustrates the basic concept; there is a range of tax rate reductions (starting from high rates) that have the potential to generate economic growth at a rate that produces additional revenue while tax cuts starting from low rates result in revenue reductions. The analysis in Chapter 3 demonstrates that over time, Arizona's overall average general fund tax burden has slipped from more than 5 percent of personal income to just over 3 percent, suggesting that cuts in the state ultimately reduced revenues as illustrated in Chapter 3. As Table 4-1 illustrates, tax cuts from low levels are NOT inconsistent with Laffer's predictions.

Probably the best example of the supply-side concept applies to the federal income tax rate reductions of 1960 and 1984 where top rates were reduced from 90 percent to 70 percent and then from 70 percent to 28 percent. Federal deficits ballooned in the 1980s despite the "pro-supply side" rhetoric at the time. In contrast, the Kansas state income tax cuts in 2012 were in many ways a widely documented fiscal disaster for the state of Kansas. The Kansas case illustrates that, unlike Federal budgets, state budgets need to be balanced and revenue-eroding tax cuts must come with expenditure reductions, resulting in public-sector reductions to offset any "animal spirits" induced private-sector gains.

The challenge with assessing the impacts of tax cuts is that the tax cuts do not occur in a vacuum, so it is legitimately hard to measure their impact in isolation. The tax reductions in Arizona usually were passed with the justification that the cuts would be good for the economy. However, empirical evidence indicates that economic performance in Arizona has not been stronger since the tax cuts went into effect. Chart 4-1 provides an illustration. In the chart, the tax change is expressed as a percentage of state government general fund tax revenue. The sign on the tax change has been reversed to facilitate comparison to the two lines representing GDP. Hence, a tax cut is a positive bar and a tax increase is a negative bar. Supply-side economics and

CHART 4-1
PER CAPITA AND PER WORKER GROSS DOMESTIC PRODUCT IN ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE COMPARED TO TAX CHANGES



* The tax change is expressed as a percentage of state government general fund revenue; the sign on the tax change has been reversed to facilitate comparison to the two lines representing GDP.
Note: GDP is expressed on a calendar year basis; tax changes are by fiscal year.

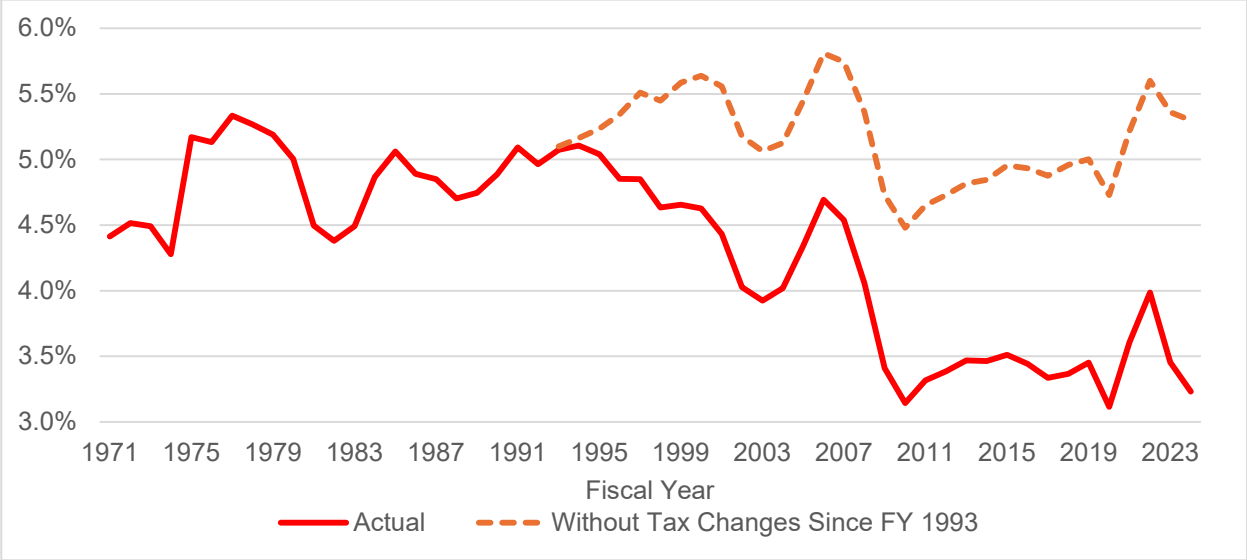
Sources: Calculated from data of the Arizona Joint Legislative Budget Committee, *2024 Tax Handbook*, Appendix D and the U.S. Department of Commerce, Bureau of Economic Analysis (GDP, population, and employment).

the Laffer Curve argument suggests that positive bars (tax cuts) should be followed by increases in the growth measures relative to the national average.

The chart reveals that the tax increases of the late 1980s were actually followed by increases in both per worker GDP and per capita GDP in Arizona relative to the U.S. average — conventional measures of standards of living. So, there is no support for the argument that the tax increases stifled prosperity in Arizona. In contrast, during and following the tax cuts that have been implemented in most years since the early 1990s, the prosperity measures are generally flat to declining. (The results of the recent round of tax cuts in 2022 is yet to be determined.) In retrospect, the productivity-induced growth of the 1990s likely fueled growth in the economy and revenue generation apart from any role played by tax cuts. But this growth paved the way for tax cutters to begin what has been a 30-plus-year erosion of the general fund revenue base.

Did the tax cuts produce more revenue as suggested by many supply-side proponents? Certainly more revenue was collected over time. Tax revenue grew historically in Arizona because the overall economy grew. And growth occurred at a robust rate both before and after enacting tax-cut legislation. But revenue as a share of personal income actually fell as discussed at length in Chapter 3 and illustrated in Chart 4-2, leaving challenges to meet the public-sector demands of a growing state. Arguably the domestic in-migration that fueled the growth masked the ongoing tax base erosion since new arrivals added to the tax base and purchased new consumer durables

CHART 4-2
ARIZONA STATE GOVERNMENT GENERAL FUND TAX REVENUE AS A SHARE OF PERSONAL INCOME, ACTUAL AND SIMULATED WITHOUT TAX CHANGES



Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (revenues and estimated value of tax law changes) and the U.S. Department of Commerce, Bureau of Economic Analysis (quarterly personal income).

to furnish new homes and fill garages. So, as long as a significant number of new arrivals showed up each year, there was apparently plenty of money. But the cuts and the generally low tax rates in the state resulted in revenue shortfalls when cyclical downturns occurred and the pace of new arrivals slowed.

Additional Considerations

The analysis and illustrations above offer no evidence that Arizona's reliance on tax cuts and limited government spending created growth and prosperity in the state in recent decades. But it is impossible to know how much new business could have been created with greater emphasis on education spending — especially spending tied to retaining and rewarding top teachers and targeting performance outcomes designed to bolster the quality of the state's workforce.

Moreover, recent rounds of tax cuts have delivered significant reductions to taxes paid by high-income families — arguably at the expense of public-sector education investments that might have enabled lower-income families to acquire workforce skills enabling them to compete in the workforce. In this light, it is conceivable that the tax-cut agenda not only failed to produce promised growth but also limited public-sector investments in education that might have lifted more residents out of poverty and raised lower-middle-income households solidly into the middle class. The evidence suggests that prosperity can be achieved by maintaining a balance between low-to-moderate tax collections while maintaining public-sector investments at a level that promotes growth in overall standards of living.

Conclusion

The lack of supply-side effects from the tax reductions implemented since the early 1990s in Arizona does not invalidate supply-side theory or the "Laffer Curve." Instead, the conditions that must be present for reductions in taxes to result in gains in economic activity and increased government revenue were not in place in Arizona.

Supply-side benefits have not been realized in Arizona for several reasons:

- Even in the early 1990s when the tax reductions began, the overall state and local government tax burden in Arizona was not higher than average. The "Laffer Curve" indicates that benefits will occur only if the tax reduction is made to a high tax rate.
- Individual taxes have been disproportionately reduced. Significant reductions in business taxes did not occur until the 2010s. The relationship between taxes and economic growth is much stronger for business taxes than for individual taxes.
- State and local government taxes are a relatively small expense to businesses, and only the minority of businesses engaged in traded activities can boost a region's economic growth. Thus, only a small supply-side effect should be expected even if relatively high state and local government taxes are reduced.
- The tax cuts in Arizona have been accompanied by spending reductions for public programs valued by businesses, such as education and transportation. The state's business climate has suffered due to these expenditure cuts.
- Even if all of the other conditions are met, in a state such as Arizona that typically has a low unemployment rate and low commercial real estate vacancy rates, a *net* benefit to government finance will not be realized. Workers would need to be imported from outside the state to accommodate the increase in economic activity, meaning that government expenditures would rise to serve the new residents and businesses.

CHAPTER 5: STATE AND LOCAL GOVERNMENT REVENUE

This chapter places Arizona state and local government revenue trends in the context of the rest of the nation and a group of comparison states. The revenue data come from the *Annual Survey of State and Local Government Finances*, published by the U.S. Census Bureau. The analysis is limited to general revenue from own sources — excluding revenue received by government utilities, liquor stores, and insurance trusts and revenue received from the federal government. Federal monies generally are limited in the ways in which they can be spent.

Per Capita Revenue

Since the early 1990s, Arizona's Legislature has shown a preference for lowering taxes. The state has collected less than 90 percent of the national average in per capita own-source revenue each year since FY 1991. Over this period, Arizona has not only maintained its status as a low-tax state but has driven per capita revenue to an especially low level. As a percentage of the national average, state per capita own-source revenue has shrunk from 89-to-70 percent between FYs 1992 and 2022. In terms of national rank, this decline represents a deterioration from 33rd among all states (including the District of Columbia) to 50th. Only Tennessee collected lower per capita revenue in FY 2022.

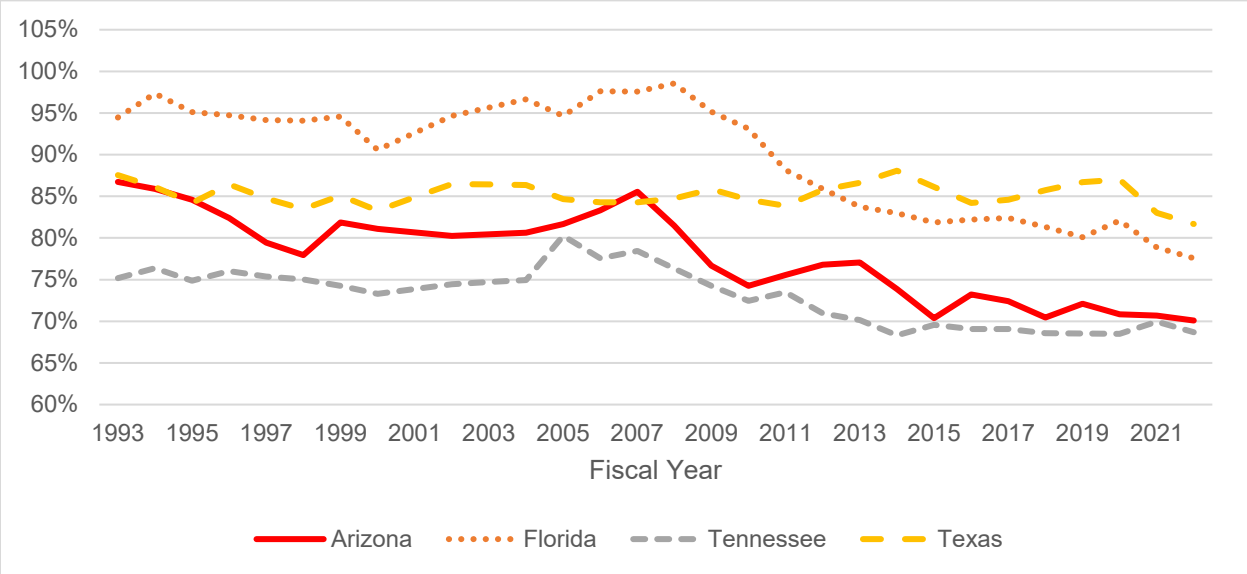
From another perspective, Arizona's inflation-adjusted per capita revenue has grown 36 percent while the national average has increased 72 percent between FYs 1992 and 2022. Since inflation-adjusted per capita personal income expanded by more than 70 percent over this time period, nationally and in Arizona, there was no increase in the tax burden nationally and a sizable decrease in Arizona. The state's revenue growth over this period was the lowest of any state except Alaska, which started the period collecting 324 percent of the U.S. average. This has led to a deterioration of Arizona's fiscal position relative to the national average that is low even by the standards of other low-tax states.

To illustrate this point, per capita own-source revenue in Arizona is compared to that of the nine comparison states in Chart 5-1. In FY 1993, Arizona's revenue was 87 percent of the national average, ranking fifth among the 10 states and within 5 percentage points of most of the comparison states.

Between FYs 1993 and 2022, Arizona's revenue dropped significantly relative to the national average, with the change ranking eighth among the comparison states. Florida, Georgia, and Nevada also had large decreases relative to the U.S. average; Idaho, Tennessee, and Texas had smaller relative declines; North Carolina's percentage of the U.S. average was steady; and South Carolina and Utah had increases versus the U.S. average.

In FY 2022, per capita own-source state and local government revenue in Arizona ranked ninth among the comparison states, higher than only Tennessee. At just 70 percent of the national average, Arizona was more than 10 percentage points below Nevada, North Carolina, South Carolina, Texas, and Utah and more than 5 percentage points lower than Florida, Georgia, and Idaho.

CHART 5-1
PER CAPITA OWN-SOURCE REVENUE
AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES



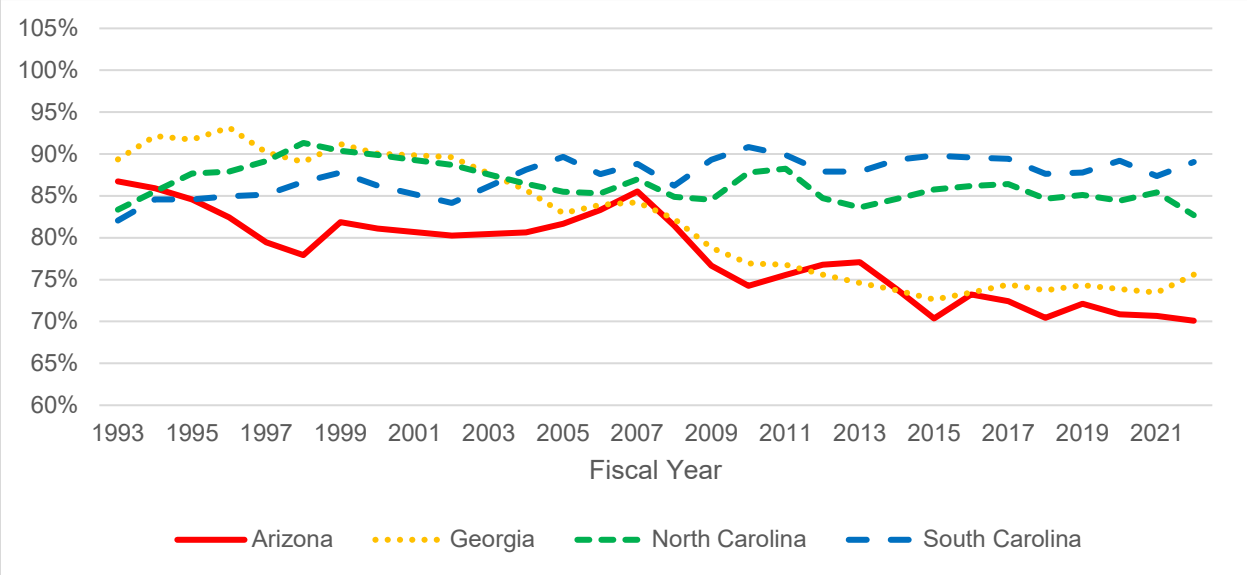


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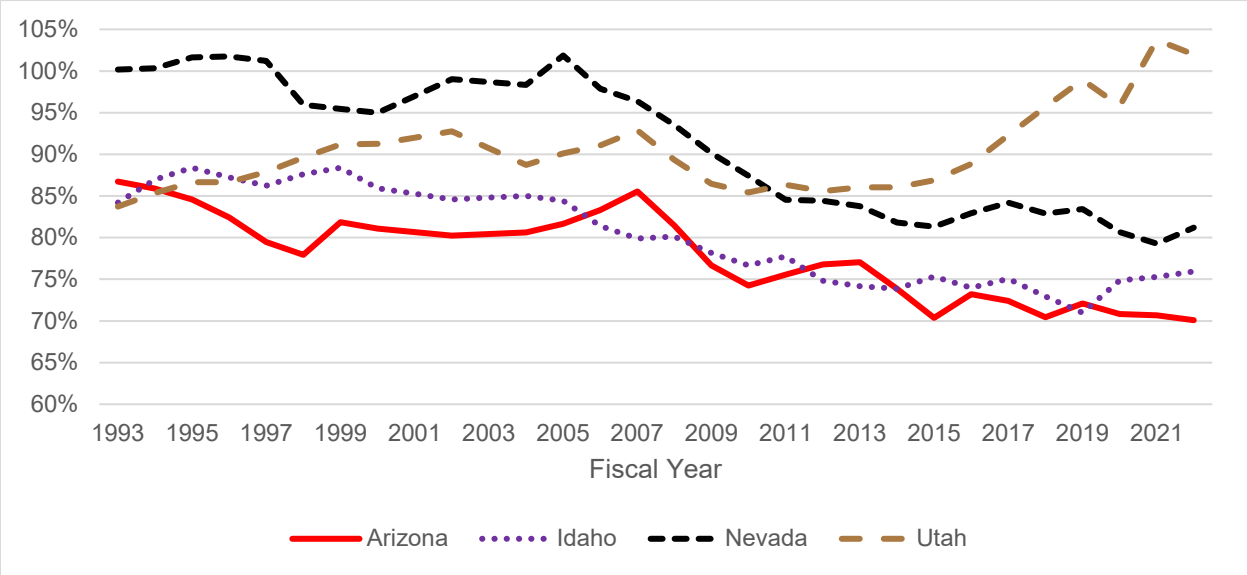
CHART 5-1 (continued)
PER CAPITA OWN-SOURCE REVENUE
AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES



Sources: Calculated from U.S. Department of Commerce, Census Bureau, *Survey of State and Local Government Finances* (own-source general revenue) and U.S. Department of Commerce, Bureau of Economic Analysis (population)

Adjustment for the Cost of Living

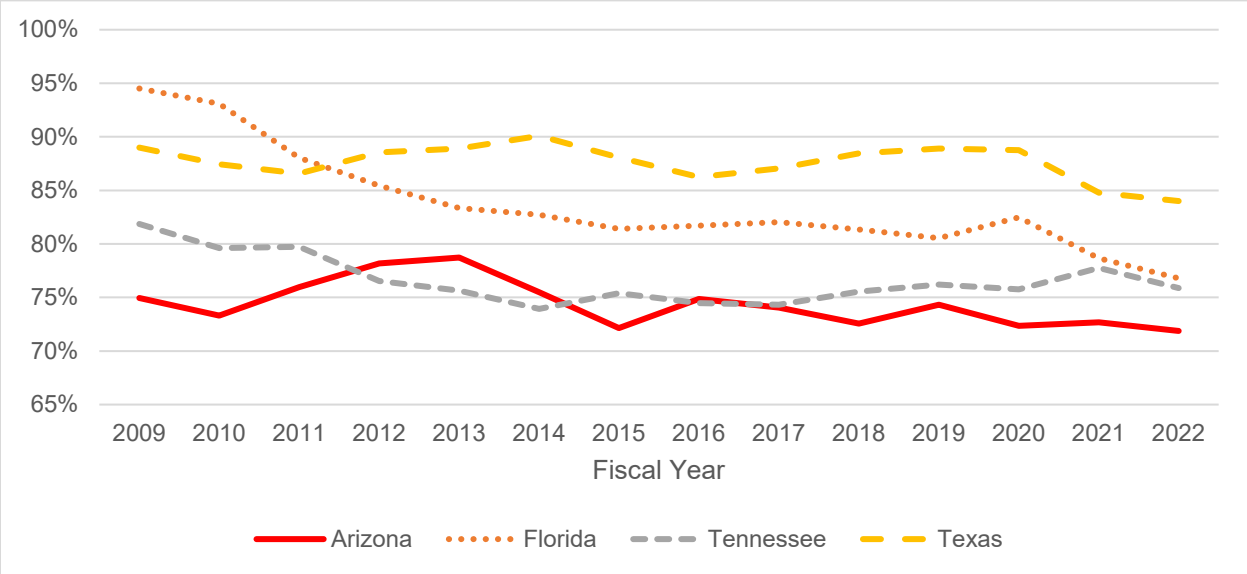
Chart 5-2 presents the same series as Chart 5-1 but adjusted for the regional price parity figures produced by the U.S. Bureau of Economic Analysis that begin in FY 2009. Adjusting for the cost of living has a limited effect on Arizona's comparison to the U.S. average since the state's cost of living has been within 3 percent of the national average in each year from FY 2009 through FY 2022. In FY 2022, the state's adjusted per capita revenue was 71.3 percent of the national average, hardly different from the unadjusted figure of 70.1 percent.

While Arizona's cost of living in FY 2022 was lower than the U.S. average, it was second highest (to Florida) among the comparison states. Seven of the comparison states had a cost of living at least 4 percent below the U.S. average, resulting in a more noticeable change versus the nation in their per capita revenue figures when adjusting for the cost of living. Making the adjustment for the cost of living puts Arizona's per capita own-source state and local government revenue last among all states in FY 2022.

Revenue as a Percentage of Personal Income

As discussed in Chapter 1, adjusting government revenue figures for personal income brings in the concept of ability to pay. Between FYs 1993 and 2022 relative to the U.S. average, Arizona's per capita personal income and that of most of the comparison states did not change much. However, the relative figure rose substantially in Utah and fell considerably in Nevada.

CHART 5-2
PER CAPITA OWN-SOURCE REVENUE AS A PERCENTAGE OF THE NATIONAL AVERAGE ADJUSTED FOR THE COST OF LIVING, SELECTED STATES



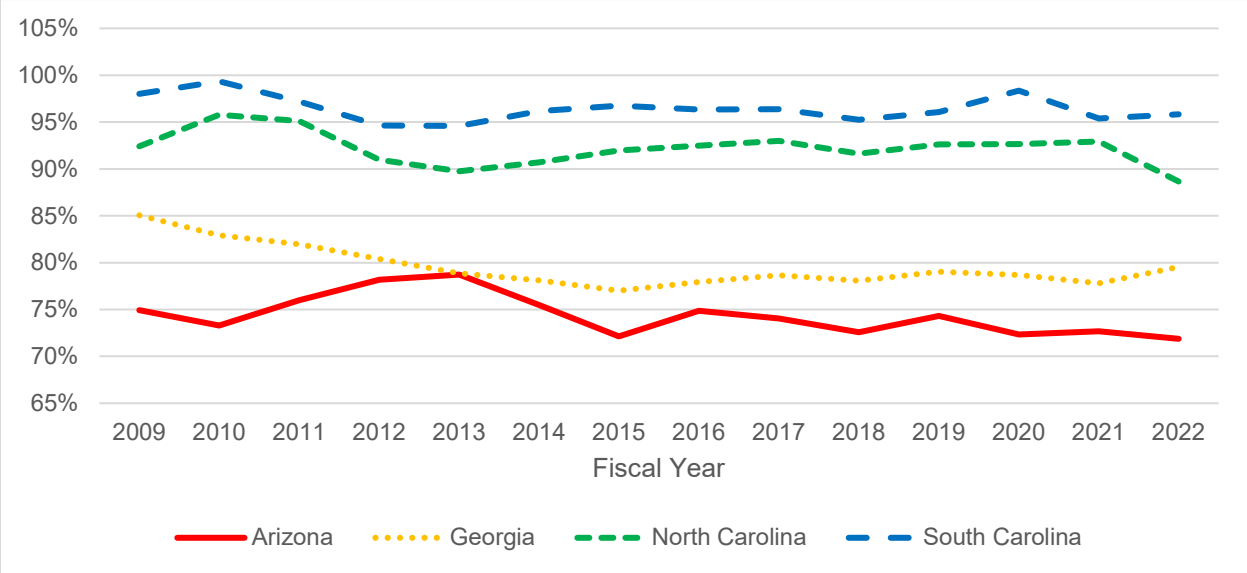


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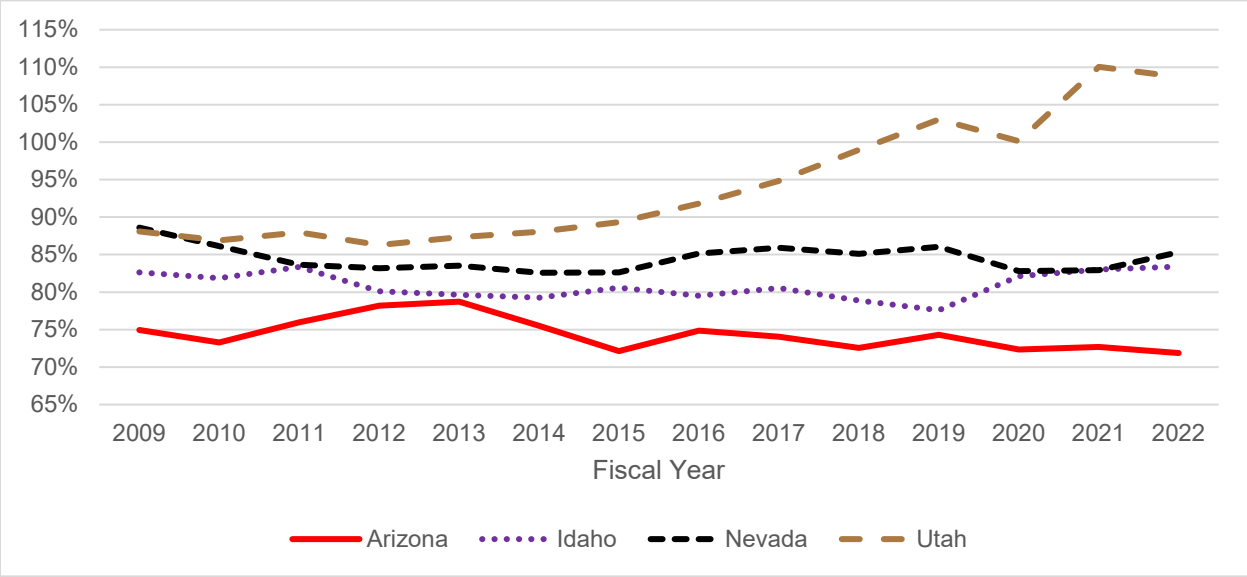
CHART 5-2 (continued)
PER CAPITA OWN-SOURCE REVENUE AS A PERCENTAGE OF THE NATIONAL AVERAGE ADJUSTED FOR THE COST OF LIVING, SELECTED STATES



Sources: Calculated from U.S. Department of Commerce, Census Bureau, *Survey of State and Local Government Finances* (own-source revenue) and U.S. Department of Commerce, Bureau of Economic Analysis (population and regional price parities).

Table 5-1 presents own-source revenue in FY 2022 as a percentage of the U.S. average for the comparison states based on each of the two standardizations. With PCPI below the national average in each of these states, own-source revenue was further below the national average when adjusted by population and the cost of living. Arizona had the lowest adjusted per capita figure and ranked ninth adjusted for personal income.

Relative Revenue Shortfall in Arizona

In fiscal year 2022, total own-source revenue needed to be approximately $16 billion higher for Arizona to rank in the middle of all states on a per capita basis adjusted for the cost-of-living. For the adjusted figure to equal the national average, $20.8 billion more was needed. Actual own-source revenue in Arizona was $50.6 billion. The amount of additional funding needed to match the adjusted per capita figure in each of the comparison states is shown in the first graph of Chart 5-3.

The second graph of Chart 5-3 displays the shortfalls in own-source tax revenue based on the per capita figures adjusted for the cost-of-living. For Arizona to rank in the middle of the states, an additional $9.5 billion was needed. To equal the national average, $13.2 billion more was needed. The third graph of Chart 5-3 shows the comparable figures for own-source nontax revenue.

TABLE 5-1
OWN-SOURCE REVENUE AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES, FISCAL YEAR 2022

	Adjusted by Personal Income	Adjusted by Population and the Cost of Living	Difference
Arizona	78.9%	71.3%	-7.6
Florida	80.1	76.2	-3.9
Georgia	87.3	79.0	-8.3
Idaho	88.0	82.8	-5.2
Nevada	86.1	84.7	-1.4
North Carolina	92.9	88.1	-4.8
South Carolina	108.4	95.2	-13.2
Tennessee	76.8	75.3	-1.5
Texas	86.6	83.4	-3.2
Utah	111.6	107.8	-3.8

Sources: Calculated from U.S. Department of Commerce, Census Bureau, *Survey of State and Local Government Finances* (own-source revenue) and U.S. Department of Commerce, Bureau of Economic Analysis (personal income, population, and regional price parities).

Own-Source Revenue by Type

State and local government own-source revenue comes from numerous tax and nontax sources. Each state uses a varying mix of these types of revenue. Per capita revenue adjusted for the cost of living as a percentage of the U.S. average in FY 2022 is shown by source in Table 5-2 for each of the comparison states.

Nationally, the largest state and local government tax sources in FY 2022 were the property tax ($649 billion), individual income tax ($601 billion), and the general sales tax ($557 billion). Other tax sources included selective sales taxes ($232 billion), corporate income tax ($160 billion), motor vehicle license tax ($35 billion), and miscellaneous taxes ($134 billion).

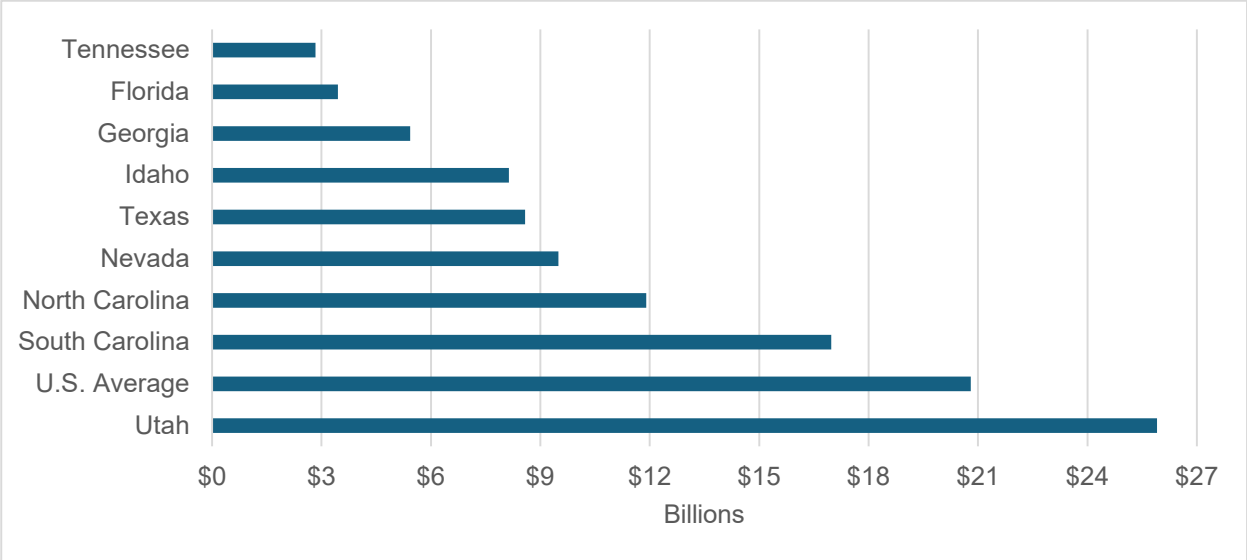
The primary nontax source of revenue was current charges, also known as user fees ($635 billion). There are numerous categories of current charges; the greatest revenue producers were hospitals ($223 billion) and higher education (tuition of $127 billion). Revenue from miscellaneous other nontax sources totaled $278 billion.

The percentage of the national average in any state depends not only on tax rates and the width of the tax base but also on such factors as income and consumer preferences. For example, per capita taxes on alcoholic beverages are quite low in Idaho and Utah in part because of the limited consumption of such beverages by residents of these states.

The change in the percentage of the U.S. average between FY 1993 and FY 2022 is shown by revenue source in Table 5-3 for each of the comparison states, based on per capita revenue *not* adjusted for the cost of living. Based on the per capita standardization, a summary of the adjusted FY 2022 figures and the change between FYs 1993 and 2022 follows for each of the selected states.

CHART 5-3
ADDITIONAL STATE AND LOCAL GOVERNMENT REVENUE NEEDED IN ARIZONA IN FISCAL YEAR 2022 TO MATCH PER CAPITA REVENUE ADJUSTED FOR THE COST OF LIVING, SELECTED STATES

TOTAL OWN-SOURCE REVENUE



OWN-SOURCE TAX REVENUE

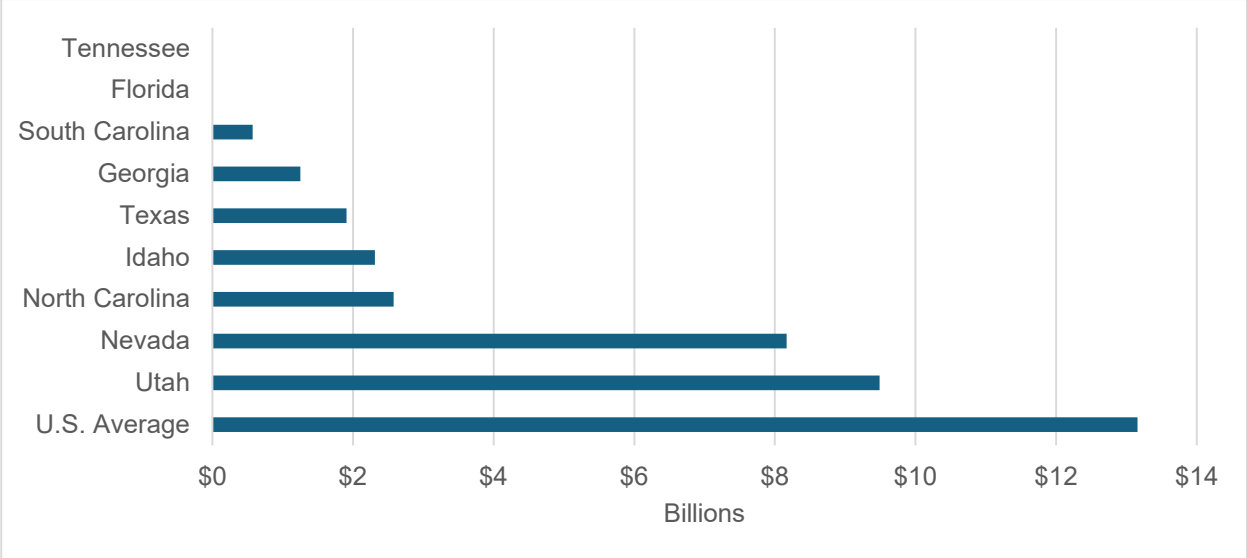


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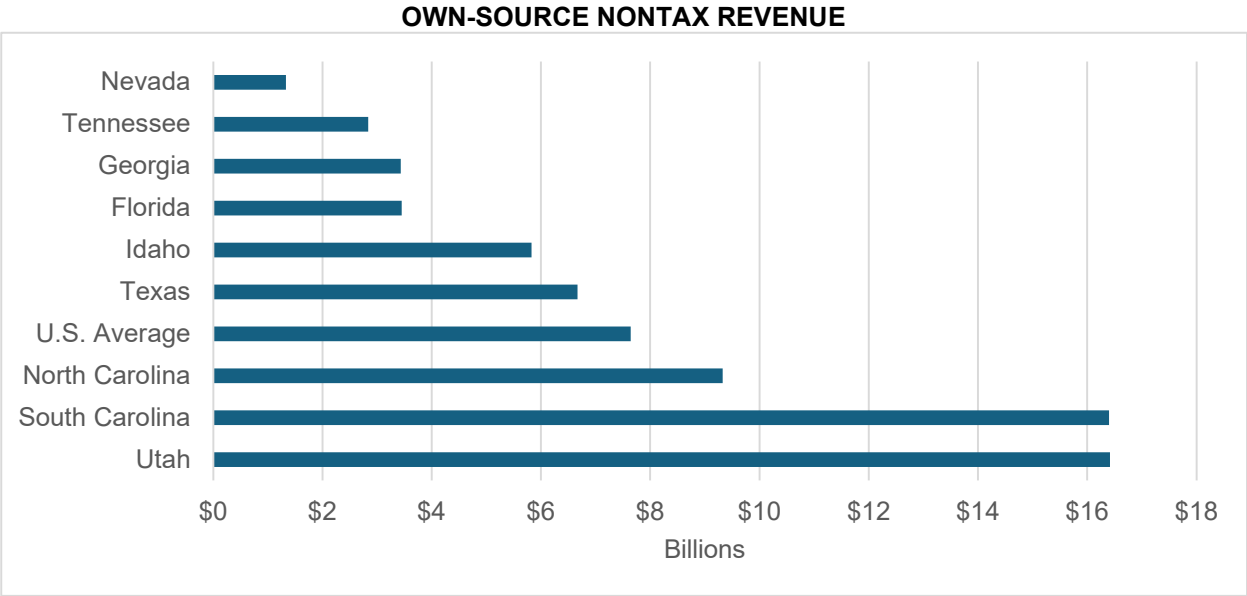
CHART 5-3 (continued)
ADDITIONAL STATE AND LOCAL GOVERNMENT REVENUE NEEDED IN ARIZONA IN FISCAL YEAR 2022 TO MATCH PER CAPITA REVENUE ADJUSTED FOR THE COST OF LIVING, SELECTED STATES



Sources: Calculated from U.S. Department of Commerce, Census Bureau, *Survey of State and Local Government Finances* (own-source revenue) and U.S. Department of Commerce, Bureau of Economic Analysis (population, and regional price parities).

Arizona

In FY 2022, Arizona had a very low own-source tax burden, with the cost-of-living-adjusted per capita figure 25 percent below the U.S. average, ranking 49th among all states; Florida and Tennessee had a lower burden. Except for the general sales tax, Arizona's tax burden was considerably below the national average in each of the categories shown in Table 5-3; Arizona ranked 38th or lower in each category. It ranked below the middle of the comparison group except for the tax on tobacco products, including a rank of last on selective sales taxes as a whole, the motor fuels tax, total nontax revenue, and current charges. Arizona also was very low on adjusted per capita nontax revenue collections at 38 percent below the U.S. average, ranking 49th. Total own-source revenue was 29 percent below average, lowest among all states.

Between FYs 1993 and 2022, Arizona's tax burden decreased relative to the national average in each category shown in Table 5-3 except for the general sales tax and the tobacco products tax. Voters increased the tax rate on the latter four times during this period. Among the comparison states, Arizona's tax decrease was second largest, including the greatest on the property tax and the vehicle license tax and second largest on the motor fuels tax, the tax on public utilities, and the corporate income tax. The decrease in nontax revenue was third greatest among the 10 states. Two of the comparison states had a larger decrease in total own-source revenue.

TABLE 5-2
OWN-SOURCE REVENUE PER CAPITA ADJUSTED FOR THE COST OF LIVING AS A PERCENTAGE OF THE NATIONAL AVERAGE, BY TYPE OF TAX, SELECTED STATES, FISCAL YEAR 2022

	Arizona	Florida	Georgia	Idaho	Nevada	North Caro-lina	South Caro-lina	Tennes-see	Texas	Utah
Total Tax Revenue	75%	68%	77%	79%	91%	80%	76%	73%	79%	93%
Property Tax	66	85	79	61	72	64	79	55	118	74
Individual Income Tax	58	0	98	82	0	98	78	0	0	119
General Sales Tax	136	113	80	99	171	93	77	142	121	116
Selective Sales Taxes	51	86	66	61	197	85	79	103	101	85
Motor Fuels	65	105	91	137	134	130	113	117	76	108
Alcoholic Beverages	46	59	145	23	63	256	169	321	209	21
Tobacco Products	71	83	41	46	106	53	46	64	74	61
Public Utilities	37	205	47	32	136	0	27	23	81	135
Other	46	51	57	37	267	75	72	104	114	72
Corporate Income Tax	34	35	50	123	0	34	51	98	0	61
Motor Vehicle License Tax	43	64	38	128	70	106	61	85	86	77
Miscellaneous Taxes	39	111	29	45	184	60	77	116	116	38
Total Nontax Revenue	62	97	83	92	69	109	145	81	96	145
Current Charges	60	88	93	100	68	119	167	81	89	167
Miscellaneous Nontax	67	119	61	72	72	88	95	82	112	96

Sources: Calculated from U.S. Department of Commerce, Census Bureau, *Survey of State and Local Government Finances* (own-source revenue) and U.S. Department of Commerce, Bureau of Economic Analysis population and regional price parities).

TABLE 5-3
CHANGE IN OWN-SOURCE REVENUE PER CAPITA AS A PERCENTAGE OF THE NATIONAL AVERAGE, BY TYPE OF TAX, SELECTED STATES, FISCAL YEAR 1993 THROUGH FISCAL YEAR 2022

	Arizona	Florida	Georgia	Idaho	Nevada	North Caro-lina	South Caro-lina	Tennes-see	Texas	Utah
Total Tax Revenue	-18	-19	-13	-7	-11	-11	-4	-8	-8	10
Property Tax	-29	-14	-4	-9	2	3	6	-0	10	7
Individual Income Tax	-16	-	-10	-25	-	-28	-14	-4	-	18
General Sales Tax	5	-14	-31	8	23	-1	-9	-4	4	1
Selective Sales Taxes	-27	-44	-6	-16	-58	-21	5	-39	-24	14
Motor Fuels	-40	-10	14	-11	-25	-11	20	-28	-49	-4
Alcoholic Beverages	-24	-201	-54	-7	-1	87	-46	105	58	-42
Tobacco Products	16	-46	-10	-37	-41	25	8	-4	-66	3
Public Utilities	-47	19	20	19	87	-67	-14	10	7	87
Other	-10	-33	-25	-12	-294	-29	13	-126	-34	24
Corporate Income Tax	-27	-18	-19	49	-	-68	1	19	-	14
Motor Vehicle License Tax	-69	-50	-8	13	-55	9	9	-20	-23	18
Miscellaneous Taxes	-2	9	-22	-49	-38	-4	-21	13	-31	-4
Total Nontax Revenue	-15	-10	-16	-12	-39	25	37	-3	1	41
Current Charges	-11	-14	-28	-6	-52	18	31	-23	-1	59
Miscellaneous Nontax	-20	4	-5	-28	-18	28	30	26	10	-2

Sources: Calculated from U.S. Department of Commerce, Census Bureau, *Survey of State and Local Government Finances* (own-source revenue) and U.S. Department of Commerce, Bureau of Economic Analysis population and regional price parities).

Florida
Florida does not levy an individual income tax, contributing to its lowest tax burden among the comparison states in FY 2022. In contrast, Florida's tax burden was greater than the U.S. average on the general sales tax, the motor fuels tax, the tax on public utilities, and miscellaneous taxes. Miscellaneous nontax revenue also was above average, with total nontax revenue near the U.S. average.

Florida's tax burden declined the most of the comparison states between FYs 1993 and 2022. It registered decreases relative to the U.S. average between FYs 1993 and 2022 except for the tax on public utilities and miscellaneous taxes.

Georgia
Though Georgia's tax burden in FY 2022 was above average only on the alcoholic beverages tax, its overall tax burden was somewhat higher than that of Arizona. Georgia exhibits a better balance among tax sources than Arizona. Nontax revenue and total own-source revenue also were greater than in Arizona.

The tax burden and overall own-source revenue in Georgia did not decrease as much as in Arizona between FYs 1993 and 2022. Georgia experienced gains greater than the U.S. average only on the motor fuels and public utilities taxes. Its decline in nontax revenue was similar to that in Arizona.

Idaho
The overall tax burden and own-source revenue in FY 2022 were higher in Idaho than in Arizona. Idaho's tax burden was above average on the motor fuels tax, corporate income tax, and motor vehicle license tax. Its current charges equaled the U.S. average.

The tax burden in Idaho decreased by less than half as much as in Arizona between FYs 1993 and 2022. It experienced gains greater than the U.S. average on the general sales tax, public utilities tax, corporate income tax, and motor vehicle license tax. Nontax revenue also decreased less than in Arizona.

Nevada
Though Nevada does not levy an income tax — either individual or corporate — its overall tax burden in FY 2022 was higher than that in Arizona; nontax revenue also was higher. Nevada's general sales tax burden exceeded that of Arizona and Nevada was above the U.S. average on most of the selective sales taxes and miscellaneous taxes.

Nevada's tax burden fell by less than in Arizona between FYs 1993 and 2022, with increases greater than the national average on the property tax, general sales tax, and public utilities tax. However, its nontax revenue fell substantially, such that its overall own-source revenue dropped by more than in Arizona.

North Carolina
North Carolina's overall tax burden and own-source revenue in FY 2022 were higher than in Arizona. North Carolina's tax burden was above average on the motor fuels tax, alcoholic

beverages tax, and motor vehicle license tax. Its current charges and total nontax revenue exceeded the U.S. average.

The tax burden in North Carolina decreased by less than in Arizona between FYs 1993 and 2022. It experienced gains greater than the U.S. average on the property tax, alcoholic beverages tax, tobacco products tax, and motor vehicle license tax. Nontax revenue rose considerably relative to the U.S. average.

South Carolina
South Carolina's overall tax burden in FY 2022 was slightly higher than in Arizona. South Carolina's tax burden was above the U.S. average on the motor fuels tax and alcoholic beverages tax. Its current charges and total nontax revenue greatly exceeded the U.S. average, putting its overall own-source revenue considerably higher than in Arizona.

The tax burden in South Carolina decreased considerably less than in Arizona between FYs 1993 and 2022. It experienced gains greater than the U.S. average on overall selective sales taxes and the motor vehicle license tax. Nontax revenue rose considerably relative to the U.S. average, putting the change in own-source revenue above the U.S. average.

Tennessee
Tennessee does not levy an individual income tax, contributing to its second-lowest tax burden among the comparison states in FY 2022. In contrast, Tennessee's tax burden was greater than the U.S. average and Arizona on the general sales tax, selective sales taxes, and miscellaneous taxes. Nontax revenue and total own-source revenue was greater than in Arizona.

Tennessee's tax burden declined by less than half as much as in Arizona between FYs 1993 and 2022. It registered increases relative to the U.S. average on the tax on public utilities, alcoholic beverages tax, corporate income tax, and miscellaneous taxes. Nontax revenue did not decrease as much as in Arizona.

Texas
Though Texas does not levy an individual income tax, its overall tax burden in FY 2022 was higher than in Arizona. The tax burden in Texas was greater than the U.S. average on the general sales tax, selective sales taxes (particularly alcoholic beverages), and miscellaneous taxes. Nontax revenue and total own-source revenue was greater than in Arizona.

The tax burden in Texas declined by half as much as in Arizona between FYs 1993 and 2022. It registered increases relative to the U.S. average on the property tax, alcoholic beverages tax, and tax on public utilities. Nontax revenue rose as much as the U.S. average.

Utah
Utah was the outlier among the comparison states, with own-source revenue greater than the U.S. average and a tax burden not far below average. Its tax burden was above average on the general sales tax, individual income tax, motor fuels tax, and tax on public utilities. Nontax revenue was substantially higher than the U.S. average.

Utah was the only comparison state with a change in own-source taxes between FYs 1993 and 2022 greater than the national average. It was above average in most of the tax categories and also above average on nontax revenue.

CHAPTER 6: UPDATES TO STATE AND LOCAL GOVERNMENT REVENUE

This chapter estimates the effects on government revenue due to tax-law changes implemented since FY 2022 in the comparison states. Since the *Annual Survey of State and Local Government Finances* has not yet been released for years FY 2023 and forward, a rough measure of revenue by state since FY 2022 has been developed using historical data and data from the State Tax Actions database produced by the National Conference of State Legislatures (NCSL) (https://www.ncsl.org/fiscal/state-tax-actions-2024). This database lists significant tax code (or other revenue-generating law) changes in each state by year, along with their estimated fiscal impacts for the next two fiscal years. To ensure accuracy and to fill in missing states, the information from the NCSL was cross-referenced to the revenue-law changes listed in the National Association of State Budget Officers' *Fiscal Survey of States* (https://www.nasbo.org/reports-data/fiscal-survey-of-states).

To construct state revenue forecasts, it was assumed that in the absence of any changes to the tax code, revenue per dollar of personal income would remain constant. Using actual and projected personal income data from S&P Global, total revenues without tax-law changes were produced, then the estimated fiscal impact from tax changes listed in the State Tax Actions database was subtracted (assuming a negative effect on revenue from a tax change). Finally, projected population data from S&P Global was used to calculate projected per capita revenue. Unless otherwise noted, all revenue numbers in this chapter are per capita.

State Tax Updates

In the years following the COVID-19 pandemic, states saw booming revenue growth due to a combination of federal aid, stock market gains, and increased consumer confidence. This increase in tax collections spurred 48 state governments and the District of Columbia to cut taxes, often multiple times.[2] In Arizona, state lawmakers enacted income tax reductions that would convert the state's progressive income tax to a flat rate of 2.5 percent by 2023. Table 6-1 places these cuts in the context of other significant tax cuts from our comparison states. The estimated reduction in per capita revenue from Arizona's income tax cuts were $171.92 in fiscal year 2023 and $144.88 in fiscal year 2024. Only Texas had a notably larger tax revenue reduction, losing an estimated $211.18 per capita in 2024 and $223.53 in 2025. Idaho's tax change, while a decrease in general fund revenue, does not represent a significant change to the tax code as it simply shifts revenue to a different government fund. It is included in the table to be consistent with the use of tax changes from the State Tax Actions database.

Chart 6-1 displays projected per capita revenue for Arizona and comparison states as a percentage of the FY 2022 national average, along with counterfactual revenue under a scenario where the tax changes did not take effect. Note that Arizona's recent tax changes continue its trajectory of decreasing relative revenues. Other states' tax actions, while significant, do not bring revenues down to Arizona levels. Even Texas, with its large tax revenue reduction, still has revenue 10 percentage points greater than in Arizona relative to the national average in FY 2025. Once again, note that the magnitude of Idaho's revenue reduction is misleading.

[2] Richard C. Auxier, "Reviewing Three Years of State Tax Cuts," *Tax Policy Center*, July 20, 2023, https://taxpolicycenter.org/taxvox/three-years-state-tax-cuts.

TABLE 6-1
RECENT ARIZONA TAX ACTIONS COMPARED TO NOTABLE TAX ACTIONS IN OTHER STATES

State	Tax Action	Projected Per Capita Fiscal Impact
Arizona	Income tax reductions	FY 23: -$171.92 FY 24: -$144.88
Texas	School district property tax reductions	FY 24: -$211.18 FY 25: -$223.53
Georgia	One-time income and property tax credits	FY 24: -$175.48
Idaho	Sales tax earmark for Public School Income Fund and In Demand Careers Fund*	FY 24: -$206.89 FY 25: -$203.88
Utah	Reduced individual and corporate income tax rates and expanded tax credits	FY 24: -$137.98 FY 25: -$137.25

*Not a true tax cut, since it diverts money to other funds. Included in calculations to keep definition of general revenue consistent.

Source: National Conference of State Legislatures, State Tax Actions database.

CHART 6-1
PROJECTED PER CAPITA OWN-SOURCE REVENUE AS A PERCENTAGE OF THE NATIONAL AVERAGE

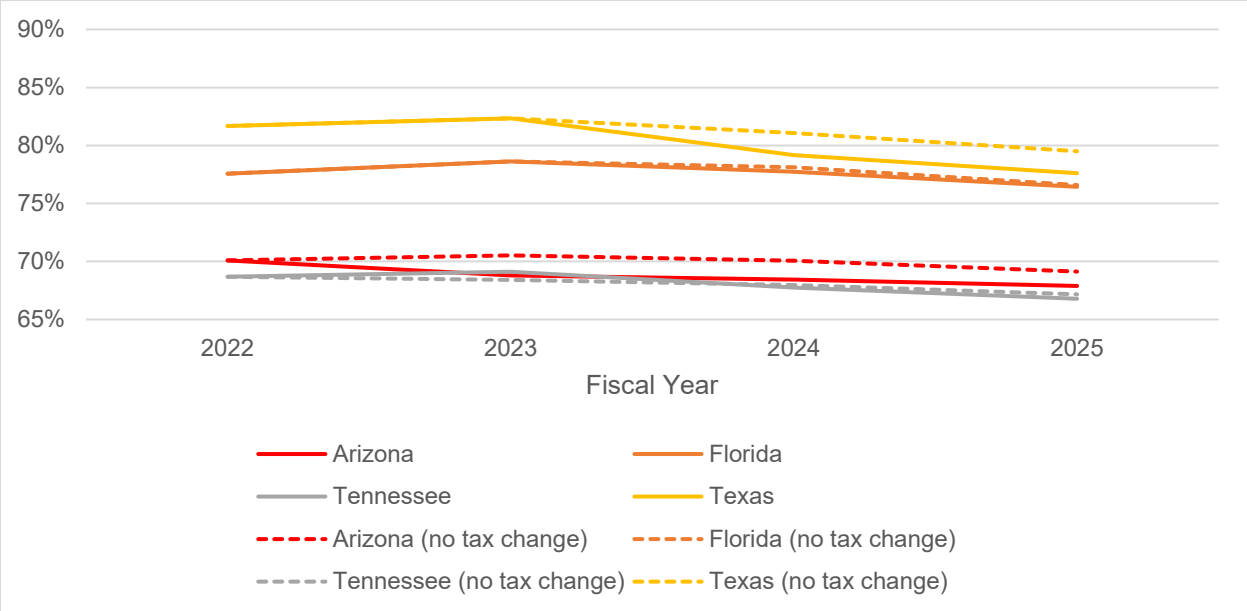


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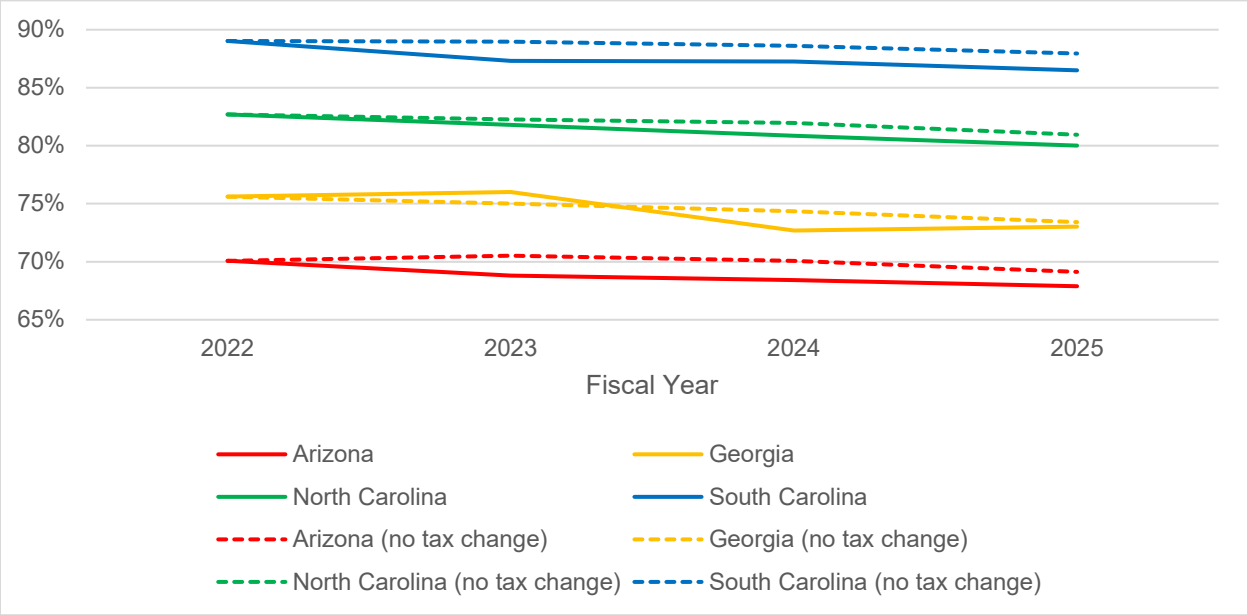
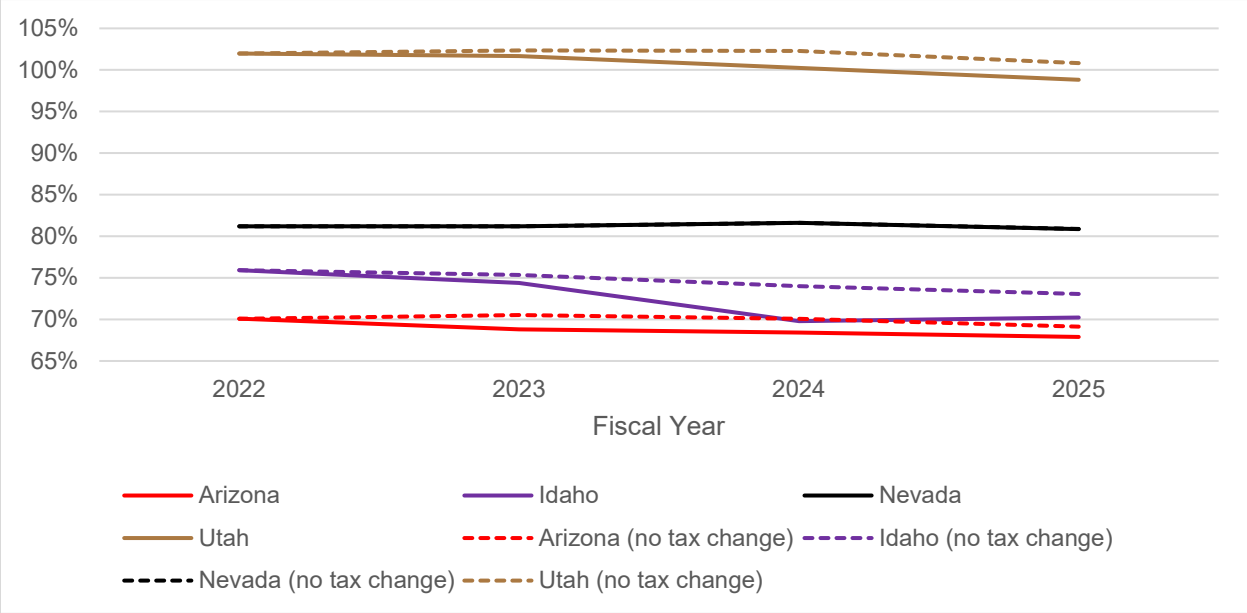
CHART 6-1 (continued)
PROJECTED PER CAPITA OWN-SOURCE REVENUE AS A PERCENTAGE OF THE NATIONAL AVERAGE





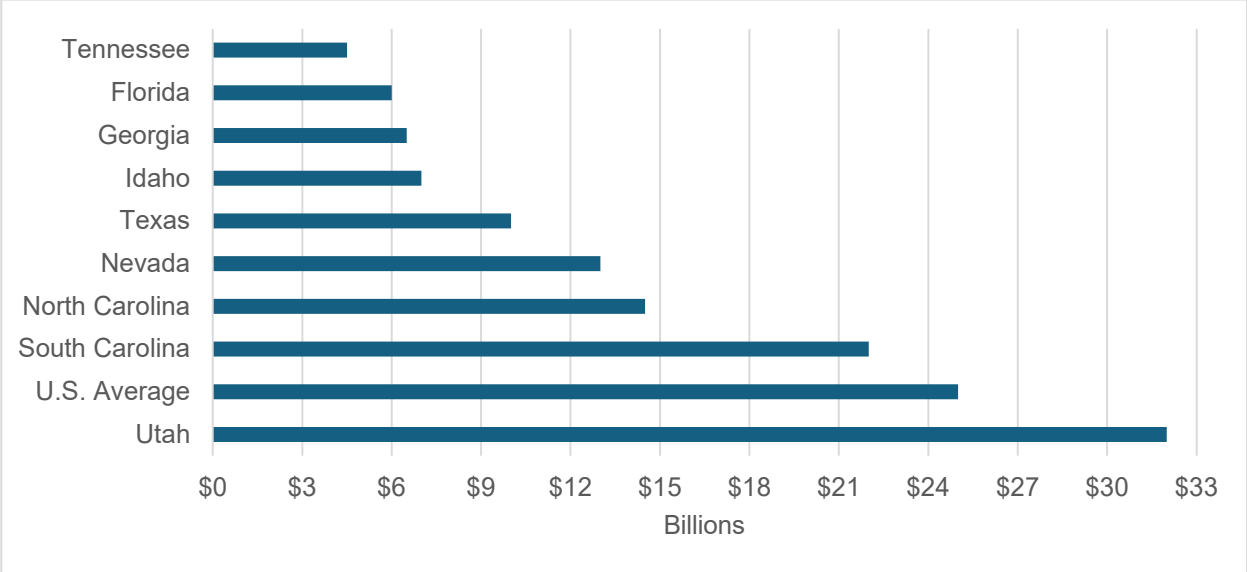
Note: The projected line for Idaho likely understates revenue available for expenditure, as a notable tax action represents a shift in revenue from the state's general fund to another government fund.

Sources: Calculated from U.S. Department of Commerce, Census Bureau, *Survey of State and Local Government Finances* (own-source revenue), U.S. Department of Commerce, Bureau of Economic Analysis (population and personal income), and National Conference of State Legislatures, State Tax Actions database (state tax actions).

Revenue Differences Between States

Chart 6-2 presents the amount of additional state and local government revenue that would be needed in Arizona to match the per capita figure of each of the comparison states in fiscal year 2025, adjusted for the cost of living. To match Tennessee, the next lowest revenue state, Arizona would need to collect $4.5 billion more in taxes in 2025. To match the national average, the state would need $25 billion more.

CHART 6-2
ADDITIONAL STATE AND LOCAL GOVERNMENT REVENUE NEEDED IN ARIZONA IN FISCAL YEAR 2025 TO MATCH PROJECTED PER CAPITA REVENUE ADJUSTED FOR THE COST OF LIVING, SELECTED STATES



Sources: Calculated from U.S. Department of Commerce, Census Bureau, *Survey of State and Local Government Finances* (own-source revenue), U.S. Department of Commerce, Bureau of Economic Analysis (population and personal income), and National Conference of State Legislatures, State Tax Actions database (state tax actions).

CHAPTER 7: EDUCATION REVENUES AND EXPENDITURES

This chapter primarily investigates education revenues and expenditures per student, with K-12 education separated from higher education. The analysis is limited to public institutions.

Elementary and Secondary Education Revenues and Expenditures

A long history of Arizona K-12 education revenues and expenditures per student relative to the national average is displayed in Chart 7-1. During the first third of the 20th century, public K-12 state and local government revenues per student and current operations expenditures per student were well above the national average in Arizona. As recently as the late 1980s, Arizona's per student figures were not much below the U.S. average. However, Arizona's per student revenues and expenditures have been more than 30 percent below the U.S. average since FY 2012.

K-12 Education Revenue

In Chart 7-2, state and local government K-12 education revenue per student in Arizona is displayed as a percentage of the national average in three ways for the period since FY 1987. The per student measure and the per student measure adjusted by per capita personal income each shows a significant decline, though a bit of an uptick is seen in the most recent years for which data are available. The recent improvement in Arizona relative to the nation largely resulted from a legislative effort that was designed to raise teacher salaries by 20 percent from FY 2018 to FY 2021 and from Proposition 123, passed in 2016, that increases the distribution of funding to beneficiaries (primarily public education) of the state's permanent land trust.

Chart 7-3 needs to be interpreted cautiously due to the difficulties in comparing either state funding or local funding across states. It shows a rather steady decrease in local government funding per student in Arizona relative to the U.S. average since the late 1980s, when local government K-12 education funding per student was roughly equal to the U.S. average. After decreasing in the late 1980s and early 1990s, state government K-12 education funding per pupil in Arizona relative to the nation was largely steady until a substantial decrease began in FY 2009. Despite a recovery in recent years, Arizona state government per student funding in FY 2022 relative to the nation remained below the level of the 1990s and 2000s. The FY 2022 state government figure adjusted for the cost of living was 32.5 percent below the U.S. average; the local government figure was 33.9 percent below average.

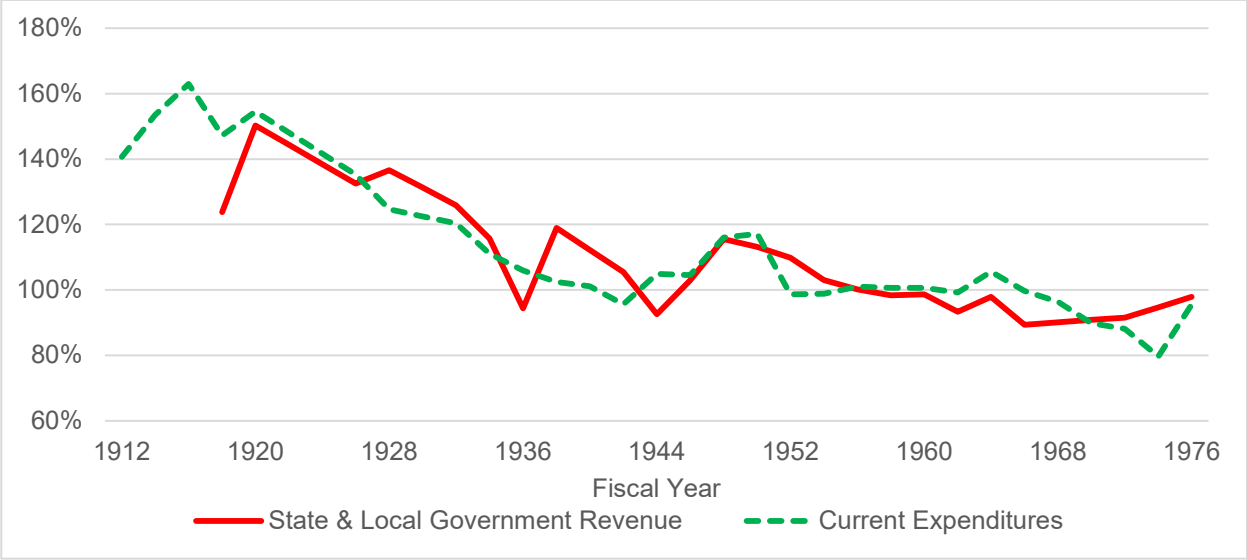
State and local government K-12 education revenue per student in Arizona and in the comparison states as a percentage of the U.S. average is displayed in Chart 7-4. In FY 1987, only Florida had a higher figure than Arizona. By FY 2012, only Idaho and Utah had lower figures than Arizona.

After adjusting for the cost of living, the only states with per student state and local government K-12 education revenue less than in Arizona in FY 2022 were comparison states. The per student revenue figure was 1.8 percent less than in Arizona in Florida and Utah; the differential was 5.7 percent in Idaho.

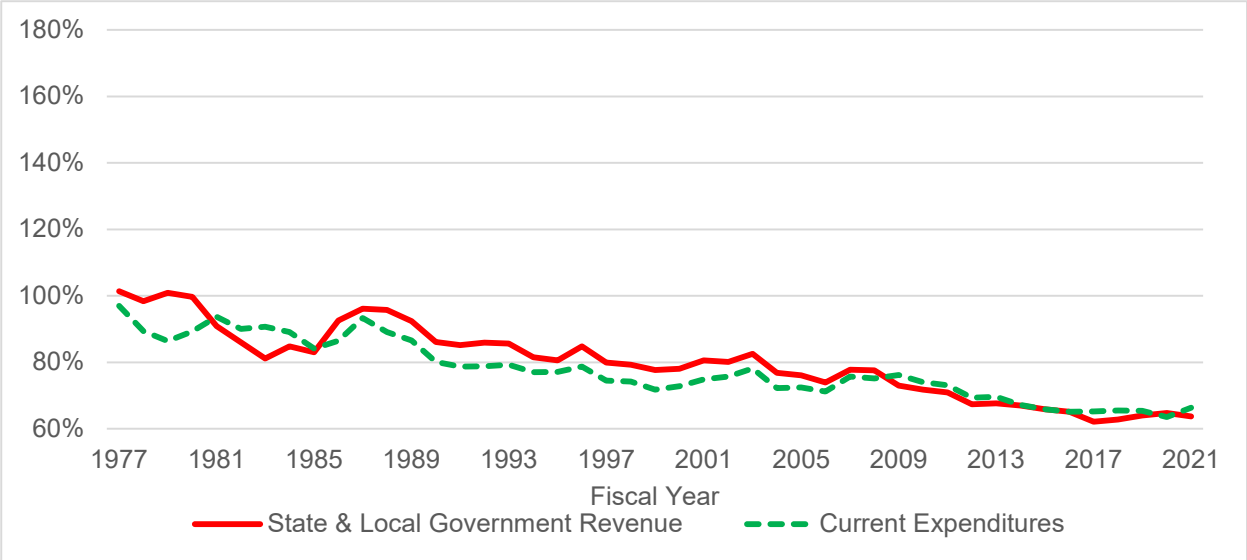
In fiscal year 2022, state and local government revenue for K-12 education needed to be nearly $4.5 billion higher for Arizona to rank in the middle of the states on a per student basis adjusted for the cost of living and $4.9 billion higher for the adjusted per student figure to equal the U.S.

CHART 7-1
PUBLIC K-12 EDUCATION FINANCE PER STUDENT, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE

BIENNIAL

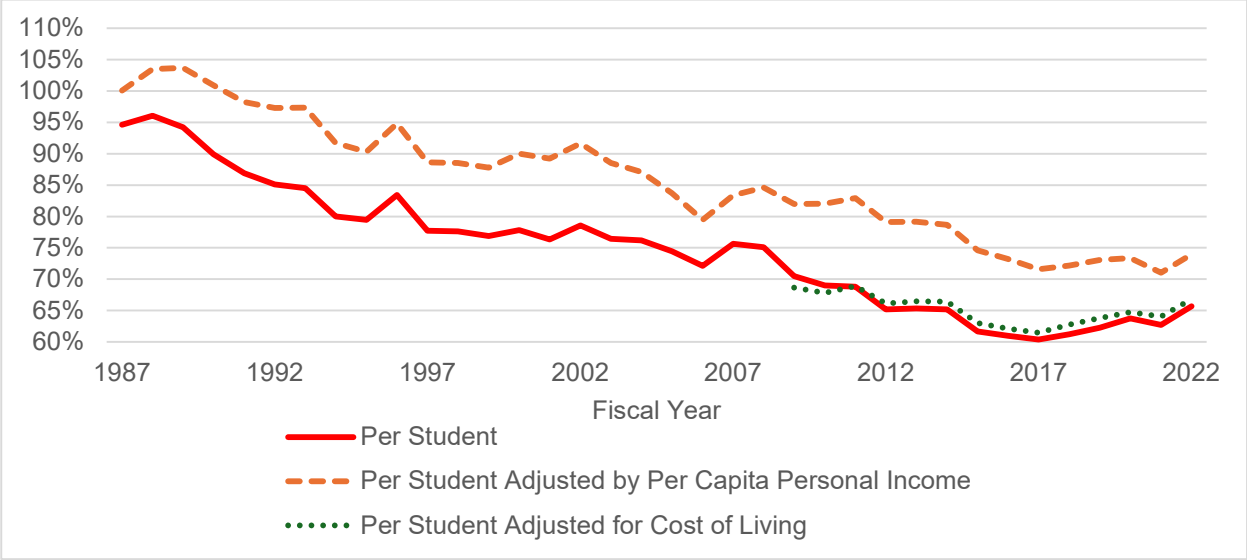


ANNUAL



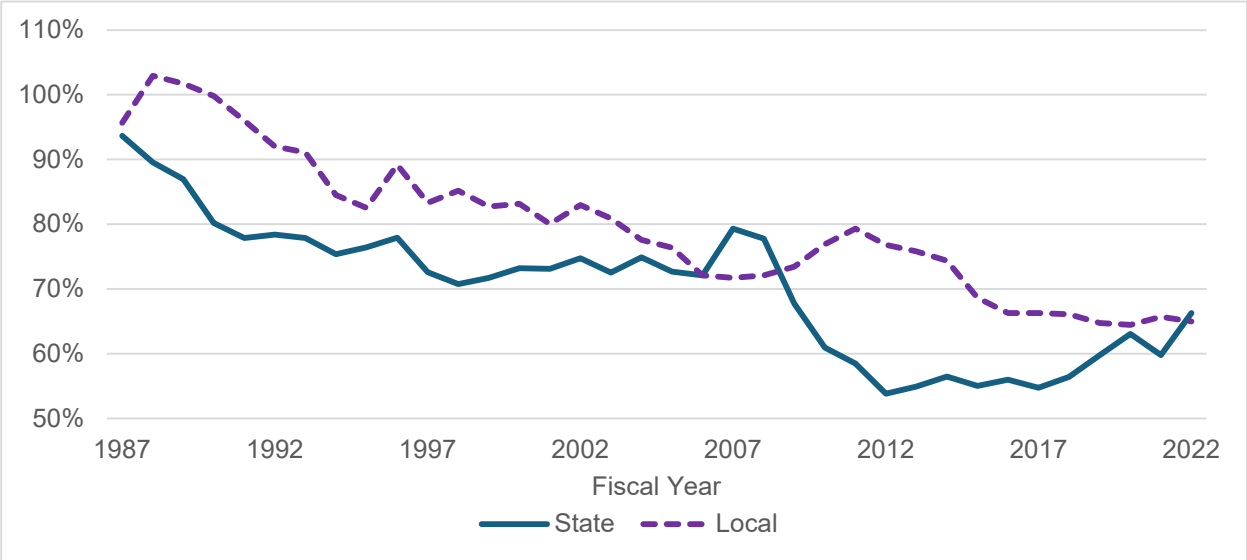
Source: Calculated from data of the U.S. Department of Education, National Center for Education Statistics.

CHART 7-2
STATE AND LOCAL GOVERNMENT PUBLIC K-12 EDUCATION REVENUE, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



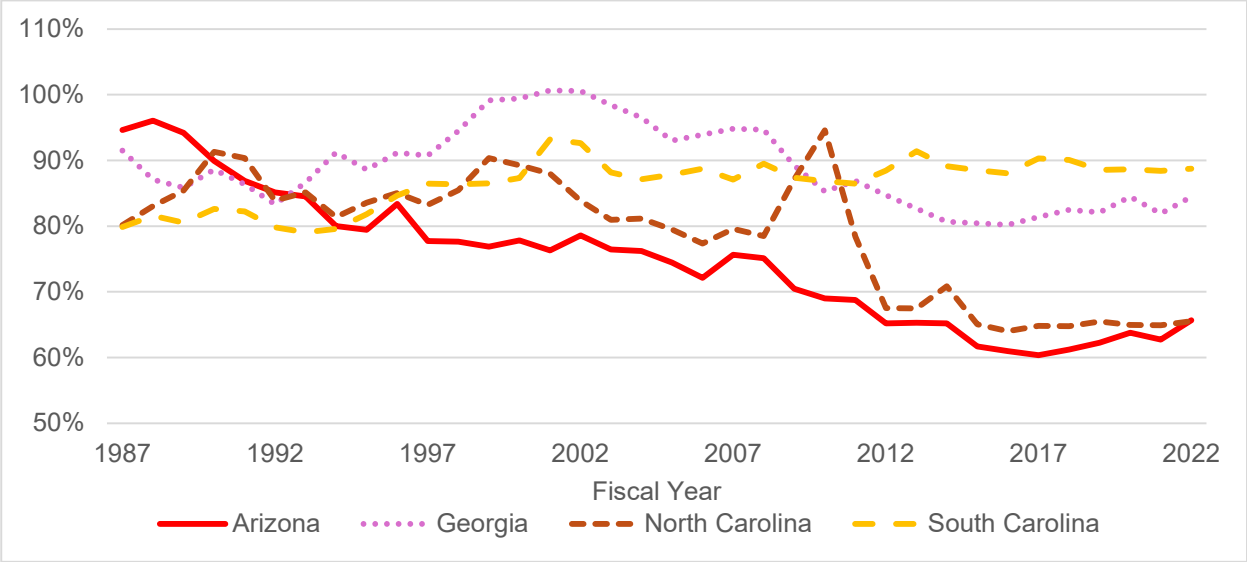
Sources: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances* (revenue and enrollment), and the U.S. Department of Commerce, Bureau of Economic Analysis (personal income and regional price parities).

CHART 7-3
STATE GOVERNMENT VERSUS LOCAL GOVERNMENT PUBLIC K-12 EDUCATION REVENUE PER STUDENT, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances*.

CHART 7-4
STATE AND LOCAL GOVERNMENT PUBLIC K-12 EDUCATION REVENUE PER STUDENT, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE



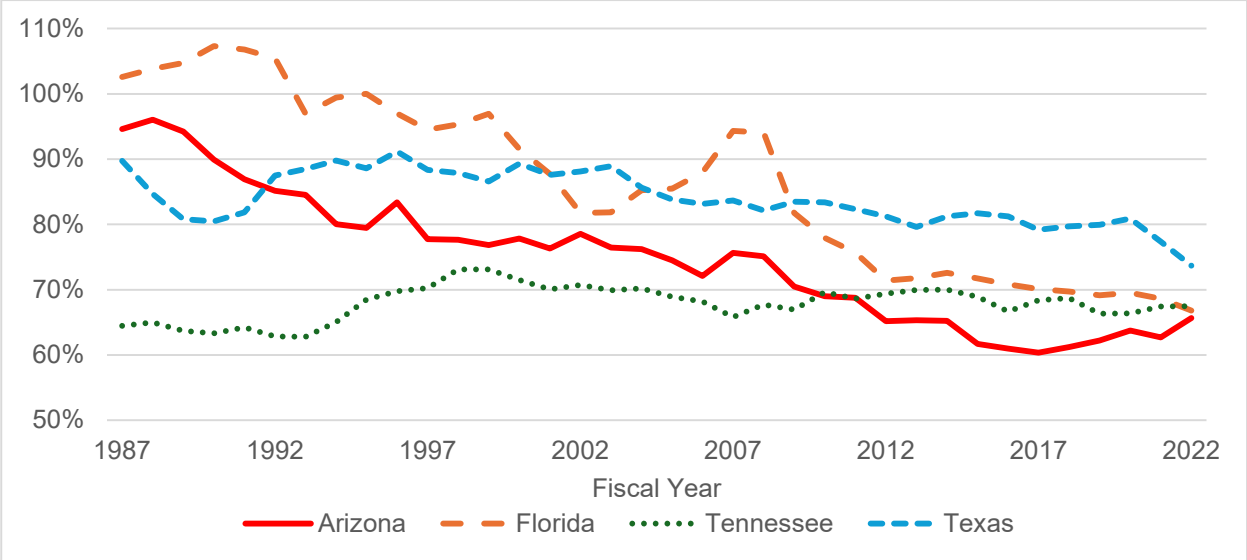


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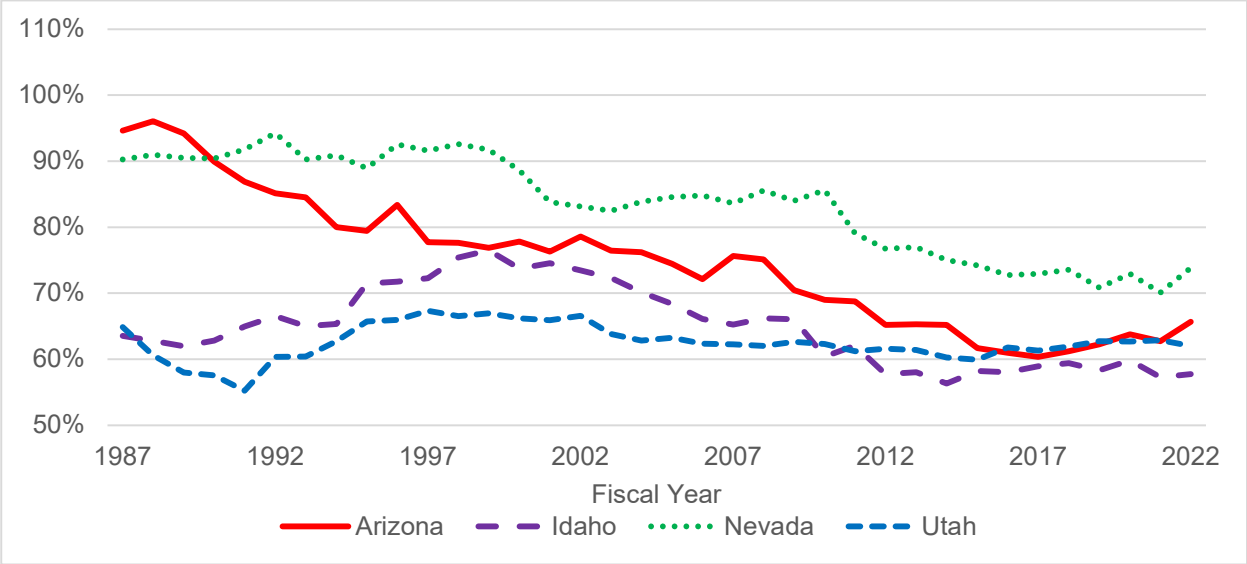
CHART 7-4 (continued)
STATE AND LOCAL GOVERNMENT PUBLIC K-12 EDUCATION REVENUE PER STUDENT, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE



Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances*.

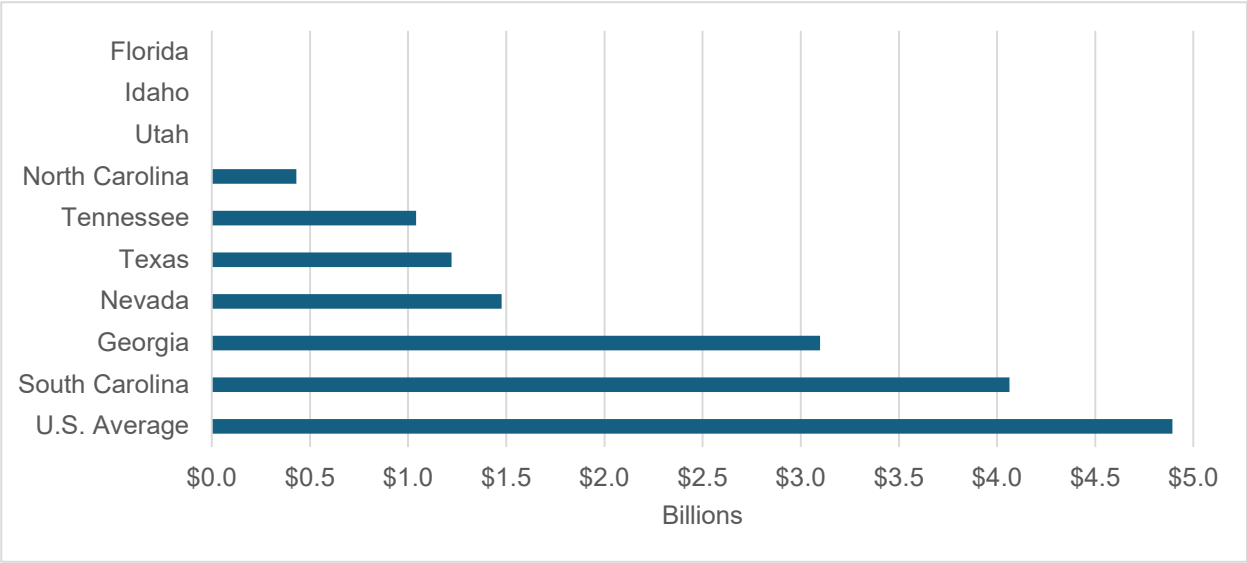
average. Actual revenue in Arizona was $9.66 billion. Additional funding needed to match the adjusted per student figure in each of the comparison states is shown in Chart 7-5.

K-12 Education Expenditures

Chart 7-6 shows K-12 education expenditures per student in Arizona as a percentage of the national average for current operations and for capital outlays since FY 1978. The much above average capital outlay figures in Arizona from the late 1970s through the mid-1990s are in large part a reflection of the state's much more rapid growth rate in public K-12 enrollment during this period. Capital outlays per student in Arizona have ranged from a little above average to considerably below average since FY 2000, a period in which public K-12 enrollment growth slowed to a bit less than the U.S. average. Between FYs 2000 and 2022, the annual average public enrollment growth rate in Arizona was 0.3 percentage points higher than the U.S. average, while the annual average capital outlays per student figure in Arizona was only 81.5 percent of the U.S. average.

Chart 7-7 displays K-12 education expenditures for current operations per student in Arizona as a percentage of the national average on a narrower scale than in Chart 7-6. In the 1980s, Arizona's per student expenditures were less than the U.S. average, even when adjusted by per capita personal income. Since the late 1980s, Arizona's per student expenditures have fallen substantially relative to the national average regardless of the measure used. The per student figure adjusted for the cost of living was 33 percent less than the U.S. average in FY 2022.

CHART 7-5
ADDITIONAL STATE AND LOCAL GOVERNMENT REVENUE NEEDED IN ARIZONA IN FISCAL YEAR 2022 TO MATCH PUBLIC PER K-12 STUDENT STATE AND LOCAL GOVERNMENT REVENUE ADJUSTED FOR THE COST OF LIVING, SELECTED STATES



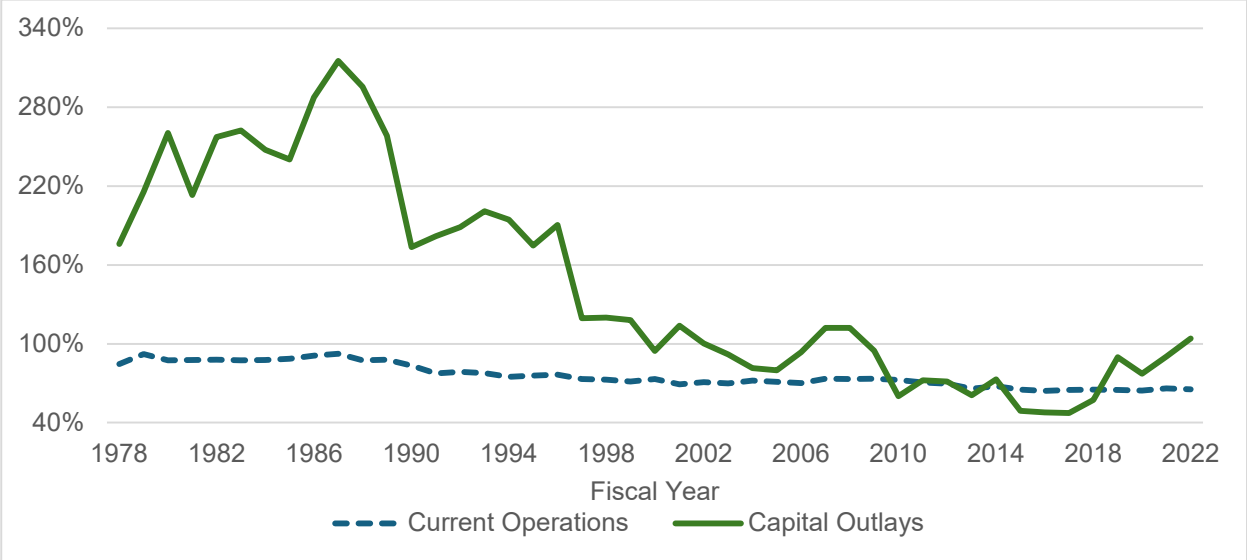
Sources: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances* (revenue and enrollment), and the U.S. Department of Commerce, Bureau of Economic Analysis (regional price parities).

The current operations category is first divided into expenditures for instruction and support services. As seen in Chart 7-8, Arizona's per student expenditures have declined in each category to substantially less than the national average. In FY 2022 adjusted for the cost of living, per student expenditures for instruction were 40 percent less than the U.S. average; the shortfall for support services was 25 percent.

The support services category is divided into seven subcategories in Chart 7-9. Arizona's per student expenditures in recent years have been at least 10 percent below the U.S. average in each subcategory. The cost-of-living-adjusted per student shortfalls in FY 2022 follow:

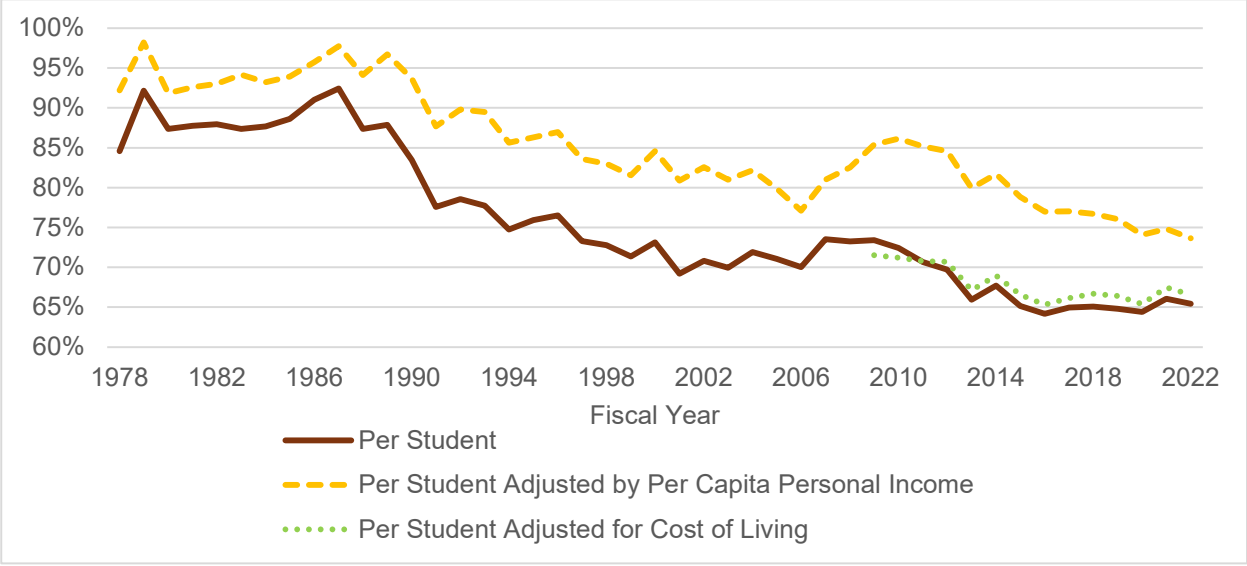
- Pupil support: 9 percent
- Instructional staff support: 24 percent
- General administration: 41 percent
- School administration: 41 percent
- Plant operations and maintenance: 18 percent
- Public transportation: 29 percent
- Other support services: 34 percent

CHART 7-6
PUBLIC K-12 EDUCATION EXPENDITURES PER STUDENT BY TYPE, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



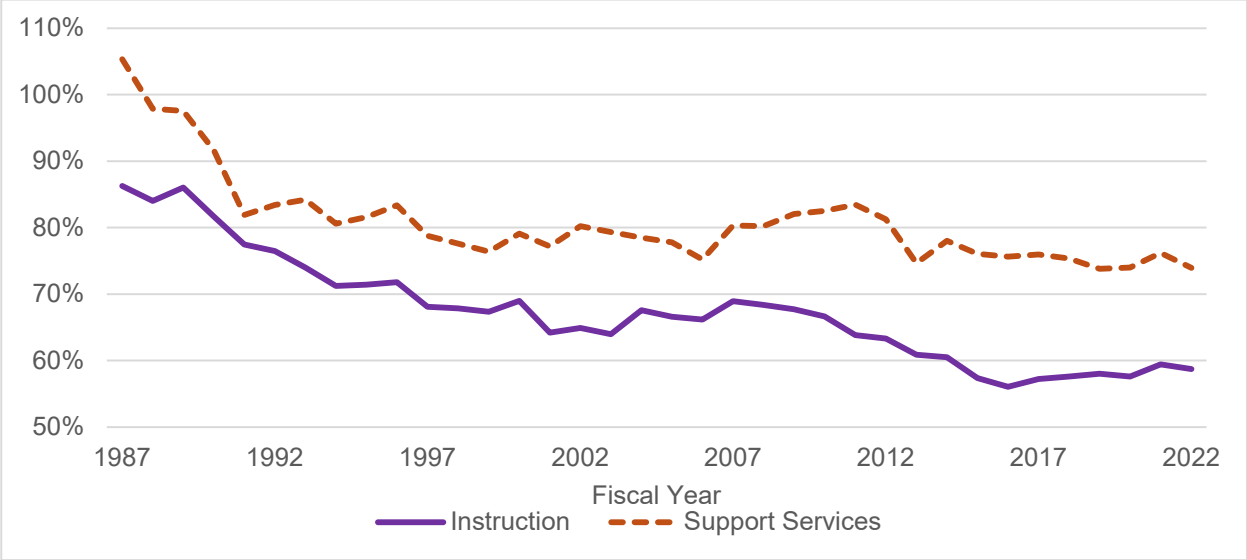
Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances*.

CHART 7-7
PUBLIC K-12 EDUCATION CURRENT OPERATIONS EXPENDITURES, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



Sources: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances* (revenue and enrollment), and the U.S. Department of Commerce, Bureau of Economic Analysis (personal income and regional price parities).

CHART 7-8
PUBLIC K-12 EDUCATION CURRENT OPERATIONS EXPENDITURES PER STUDENT BY TYPE, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances*.

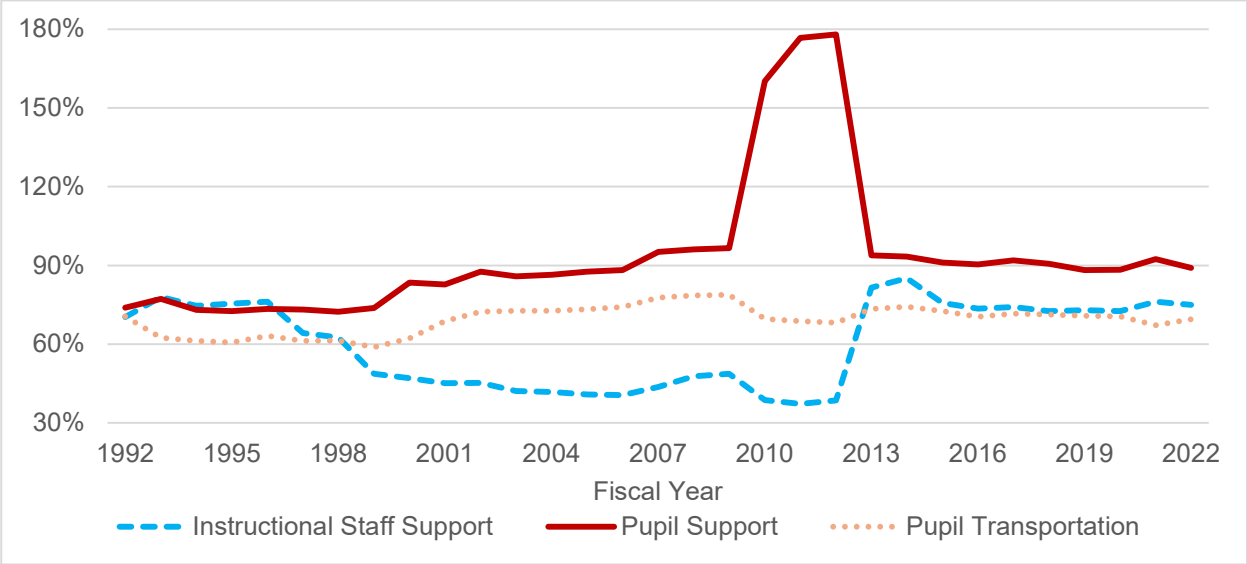
Current operations expenditures are divided in another way in Chart 7-10. Wages and salaries divided by the number of students have declined over time. In FY 2022 adjusted for the cost of living, wages and salaries per student were 28 percent below the U.S. average. The other categories were even further below the adjusted per student U.S. average, by 45 percent for employee benefits and 35 percent for other current operations.

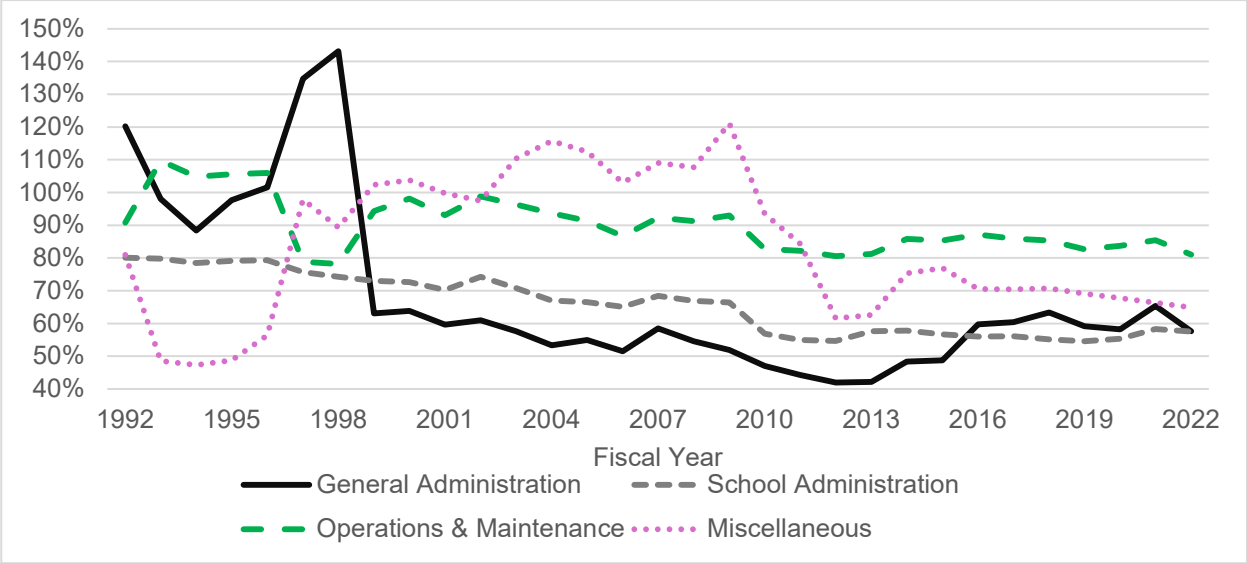
K-12 education expenditures for current operations per student as a percentage of the national average is displayed in Chart 7-11 for each of the comparison states. In the late 1970s, only Florida had a higher figure than Arizona. Since the late 2000s, Arizona's figure has been higher than only Idaho and Utah.

Chart 7-12 provides the time series of per student instructional expenditures for the comparison states and Chart 7-13 displays the data for support services. In each category, Arizona's per student expenditures have decreased relative to the other states. In FY 1987, Arizona ranked above the middle of the comparison states on instructional expenditures, but it has had the lowest figure since FY 2017. Arizona ranked second on per student support services spending in the late 1980s, but ranked fifth in FY 2022.

Table 7-1 provides the cost-of-living adjusted figures for the comparison states in FY 2022. In each category shown, each of the comparison states was below the U.S. average on a per pupil basis. Arizona ranked eighth, ahead of Idaho and Utah, on adjusted per student current operations spending, last on adjusted per student instructional spending, and sixth on adjusted per student support services expenditures.

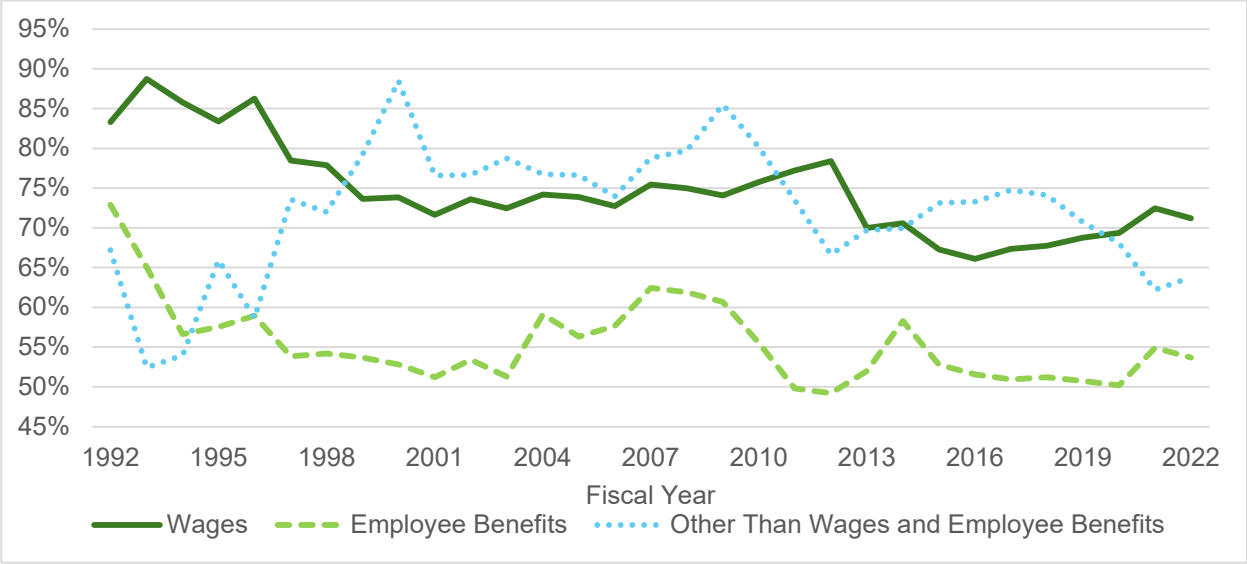
CHART 7-9
PUBLIC K-12 EDUCATION CURRENT OPERATIONS EXPENDITURES PER STUDENT BY TYPE OF SUPPORT SERVICE, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE





Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances*.

CHART 7-10
PUBLIC K-12 EDUCATION CURRENT OPERATIONS EXPENDITURES PER STUDENT BY MAJOR CATEGORY, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances*.

CHART 7-11
PUBLIC K-12 EDUCATION CURRENT OPERATIONS EXPENDITURES PER STUDENT, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE

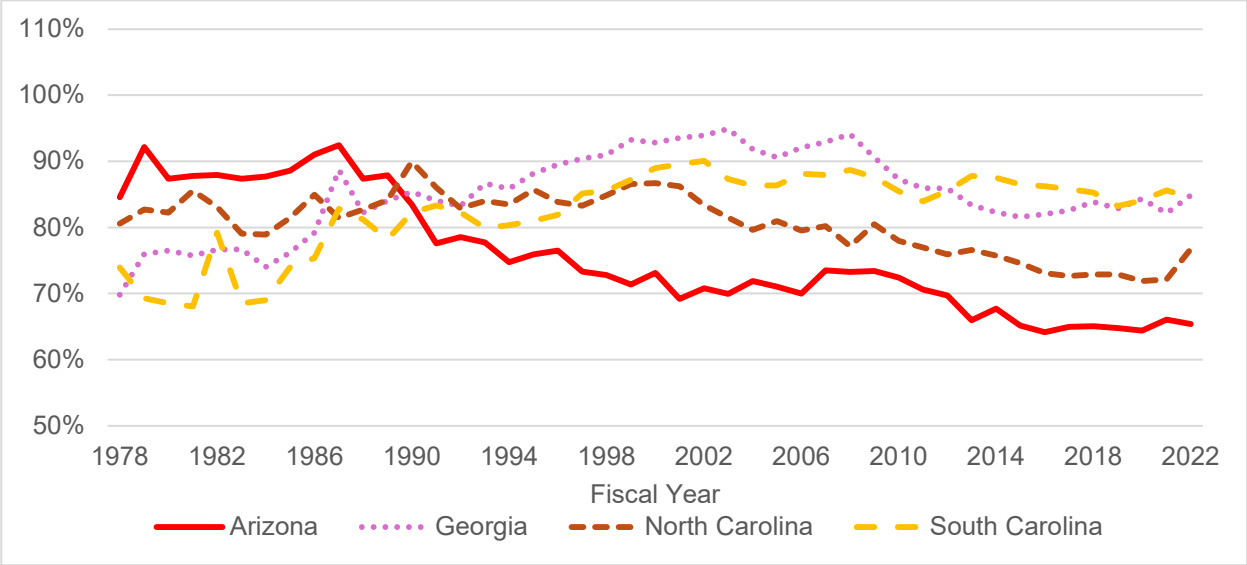


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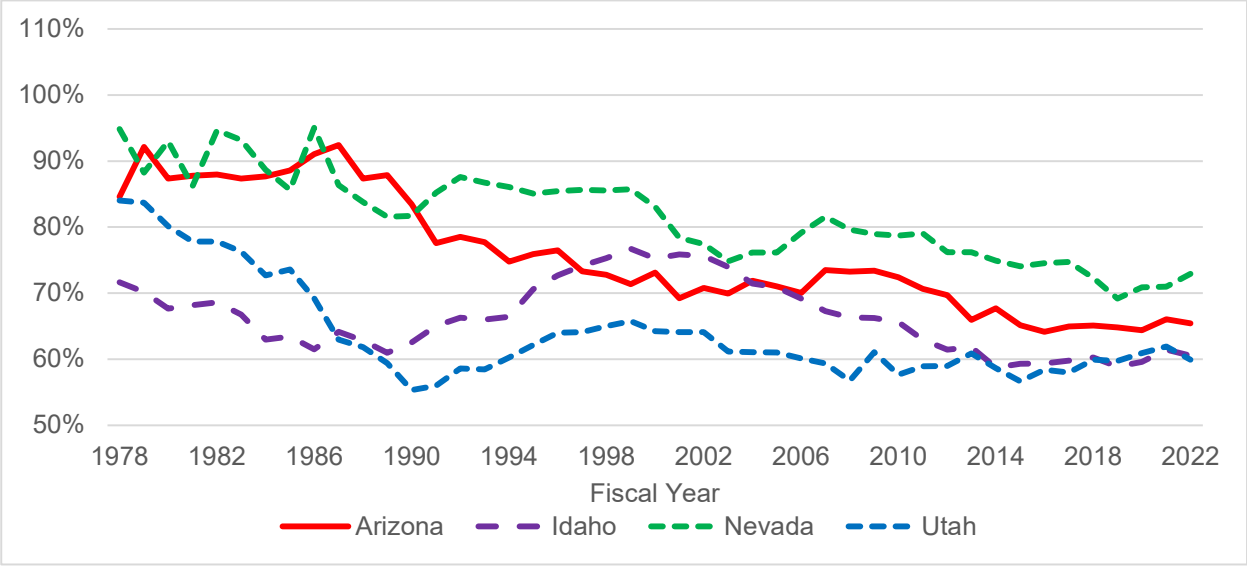
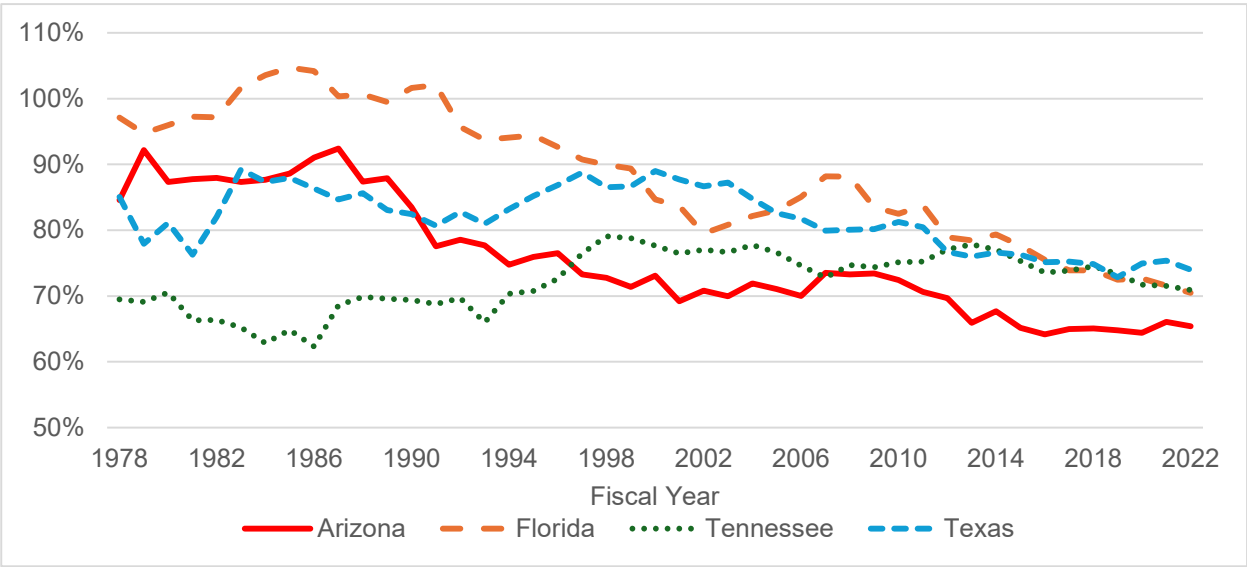
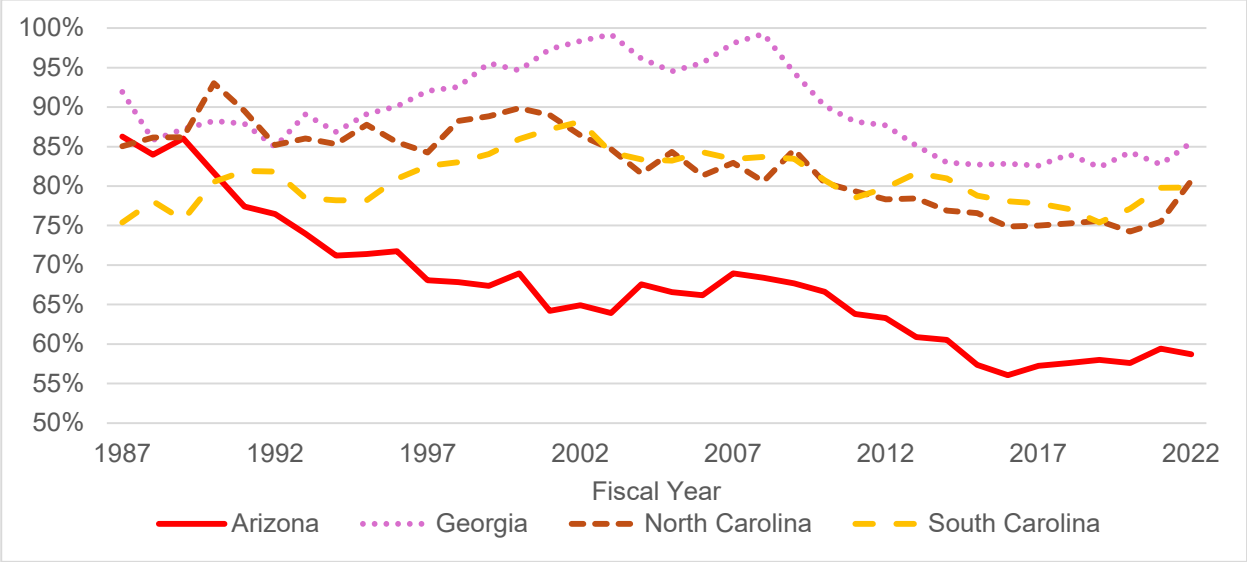
CHART 7-11 (continued)
PUBLIC K-12 EDUCATION CURRENT OPERATIONS EXPENDITURES PER STUDENT, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE





Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances*.

CHART 7-12
PUBLIC K-12 EDUCATION INSTRUCTIONAL EXPENDITURES PER STUDENT, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE



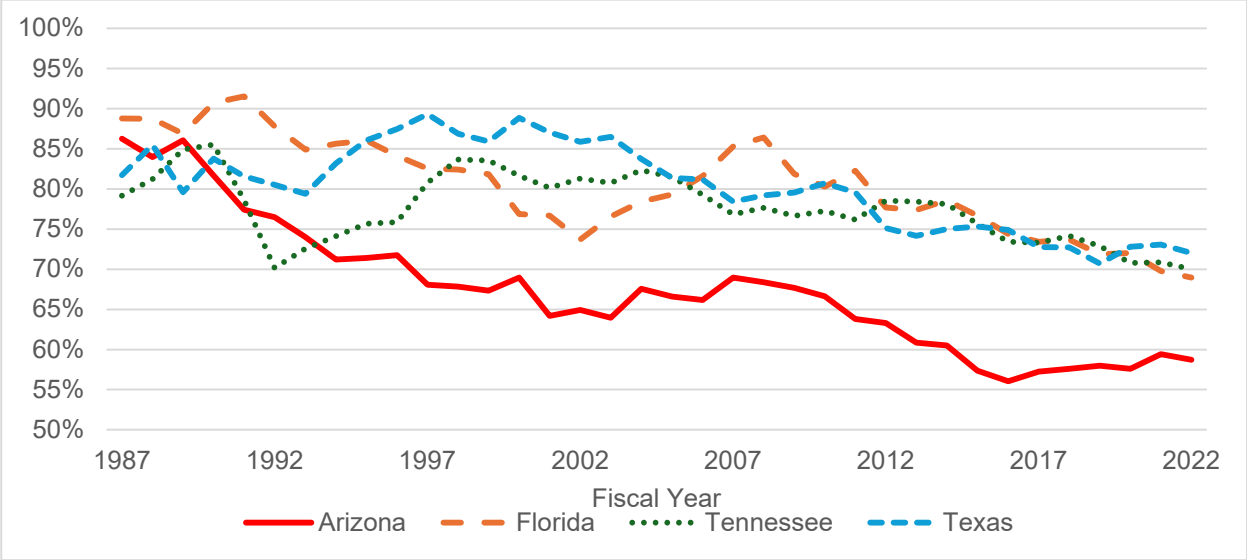


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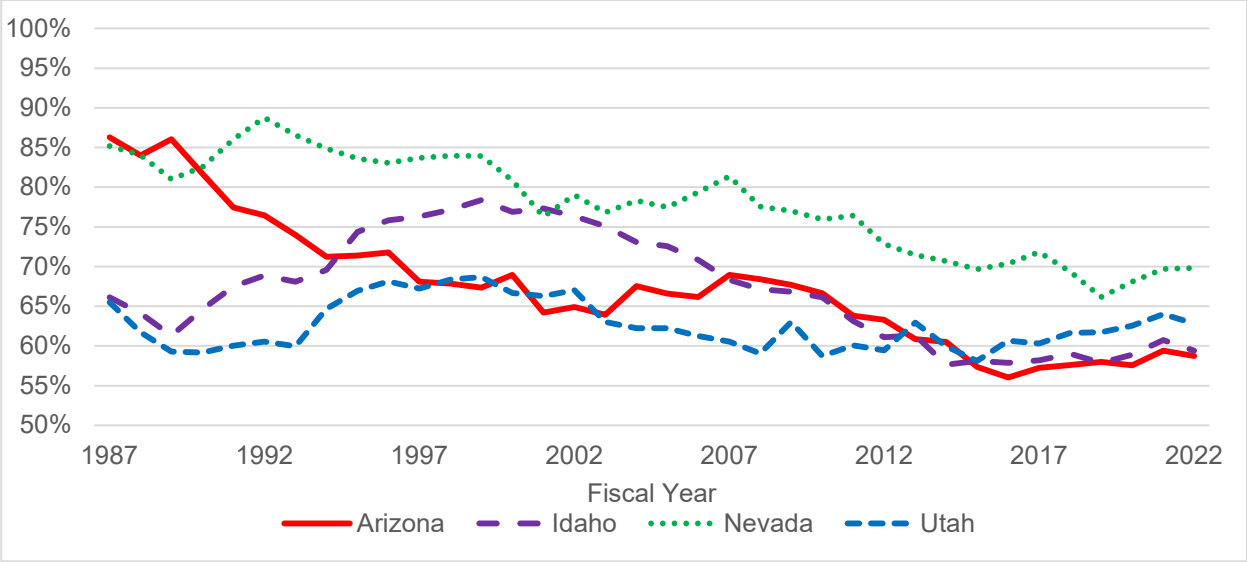
CHART 7-12 (continued)
PUBLIC K-12 EDUCATION INSTRUCTIONAL EXPENDITURES PER STUDENT, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE



Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances*.

CHART 7-13
PUBLIC K-12 EDUCATION SUPPORT SERVICES EXPENDITURES PER STUDENT, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE

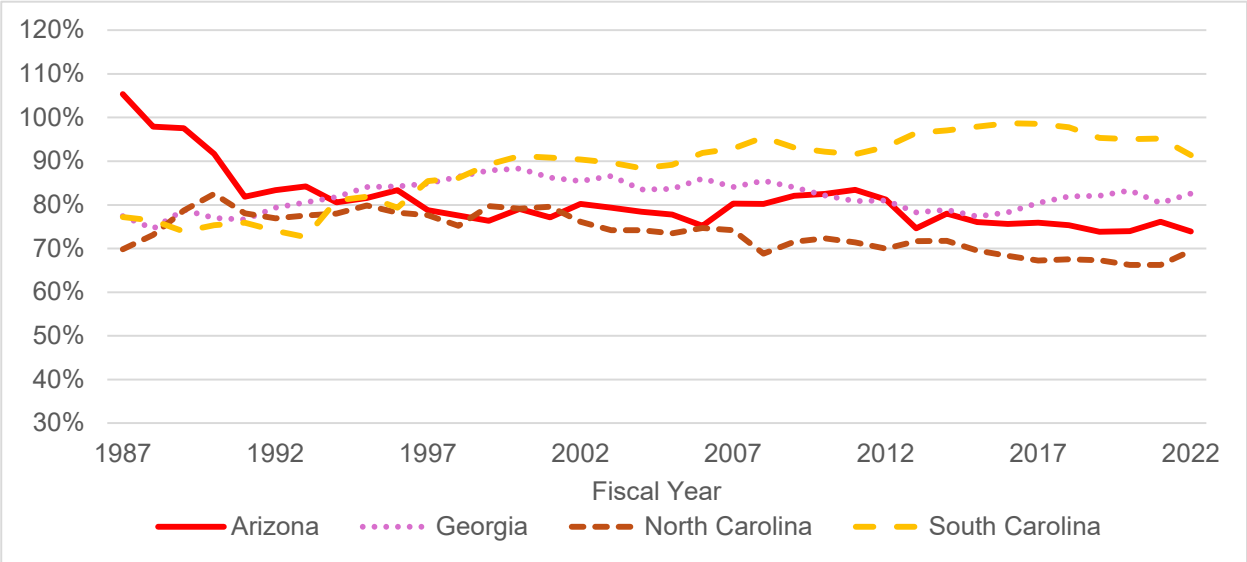


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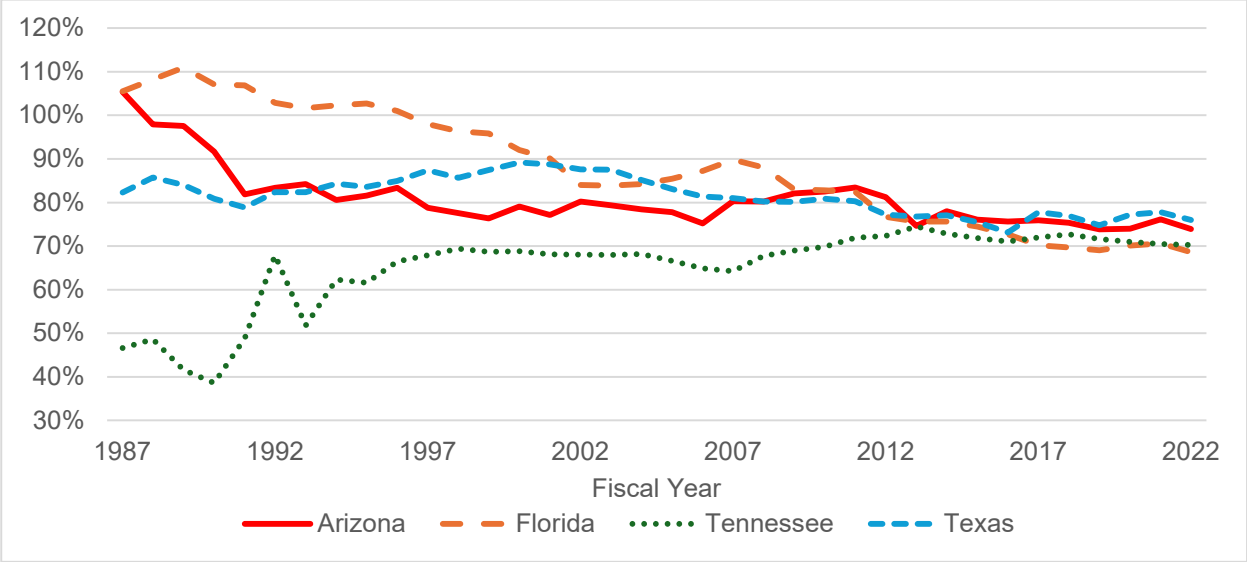
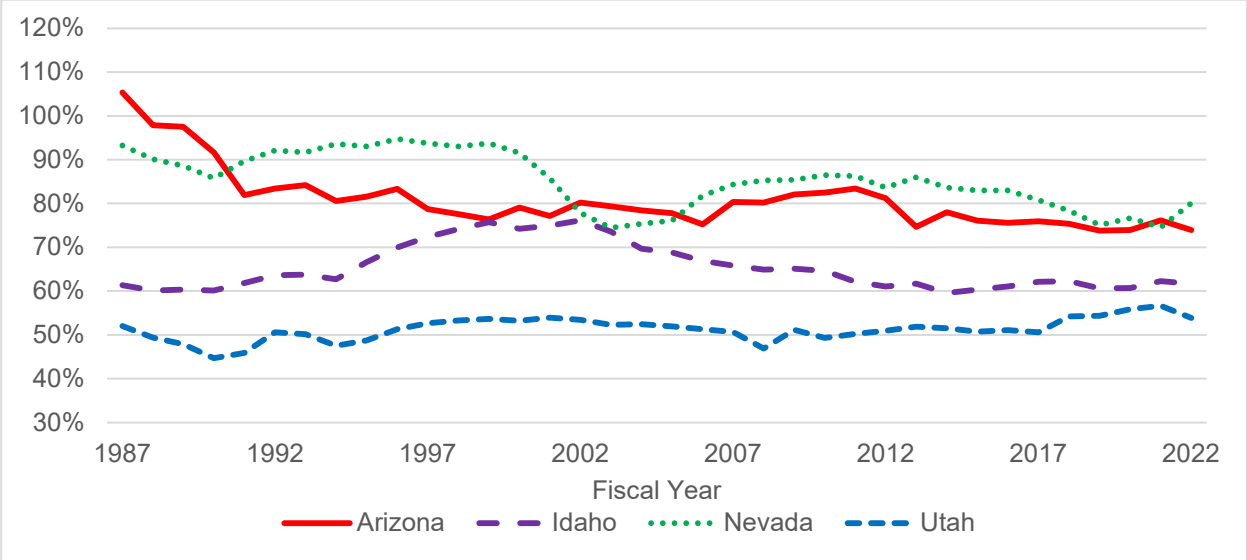
CHART 7-13 (continued)
PUBLIC K-12 EDUCATION SUPPORT SERVICES EXPENDITURES PER STUDENT, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE





Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances*.

TABLE 7-1
PUBLIC K-12 EDUCATION EXPENDITURES PER STUDENT ADJUSTED FOR THE COST OF LIVING, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE, FISCAL YEAR 2022

	Current Operations	Instruction	Support Services
Arizona	66.6%	59.8%	75.3%
Florida	69.3	67.7	67.4
Georgia	88.6	89.3	86.2
Idaho	66.0	64.8	67.3
Nevada	76.1	72.8	83.5
North Carolina	81.7	85.9	73.9
South Carolina	90.3	85.3	97.6
Tennessee	77.8	76.8	77.1
Texas	75.5	73.5	77.6
Utah	63.4	66.5	57.0

Sources: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances* (expenditures and enrollment), and the U.S. Department of Commerce, Bureau of Economic Analysis (regional price parities).

Higher Education Revenue

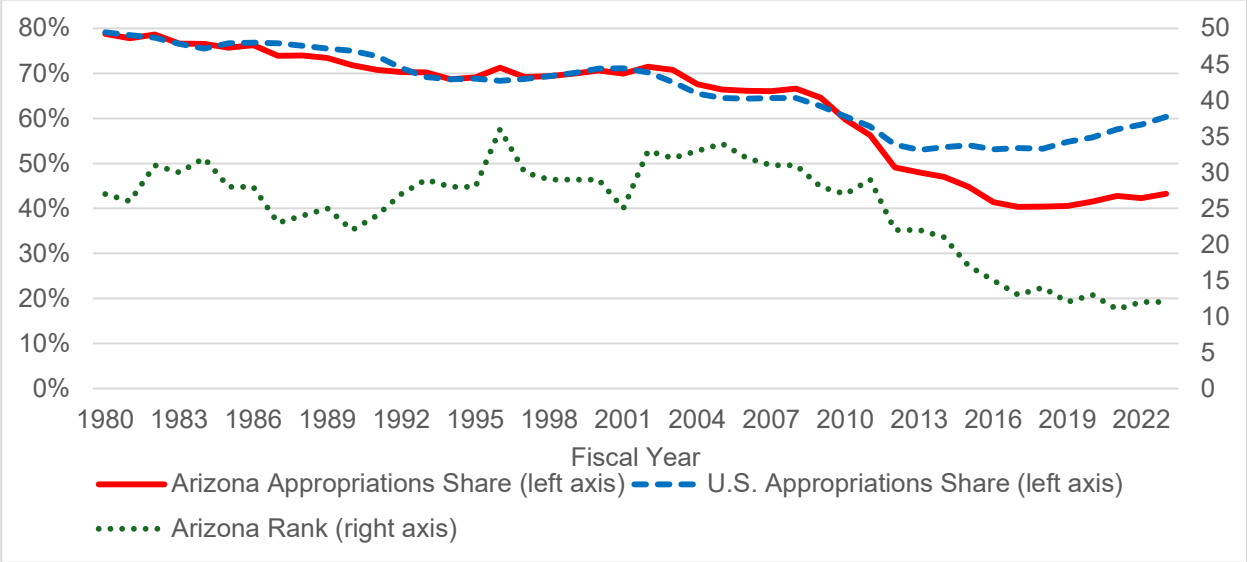
SHEEO's *State Higher Education Finance* report focuses on the sources of funding for public higher education; it does not provide information on how those funds are expended. SHEEO does not include revenue from all sources. The five primary categories of revenue follow:

- State Support for Public Higher Education: State government appropriations.
- Local Support for Public Higher Education: Local government funding; in Arizona, only community colleges receive local funding.
- Educational Appropriations for Public Higher Education: The sum of state support and local support, minus appropriations for special purposes, research, and medical programs.
- Net Tuition for Public Higher Education: Tuition and fees paid by students, minus financial aid from state and institutional sources, student waivers and discounts, and medical student tuition and fees.
- Total Educational Revenue for Public Higher Education: The sum of the educational appropriations category and the net tuition category, minus tuition revenue used for capital outlays or debt service.

After decades of tracking the national average, the share of total educational revenue coming from appropriations began to diverge in Arizona in fiscal year 2010, as seen in Chart 7-14. In FY 1980, Arizona's share was only 0.4 percentage points less than the U. S. average. By FY 2023, Arizona's appropriations share was 17.0 percentage points less than the U.S. average. The state's rank among all states dropped from 24th to 39th.

The appropriations share over time in each of the comparison states is shown in Chart 7-15. Though Arizona's share in FY 1980 of 78.7 percent ranked ninth among the comparison states, above only Tennessee, the share was within 7 percentage points of the highest comparison state. Arizona's FY 2023 share of 43.3 percent also was second lowest among the 10 comparison

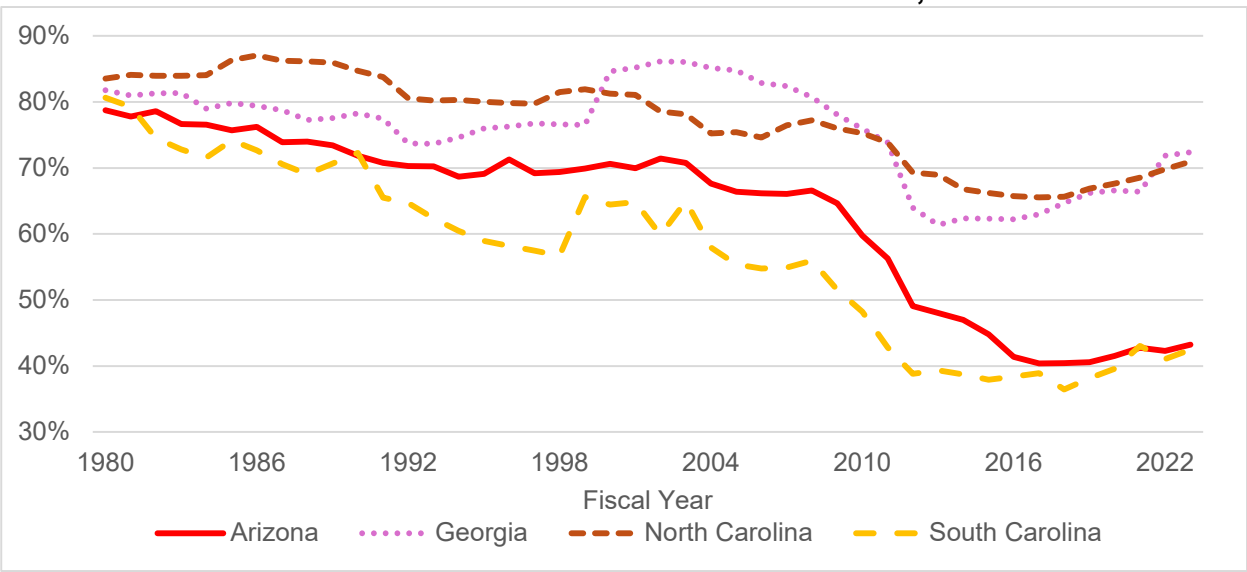
CHART 7-14
EDUCATIONAL APPROPRIATIONS AS A SHARE OF TOTAL EDUCATIONAL REVENUE OF PUBLIC HIGHER EDUCATION INSTITUTIONS



Note: A rank of 1 represents the lowest percentage among the 50 states.

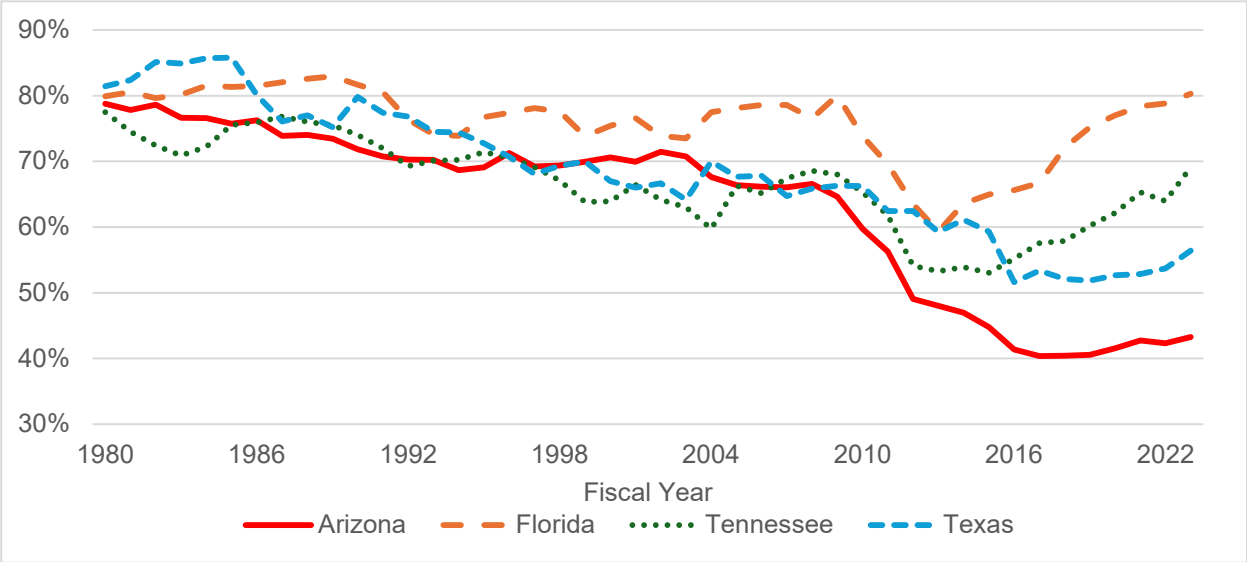
Source: Calculated from data of the State Higher Education Executive Officers Association, *State Higher Education Finance*.

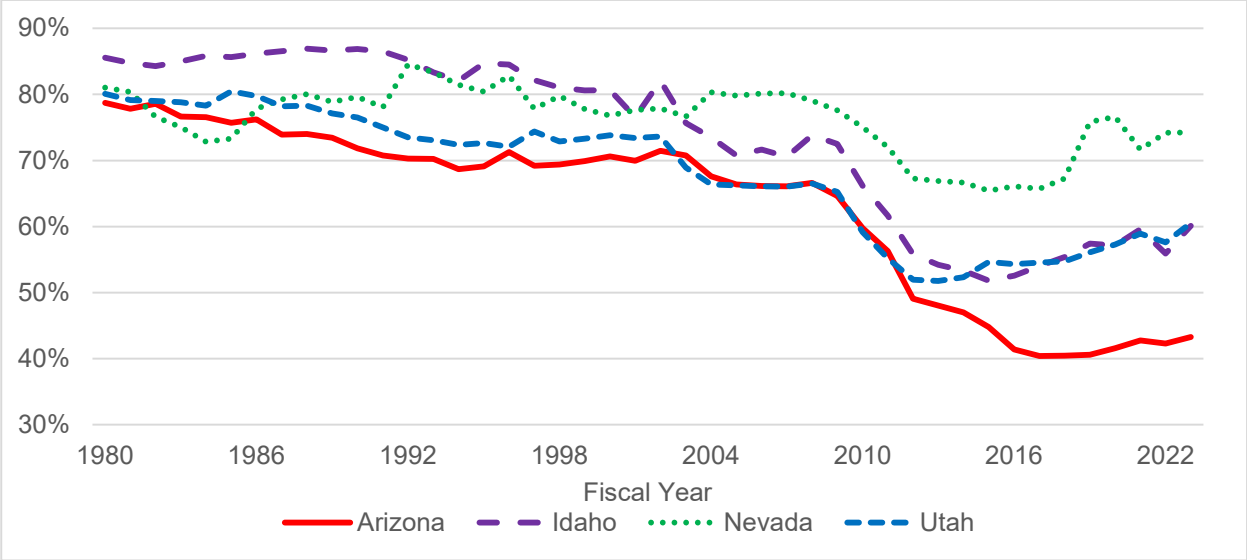
CHART 7-15
EDUCATIONAL APPROPRIATIONS AS A SHARE OF TOTAL EDUCATIONAL REVENUE OF PUBLIC HIGHER EDUCATION INSTITUTIONS,SELECTED STATES



(continued)

CHART 7-15 (continued)
EDUCATIONAL APPROPRIATIONS AS A SHARE OF TOTAL EDUCATIONAL REVENUE OF PUBLIC HIGHER EDUCATION INSTITUTIONS,SELECTED STATES





Source: Calculated from data of the State Higher Education Executive Officers Association, *State Higher Education Finance*.

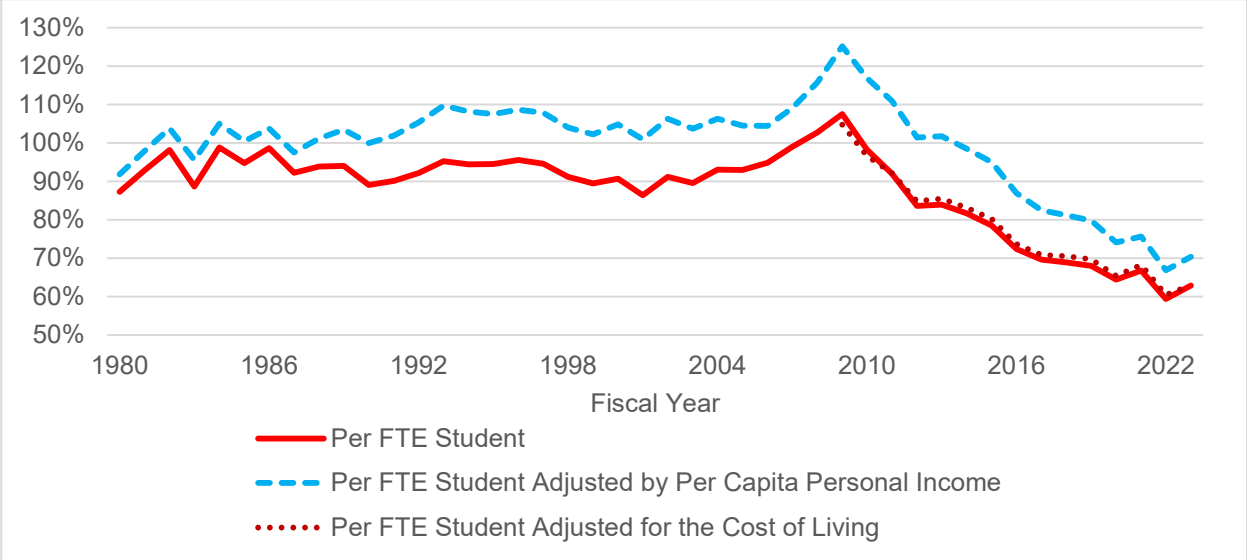
states, above only South Carolina, but the share was more than 13 percentage points less than each of the other eight states. Among the comparison states, only South Carolina had a greater decline in share between FYs 1980 and 2023.

Another way of examining educational appropriations is on a per FTE student basis. From the 1980s through the 2000s, annual educational appropriations per FTE student in Arizona generally were from 1-to-11 percent less than the U.S. average (see Chart 7-16). The per FTE student educational appropriations figure in FY 2023 was 37 percent below average adjusted for the cost of living, ranking 48th among all states. Chart 7-16 also provides the per FTE student figures adjusted by per capita personal income. Adjusted for the cost of living, Arizona's figure was 30 percent below average in FY 2023, ranking 42nd among all states.

Educational appropriations per full-time-equivalent higher education student as a percentage of the national average in each of the comparison states is shown in Chart 7-17. In FY 1980, Arizona ranked seventh among the comparison states. Between 1980 and 2023, only Nevada and South Carolina experienced a greater decrease.

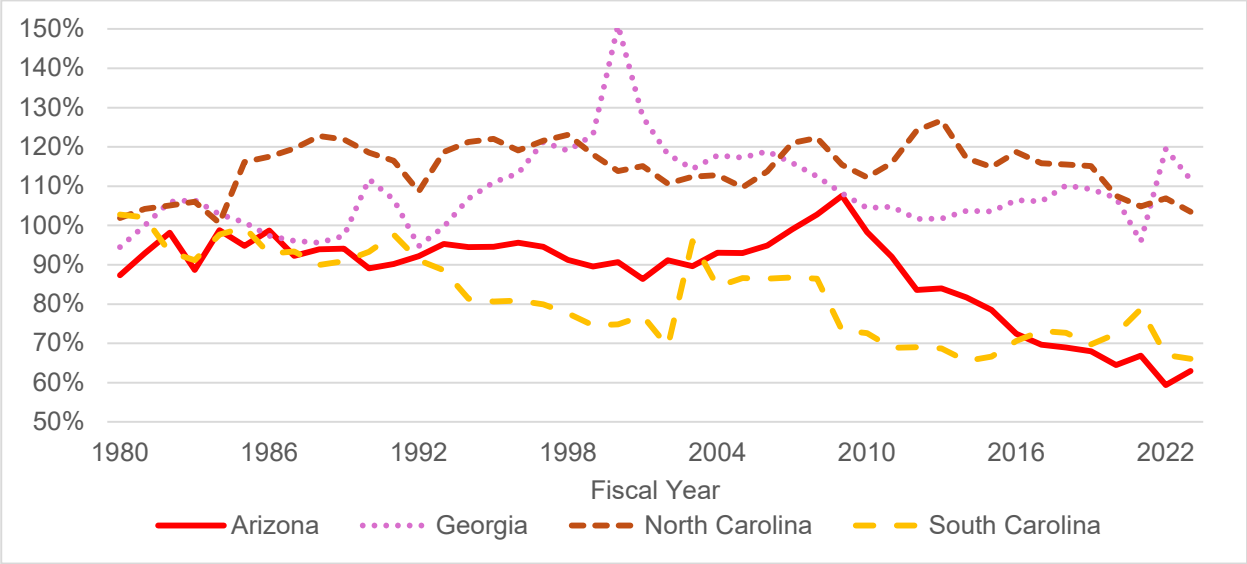
Adjusted for the cost of living, educational appropriations per full-time-equivalent higher education student in FY 2023 in Arizona was the lowest of the comparison states. Other than South Carolina, the lowest figure among the comparison states was only 14 percent less than the U.S. average (compared to Arizona's shortfall of 37 percent); five of the states had a figure in excess of the national average.

CHART 7-16
EDUCATIONAL APPROPRIATIONS PER FULL-TIME-EQUIVALENT PUBLIC HIGHER EDUCATION STUDENT, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



Sources: Calculated from data of the State Higher Education Executive Officers Association, *State Higher Education Finance* (educational appropriations and enrollment) and the U.S. Department of Commerce, Bureau of Economic Analysis (per capita personal income and regional price parities).

CHART 7-17
EDUCATIONAL APPROPRIATIONS PER FULL-TIME-EQUIVALENT PUBLIC HIGHER EDUCATION STUDENT AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES



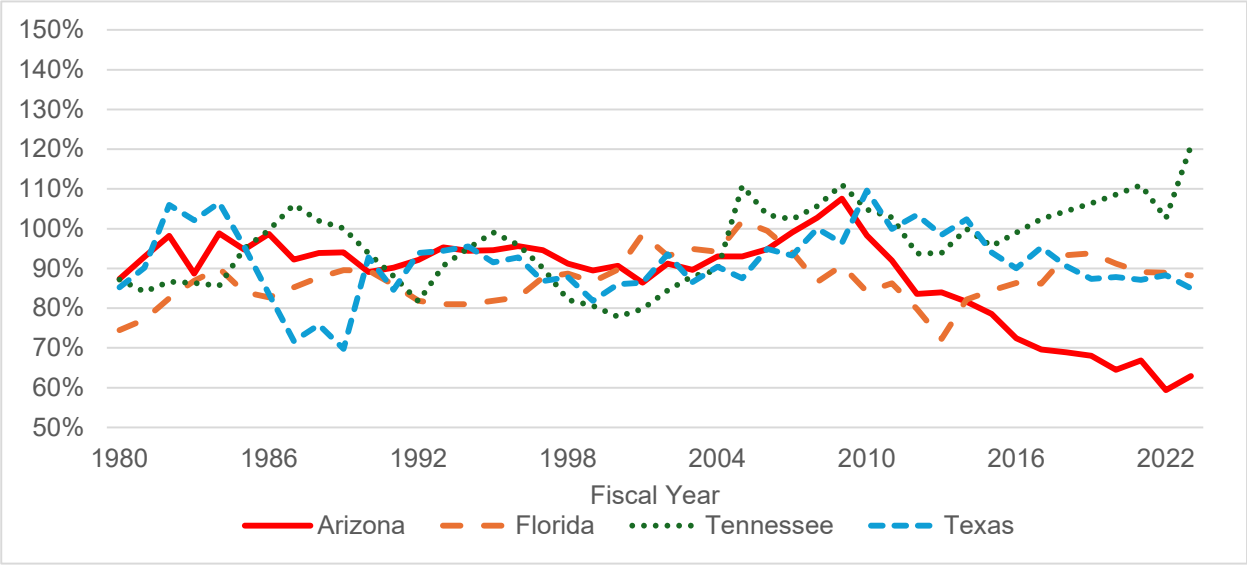


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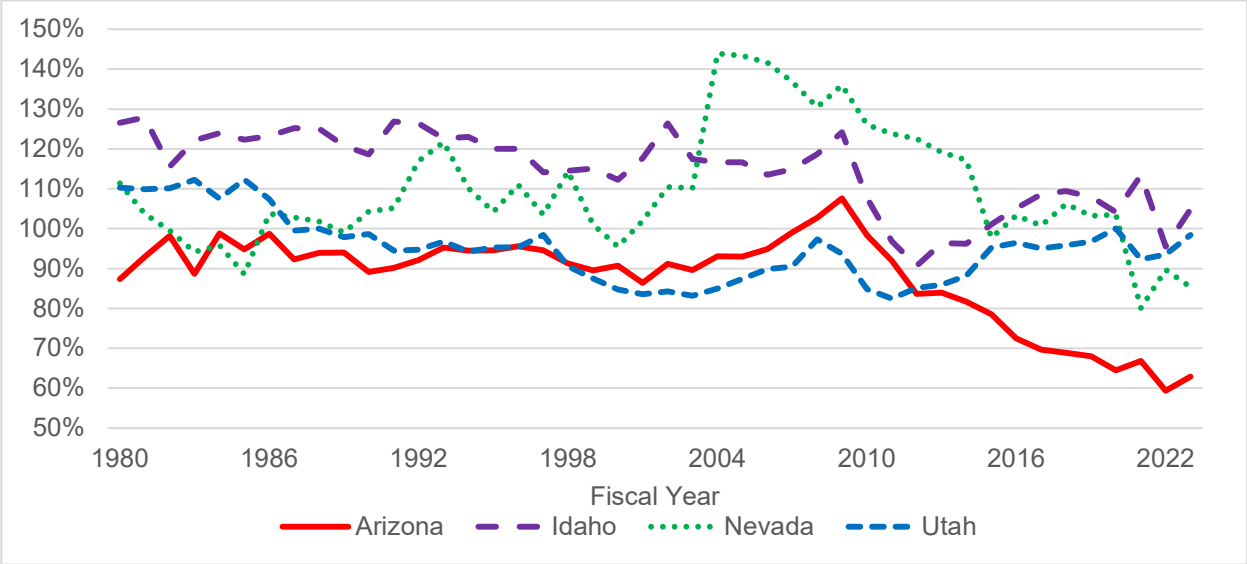
CHART 7-17 (continued)
EDUCATIONAL APPROPRIATIONS PER FULL-TIME-EQUIVALENT PUBLIC HIGHER EDUCATION STUDENT AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES



Source: Calculated from data of the State Higher Education Executive Officers Association, *State Higher Education Finance*.

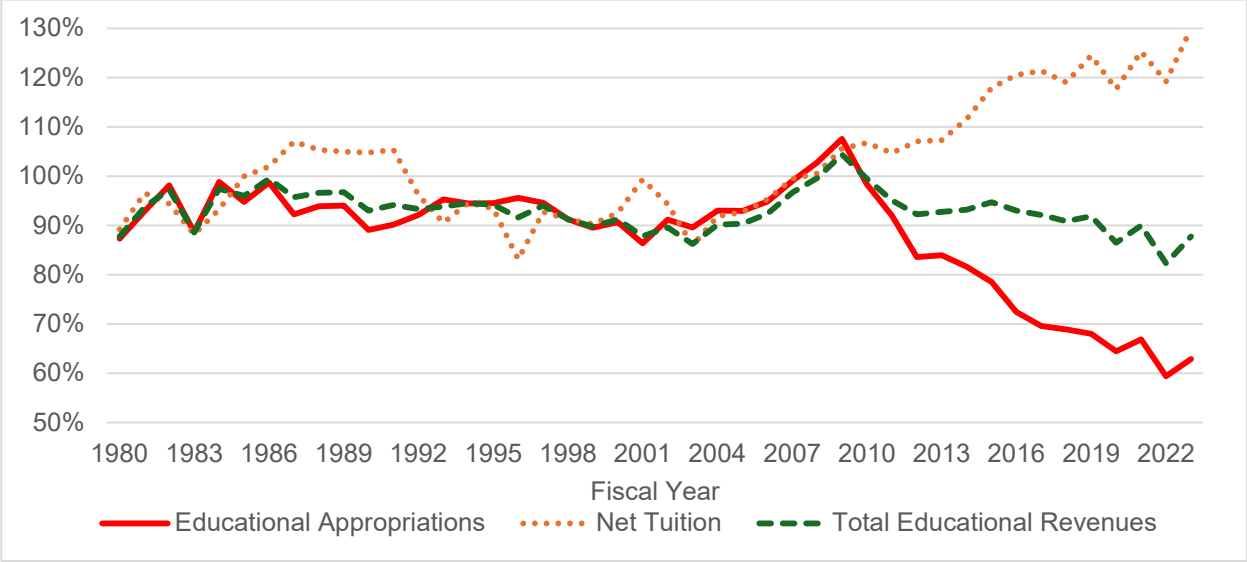
Educational appropriations, net tuition, and total educational revenue per FTE student in Arizona as a percentage of the national average is displayed in Chart 7-18. The lines diverge substantially after FY 2009.

From the 1980s through FY 2008, annual net tuition per FTE student in Arizona most commonly ranged from 5-to-10 percent less than the U.S. average (see Chart 7-18). The per FTE student net tuition figure in FY 2023 adjusted for the cost of living was 29 percent above average, 19th highest in the nation. Thus, as per FTE student educational appropriations fell substantially in Arizona relative to the U.S. average, per FTE student net tuition rose considerably.

Net tuition per full-time-equivalent higher education student as a percentage of the national average in each of the comparison states is shown in Chart 7-19. In FY 1980, Arizona ranked fifth among the comparison states with a figure 11 percent less than the U.S. average. Only South Carolina had a greater rise between FYs 1980 and 2023. In FY 2023, Arizona ranked second (to South Carolina) among the comparison states. Adjusted for the cost of living, four of the comparison states had a net tuition figure far below the national average and three others were within 10 percent of the U.S. average.

From the 1980s through FY 2008, annual total higher education revenue per FTE student in Arizona ranged from slightly less than the U.S. average to more than 10 percent below average (see Chart 7-18). Since then, the range has been comparable, as decreases in educational appropriations essentially were offset by increases in net tuition. The per FTE student total

CHART 7-18
REVENUE PER FULL-TIME-EQUIVALENT PUBLIC HIGHER EDUCATION STUDENT BY TYPE, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



Source: Calculated from data of the State Higher Education Executive Officers Association, *State Higher Education Finance*.

CHART 7-19
NET TUITION REVENUE PER FULL-TIME-EQUIVALENT PUBLIC HIGHER EDUCATION STUDENT AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES

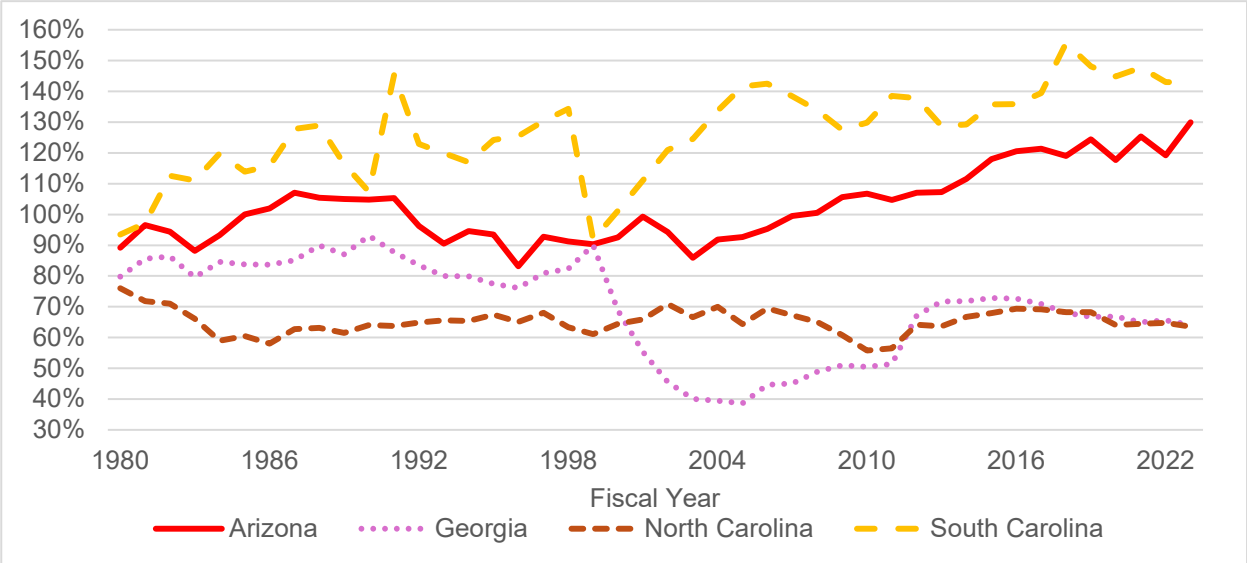


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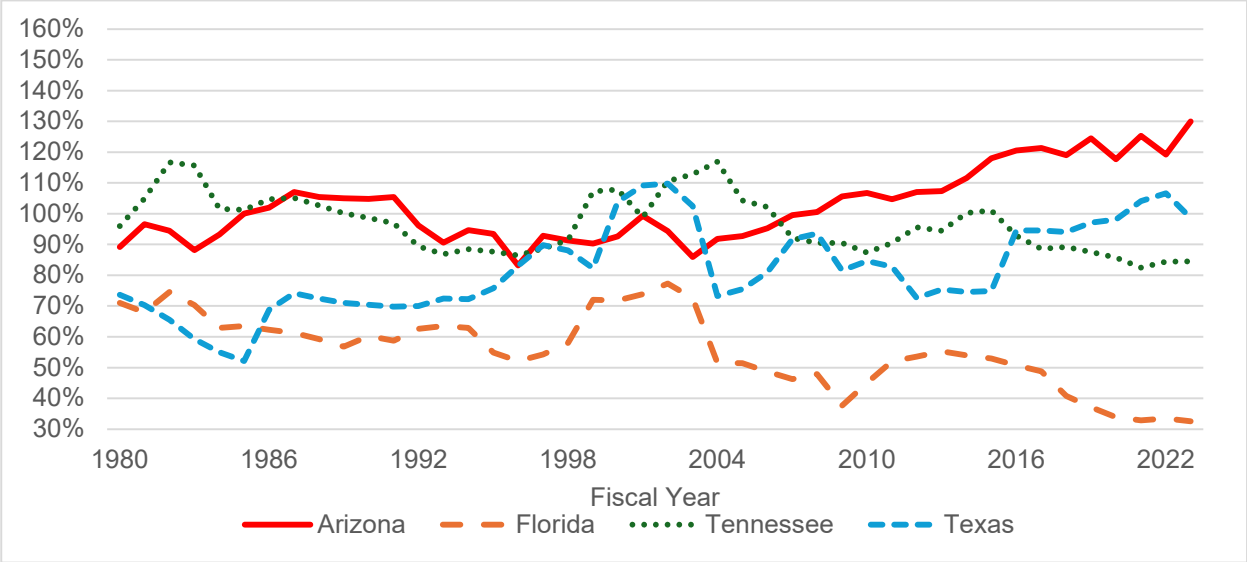
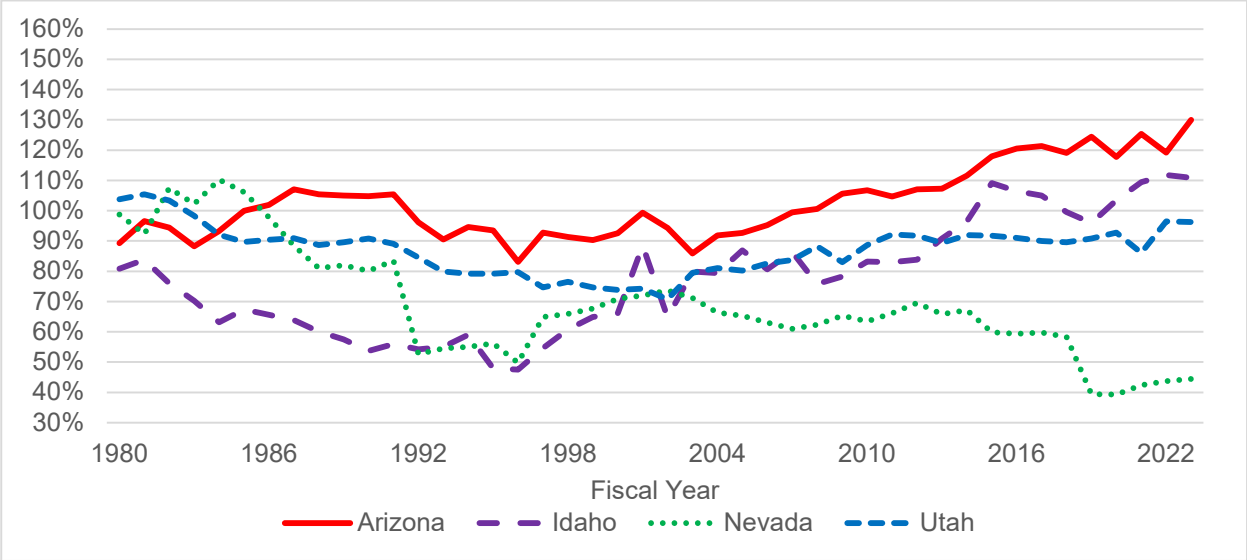
CHART 7-19 (continued)
NET TUITION REVENUE PER FULL-TIME-EQUIVALENT PUBLIC HIGHER EDUCATION STUDENT AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES





Source: Calculated from data of the State Higher Education Executive Officers Association, *State Higher Education Finance*.

educational revenue figure in FY 2023 was 13 percent below average after adjusting for the cost of living, ranking 45th among the states.

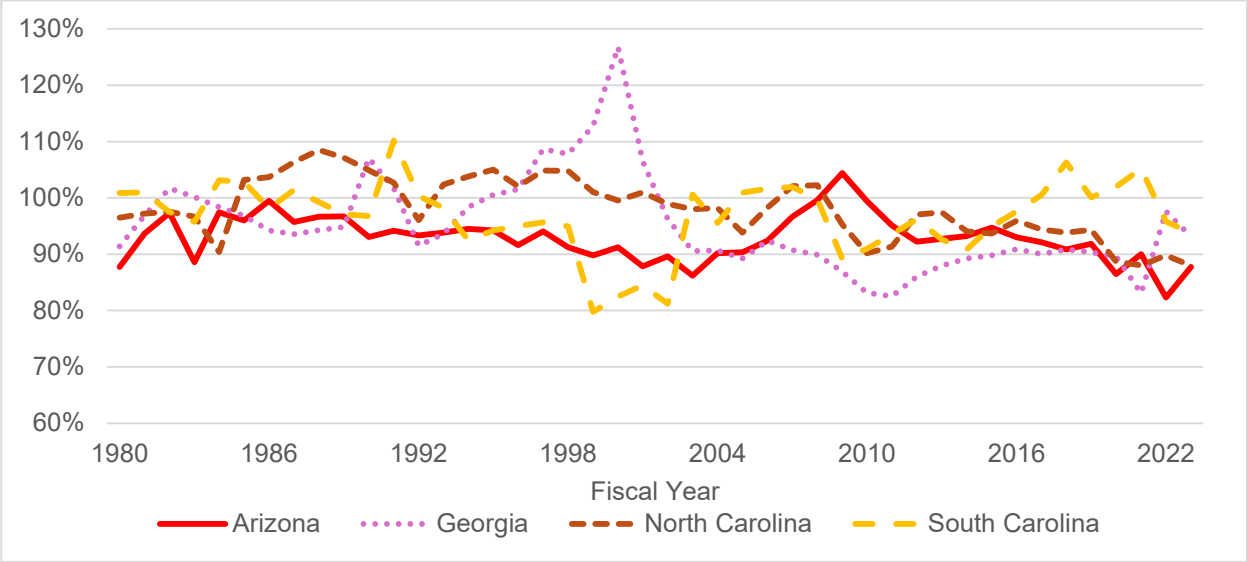
Total educational revenue per full-time-equivalent higher education student as a percentage of the national average in each of the comparison states is shown in Chart 7-20. In FY 1980, Arizona ranked eighth among the comparison states with a figure 12 percent less than the U.S. average. In FY 2023, Arizona also ranked eighth among the comparison states, higher than Florida and Nevada.

To summarize the changes in per FTE student higher education finance between FY 1980 and FY 2023 relative to the national average, the comparison states can be organized into disparate groups:

- A decrease in educational appropriations with an increase in net tuition: Arizona, Idaho, and South Carolina. Total educational revenue was maintained in Arizona but fell in Idaho and South Carolina.
- No change in appropriations with an increase in tuition: Texas.
- No change in appropriations with a decrease in tuition: North Carolina.
- An increase in appropriations with a decrease in tuition: Florida, Georgia, and Tennessee. Total educational revenue increased in Tennessee, was maintained in Georgia, and fell in Florida.
- A decrease in both appropriations and tuition: Nevada and Utah. The decrease in total educational revenue was moderate in Utah and substantial in Nevada.

Table 7-2 provides the cost-of-living adjusted figures for FY 2023. In fiscal year 2023, educational appropriations for higher education needed to be more than $900 million higher for Arizona to rank in the middle of the states per FTE higher education student, adjusted for the cost-of-living. For the adjusted figure to equal the national average, $1.3 billion more was needed. Actual educational appropriations in Arizona were $2.12 billion. The amount of additional funding needed to match the adjusted per FTE student figure in each of the comparison states is shown in Chart 7-21.

CHART 7-20
TOTAL EDUCATIONAL REVENUE PER FULL-TIME-EQUIVALENT PUBLIC HIGHER EDUCATION STUDENT AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES



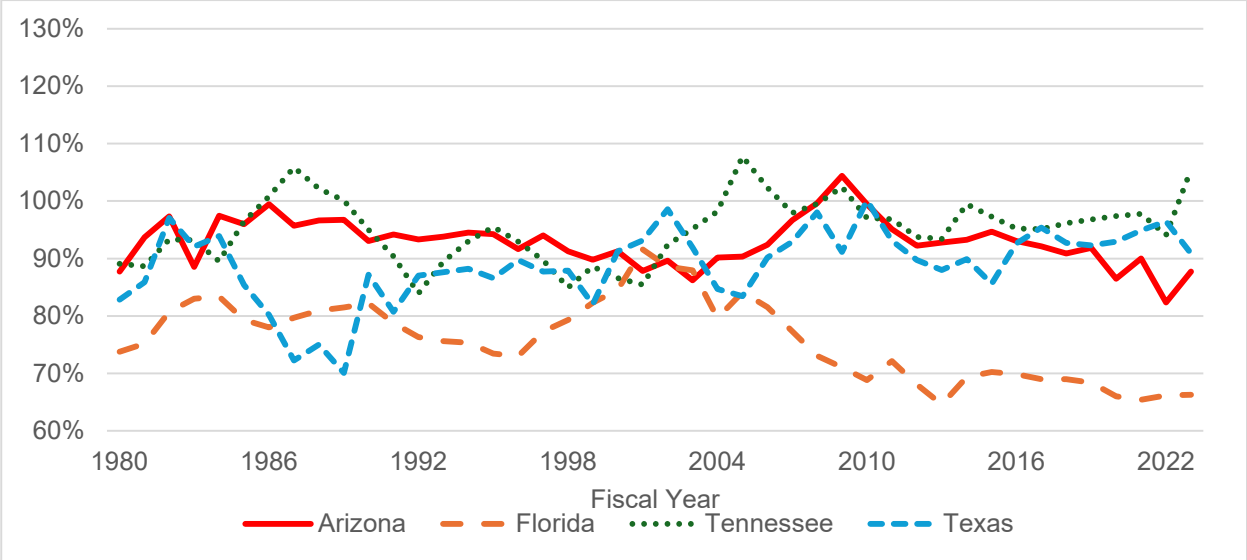


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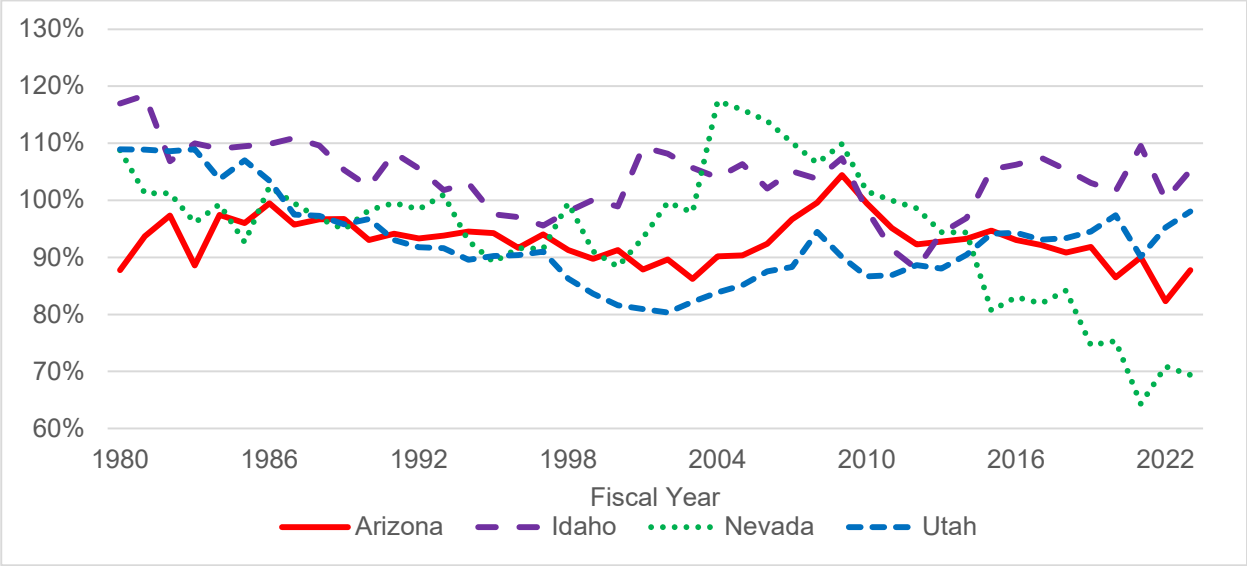
CHART 7-20 (continued)
TOTAL EDUCATIONAL REVENUE PER FULL-TIME-EQUIVALENT PUBLIC HIGHER EDUCATION STUDENT AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES



Source: Calculated from data of the State Higher Education Executive Officers Association, *State Higher Education Finance*.

2023, with the calendar year 2022 RPPs used since calendar year 2023 RPPs are not yet available to use to calculate FY 2022 figures. Arizona's calendar year 2022 RPP was higher than in previous years, at 99.9 percent.

Arizona's adjusted per FTE student educational appropriations were the lowest of the comparison states, but adjusted per FTE student net tuition ranked second. Arizona ranked eighth on per FTE student educational revenue.

In fiscal year 2023, educational appropriations for higher education needed to be more than $900 million higher for Arizona to rank in the middle of the states per FTE higher education student, adjusted for the cost-of-living. For the adjusted figure to equal the national average, $1.3 billion more was needed. Actual educational appropriations in Arizona were $2.12 billion. The amount of additional funding needed to match the adjusted per FTE student figure in each of the comparison states is shown in Chart 7-21.

Census Bureau State and Local Government Expenditures

The Census Bureau's *Annual Survey of State and Local Government Finances* is used in this section for the following analyses:

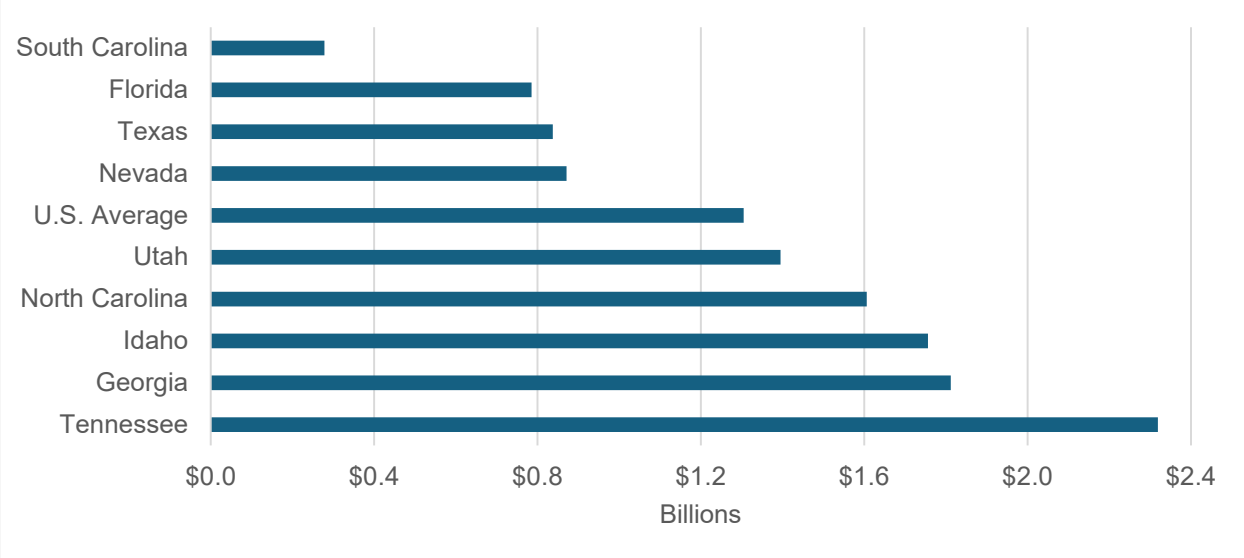
- To examine higher education and K-12 education shares of total noncapital expenditures over time and across states.
- To compare per capita higher education and K-12 education total expenditures in Arizona over time to per capita expenditures in other categories.

TABLE 7-2
PUBLIC HIGHER EDUCATION REVENUE PER FULL-TIME-EQUIVALENT STUDENT ADJUSTED FOR THE COST OF LIVING, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE, FISCAL YEAR 2023

	Educational Appropriations	Net Tuition	Total Educational Revenue
Arizona	62.6%	129.3%	87.3%
Florida	85.8	31.6	64.5
Georgia	116.1	66.5	96.8
Idaho	114.5	121.0	114.9
Nevada	88.3	46.0	71.8
North Carolina	110.0	67.6	93.5
South Carolina	70.8	153.3	100.6
Tennessee	131.1	91.7	114.4
Texas	87.3	101.3	93.4
Utah	103.8	101.6	103.4

Sources: Calculated from data of the State Higher Education Executive Officers Association, *State Higher Education Finance* (revenues and enrollment), and the U.S. Department of Commerce, Bureau of Economic Analysis (regional price parities).

CHART 7-21
ADDITIONAL STATE AND LOCAL GOVERNMENT EDUCATIONAL APPROPRIATIONS NEEDED IN ARIZONA IN FISCAL YEAR 2023 TO MATCH PER FULL-TIME-EQUIVALENT STUDENT STATE AND LOCAL GOVERNMENT EDUCATIONAL APPROPRIATIONS FOR PUBLIC HIGHER EDUCATION ADJUSTED FOR THE COST OF LIVING, SELECTED STATES



Sources: Calculated from data of the State Higher Education Executive Officers Association, *State Higher Education Finance* (revenues and enrollment), and the U.S. Department of Commerce, Bureau of Economic Analysis (regional price parities).

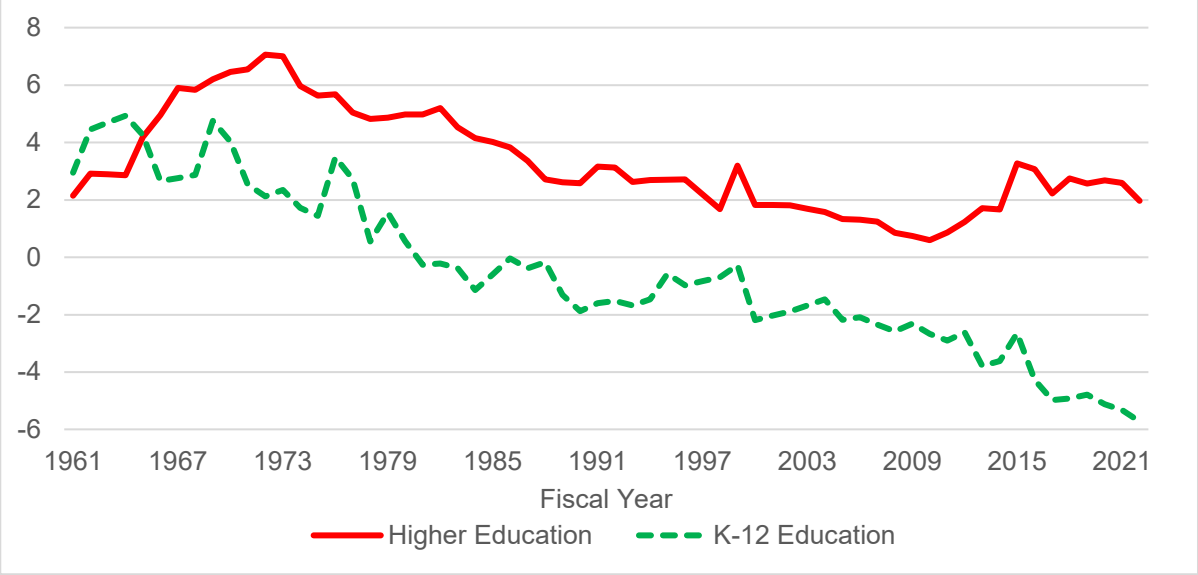
Noncapital expenditures for K-12 education in the 1960s and 1970s accounted for a greater share of total noncapital expenditures in Arizona than the U.S. average, as seen in Chart 7-22. The K-12 share in Arizona relative to the nation began to drop in the late 1960s, falling increasingly far below the national average.

After rising in the 1960s and early 1970s relative to the national average, the higher education share of total noncapital expenditures has also declined in Arizona. The share remains above the national average because of the above-average per capita higher education enrollment in Arizona. Per capita higher education FTE enrollment in Arizona as a percentage of the national average is shown in Chart 7-23.

In Chart 7-24, the difference from the U.S. average in the higher education share of total noncapital expenditures is shown for each of the comparison states. From the 1960s into the 1980s, Arizona had the second-highest share among the comparison states. It continued to have one of the higher shares in FY 2022 despite having the largest drop over time in the share. In FY 2022, per capita higher education FTE enrollment in Arizona was higher than in each of the comparison states except Utah.

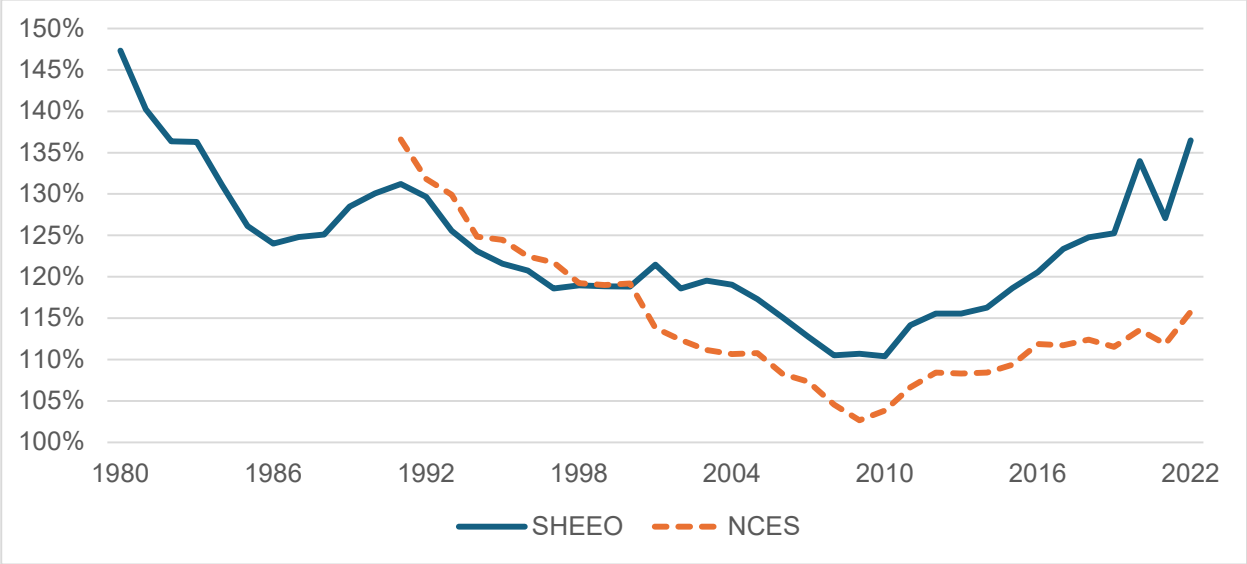
The difference from the U.S. average in the K-12 education share of total noncapital expenditures is shown for each of the comparison states in Chart 7-25. Arizona's sharp decrease relative to the national average was not unique, as Florida, North Carolina, South Carolina, and Utah also experienced appreciable declines.

CHART 7-22
NONCAPITAL PUBLIC EDUCATION EXPENDITURES, PERCENTAGE POINT DIFFERENCE IN SHARE OF THE TOTAL, ARIZONA MINUS THE UNITED STATES



Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of State and Local Government Finances*.

CHART 7-23
PER CAPITA FULL-TIME-EQUIVALENT PUBLIC HIGHER EDUCATION ENROLLMENT, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



Sources: Calculated from data of the State Higher Education Executive Officers Association (SHEEO), *State Higher Education Finance* (FTE enrollment), the U.S. Department of Education, National Center for Education Statistics (NCES, FTE enrollment), and the U.S. Department of Commerce, Census Bureau (population).

CHART 7-24
PUBLIC HIGHER EDUCATION NONCAPITAL EXPENDITURES, PERCENTAGE POINT DIFFERENCE IN SHARE FROM THE NATIONAL AVERAGE, SELECTED STATES

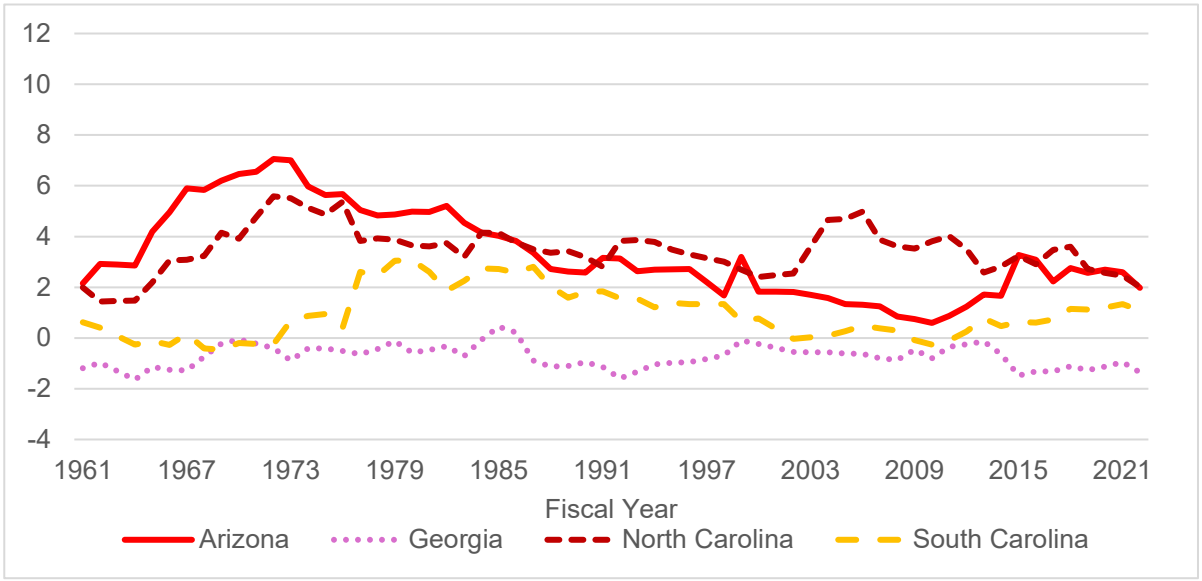


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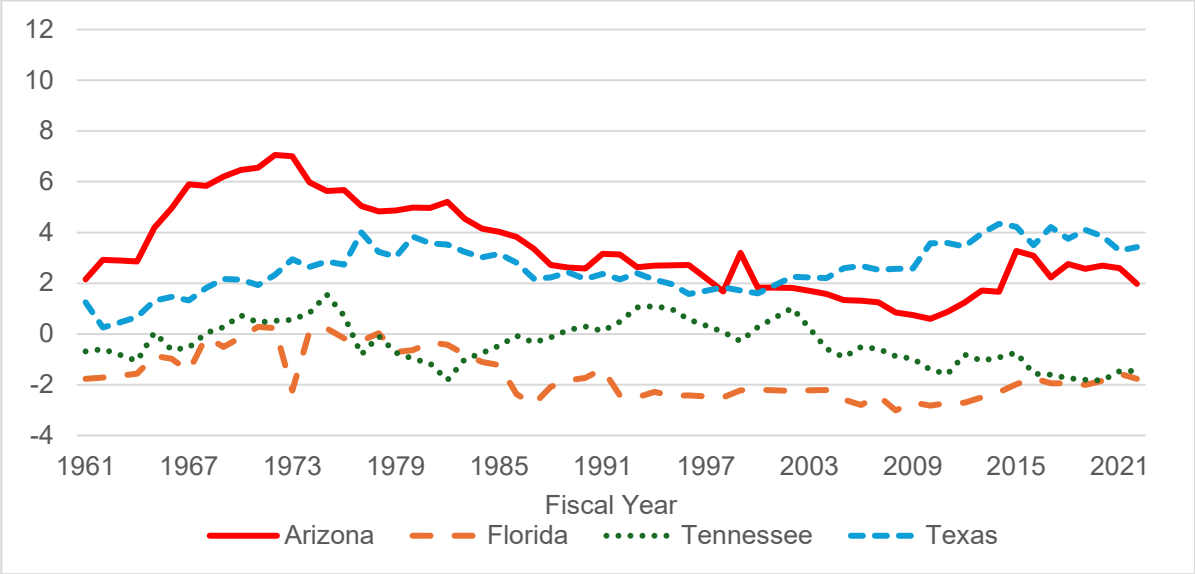
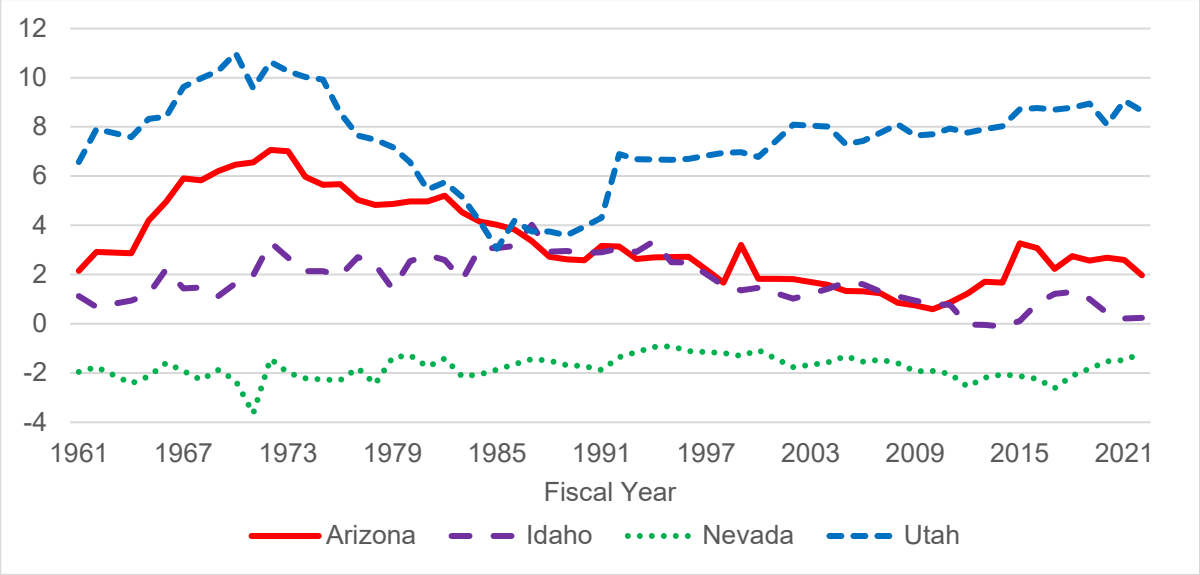
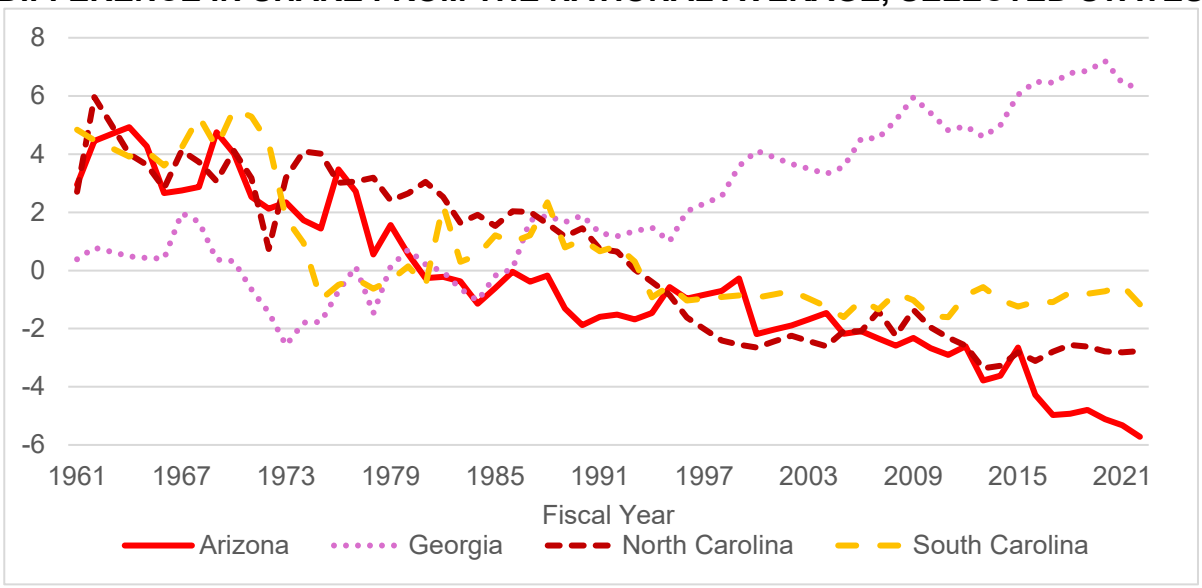
CHART 7-24 (continued)
PUBLIC HIGHER EDUCATION NONCAPITAL EXPENDITURES, PERCENTAGE POINT DIFFERENCE IN SHARE FROM THE NATIONAL AVERAGE, SELECTED STATES





Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of State and Local Government Finances*.

CHART 7-25
PUBLIC K-12 EDUCATION NONCAPITAL EXPENDITURES, PERCENTAGE POINT DIFFERENCE IN SHARE FROM THE NATIONAL AVERAGE, SELECTED STATES



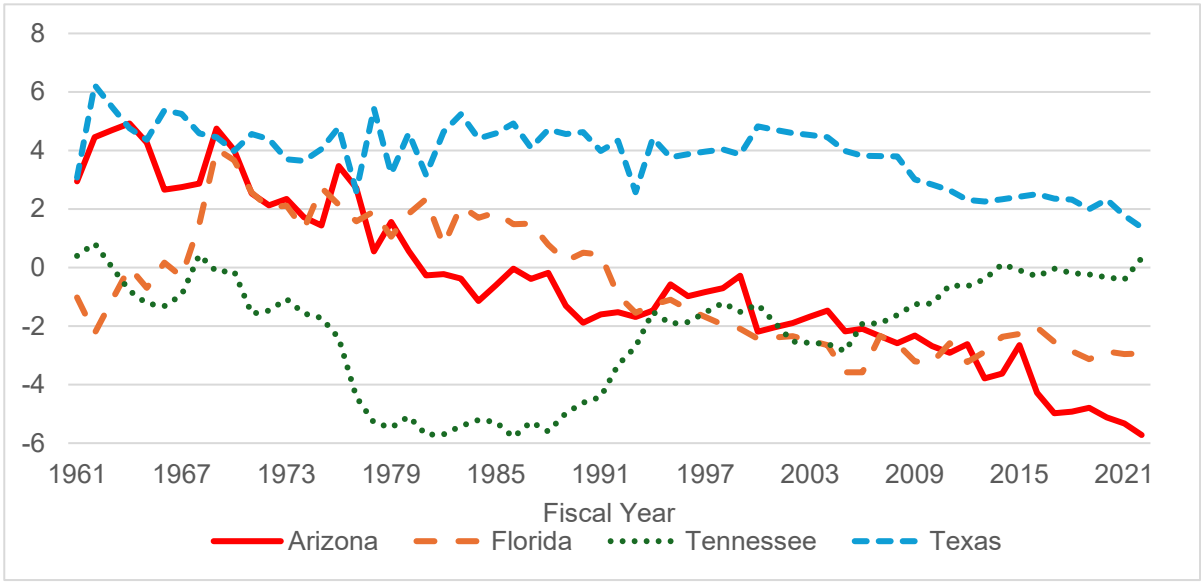


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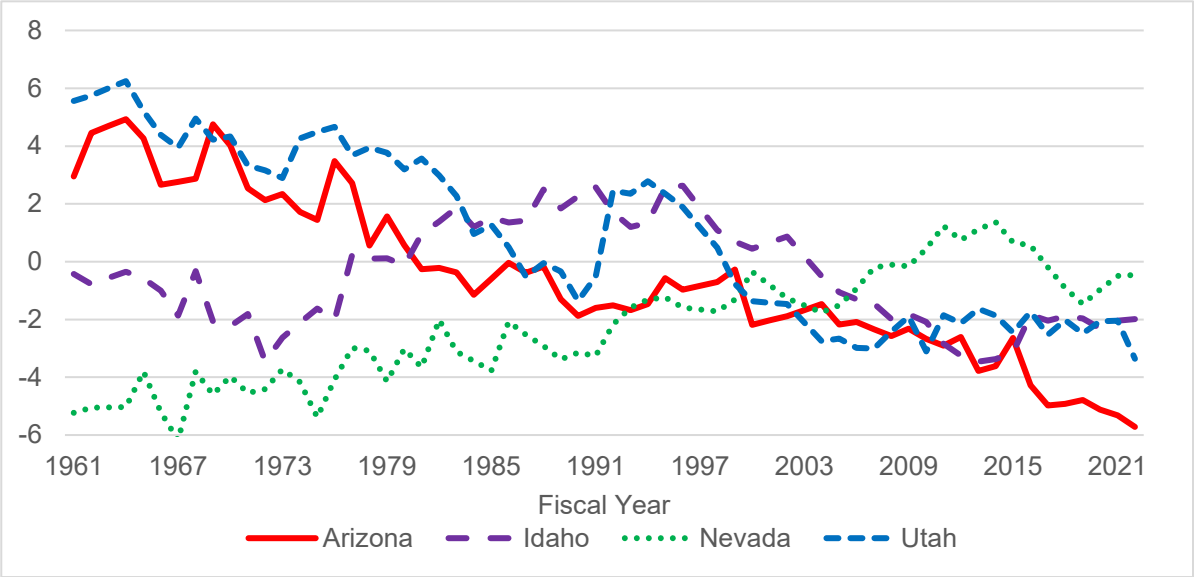
CHART 7-25 (continued)
PUBLIC K-12 EDUCATION NONCAPITAL EXPENDITURES, PERCENTAGE POINT DIFFERENCE IN SHARE FROM THE NATIONAL AVERAGE, SELECTED STATES



Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of State and Local Government Finances*.

Per capita higher education and K-12 education total expenditures in Arizona over time are compared to the overall total in the top graph of Chart 7-26, all expressed as a percentage of the U.S. average. Due to the unavailability of complete data on capital outlays by category of spending, these figures include both capital outlays and current operations. The total in Arizona declined relative to the national average, but the decreases in K-12 education and especially in higher education were greater.

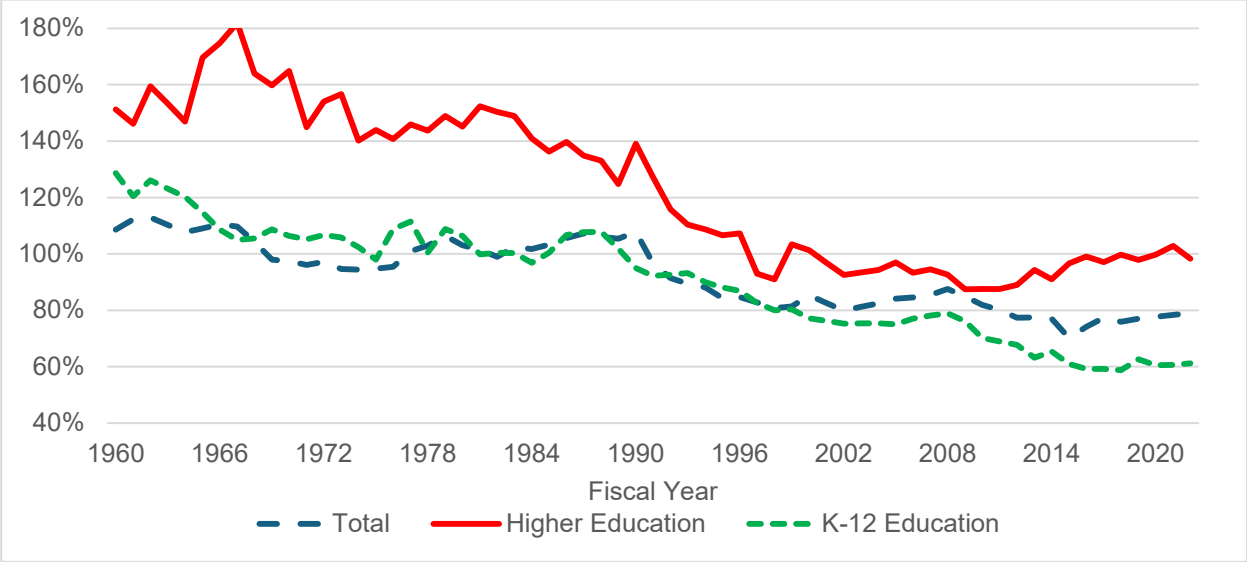
The other two graphs in Chart 7-26 compare the two education categories to other major expenditure categories for the period since FY 1993. Other than the government administration category, K-12 education had the greatest decline. In contrast, per capita expenditures for public safety did not change over time relative to the nation and per capita expenditures for social services rose.

Arizona State Government General Fund

The K-12 share of the general fund's expenditures has not changed much over time, as seen in Chart 7-27. In contrast, the share for universities has plunged from 19 percent of the general fund total in FY 1979 to 6 percent in FY 2025, as seen in Chart 7-28.

In Chart 7-29, the history of general fund support for higher education per FTE student is displayed. After holding relatively steady through FY 2008, inflation-adjusted expenditures per FTE student plunged. As of FY 2022 (the latest year of FTE enrollment separated by community colleges and universities), no recovery in per FTE student university funding had occurred.

CHART 7-26
EXPENDITURES PER CAPITA, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



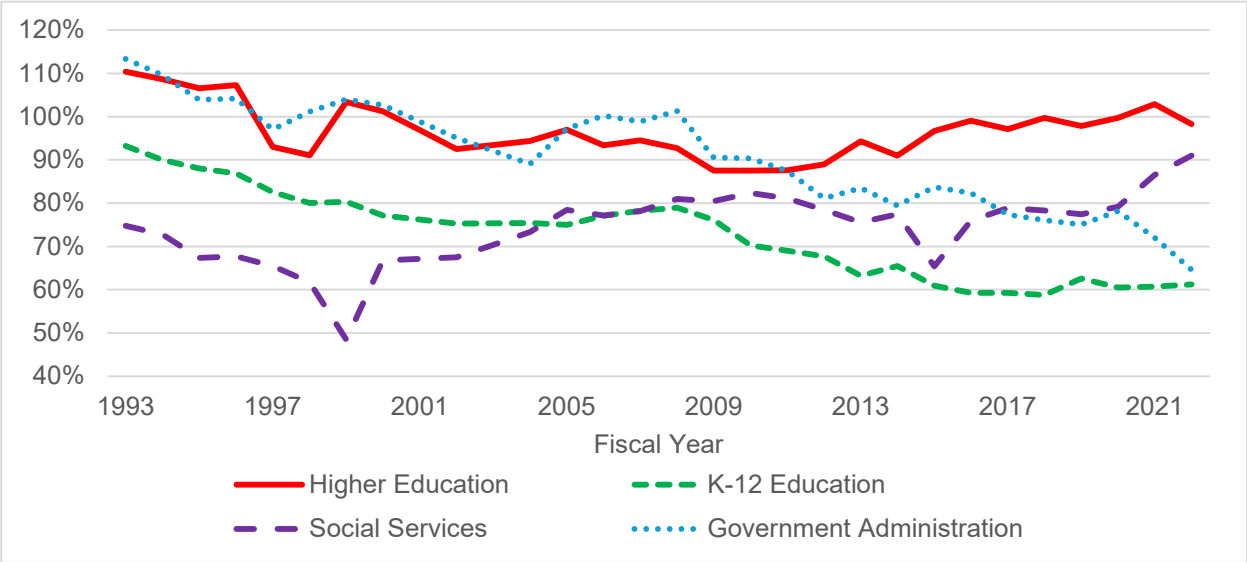


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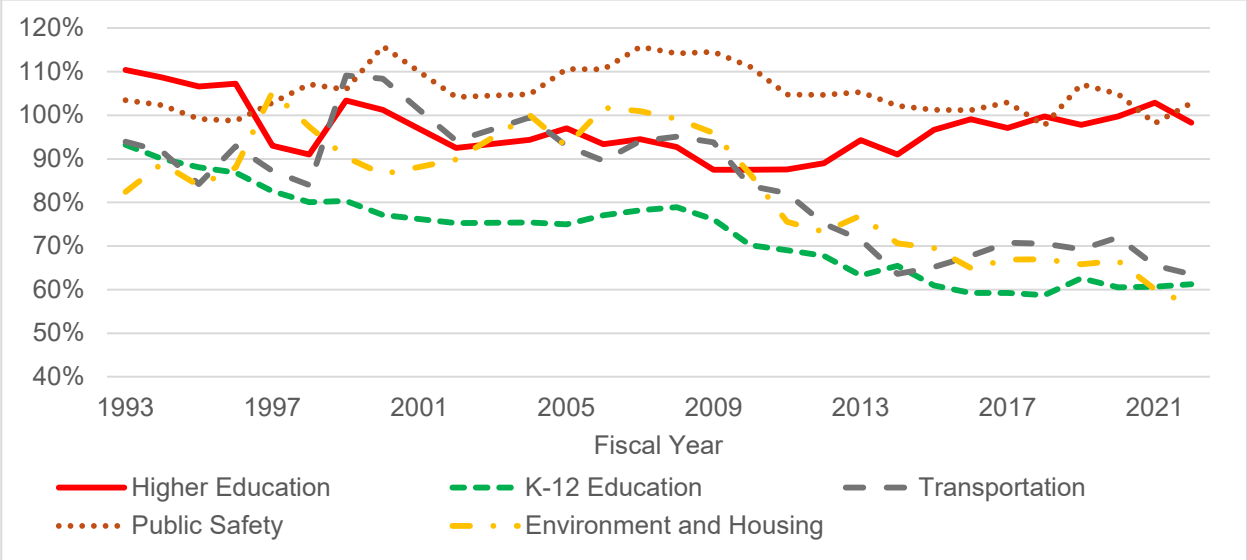
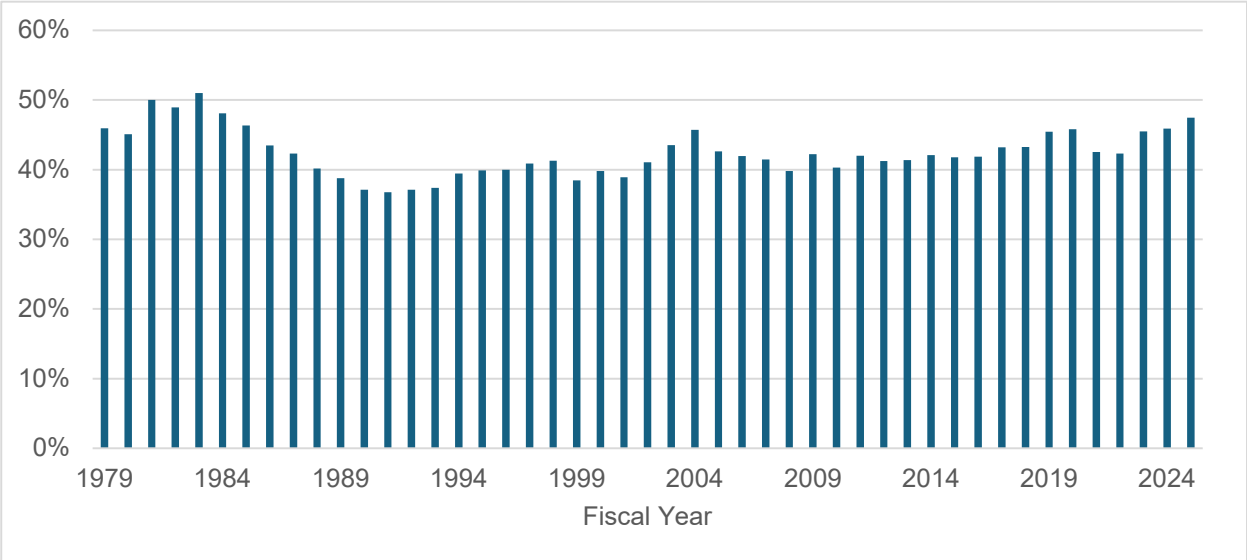
CHART 7-26 (continued)
EXPENDITURES PER CAPITA, ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



Note: The expenditure figures include capital outlays.

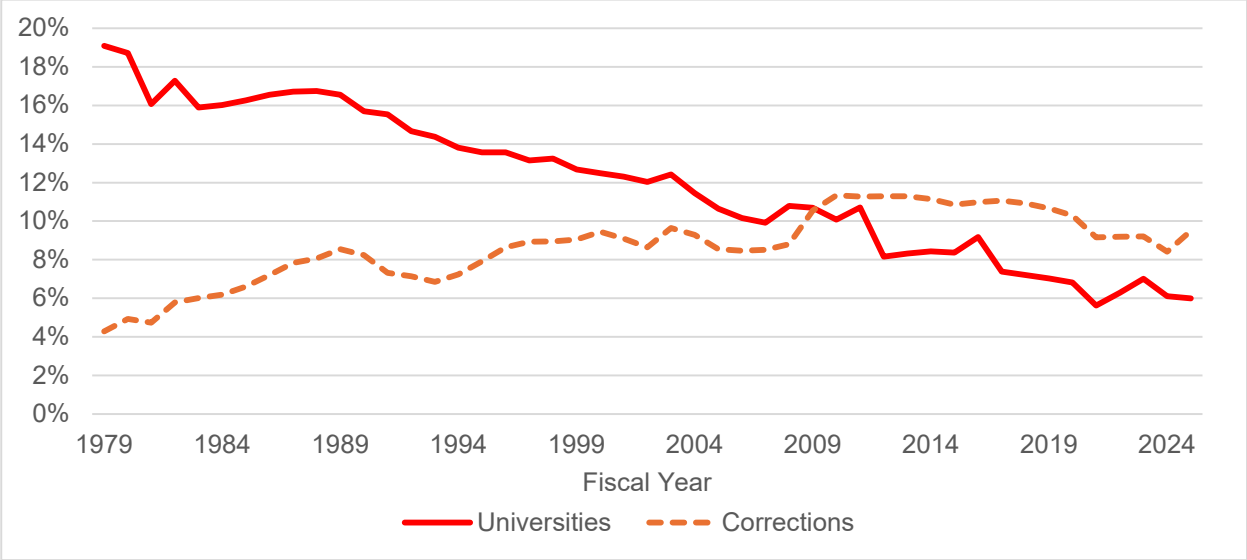
Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of State and Local Government Finances*.

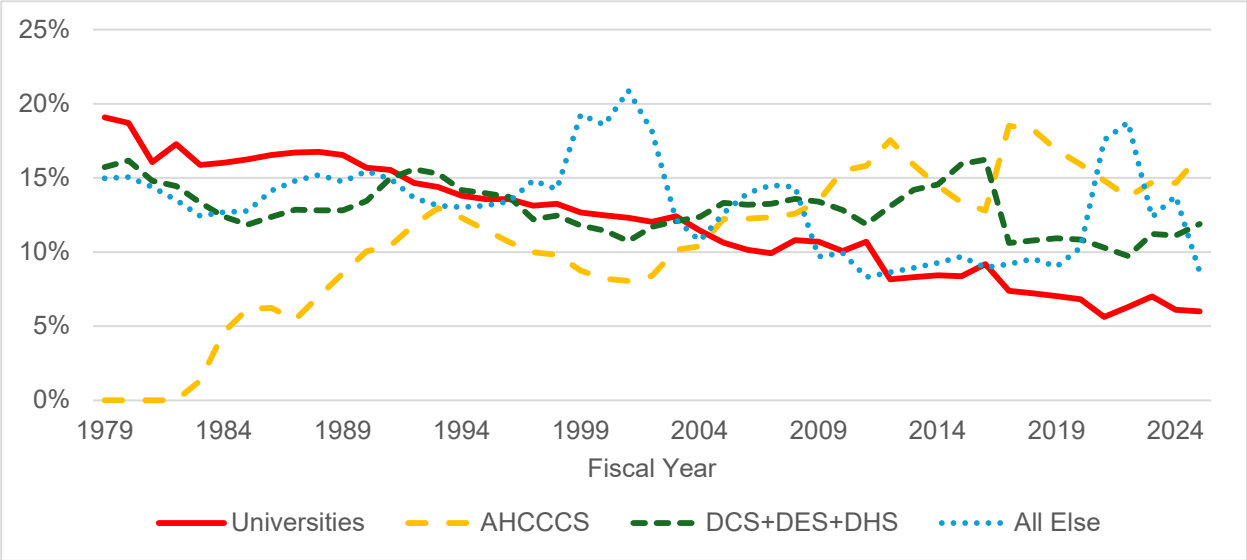
CHART 7-27
ARIZONA STATE GOVERNMENT GENERAL FUND PUBLIC K-12 EDUCATION SHARE OF TOTAL EXPENDITURES



Source: Calculated from data of the Arizona Joint Legislative Budget Committee.

CHART 7-28
ARIZONA STATE GOVERNMENT GENERAL FUND, SHARE OF TOTAL EXPENDITURES

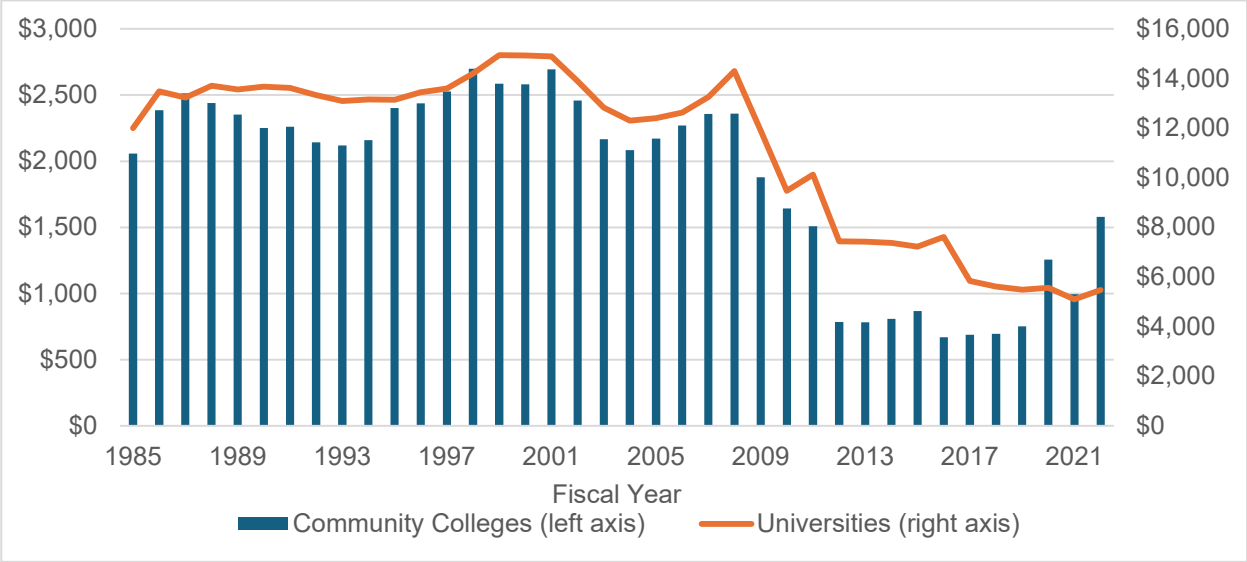




Notes: "AHCCCS" is the Arizona Health Care Cost Containment System, Arizona's version of Medicaid. "DCS+DES+DHS" is the sum of the departments of child safety, economic security, and health services.

Source: Calculated from data of the Arizona Joint Legislative Budget Committee.

CHART 7-29
INFLATION-ADJUSTED ARIZONA STATE GOVERNMENT GENERAL FUND EXPENDITURES PER FULL-TIME-EQUIVALENT PUBLIC HIGHER EDUCATION STUDENT



Note: The universities include funding for the Arizona Board of Regents.

Sources: Calculated from data of the Arizona Joint Legislative Budget Committee (higher education funding), the U.S. Department of Education, National Center for Education Statistics (FTE enrollment), and the U.S. Department of Commerce, Bureau of Economic Analysis (gross domestic product implicit price deflator).

CHAPTER 8: SCHOOL FUNDING AND EDUCATIONAL OUTCOMES

Based on the educational research literature, the relationship between school funding and student outcomes is not a simple one of "more money, better results." The effectiveness of any funding increase hinges on how those resources are used. School funding is indeed necessary to achieve positive student outcomes, but increasing funding alone may not be sufficient to guarantee those outcomes.[3]

Several factors beyond the mere amount of funding appear to play a significant role in shaping student outcomes:

- Policy Environments: For example, state-level policies related to accountability, teacher certification, and curriculum standards can all interact with funding levels to shape student learning.
- Resource Allocation Decisions: Even within a given spending category, the specific programs and practices funded can vary significantly.
- School Leadership and Teacher Quality: The sources highlight the critical role of school leadership and teacher quality in translating resources into student success. Effective school leaders and high-quality teachers can leverage resources to implement evidence-based practices and create a supportive learning environment that maximizes student potential.

Teacher quality appears to be important to student success. Generally, teacher quality rises rapidly with years of experience teaching for several years, then levels off. Thus, a school system with high teacher turnover, largely hiring inexperienced teachers, can result in lower student success. Low teacher salaries are one cause of high teacher turnover.

Research findings on the importance of class size to student success are mixed. However, one notable study found that class size in early grades (largely through grade 3) is important. It indicated that class size in these early grades should not exceed 18.[4]

Elementary and Secondary Schools

Funding reductions have led to increases in average class size and to decreases in average teacher salaries in Arizona relative to the U.S. average. The relationship in Arizona between funding and test scores is unclear and the time series of graduation rates is too short to draw a link to funding.

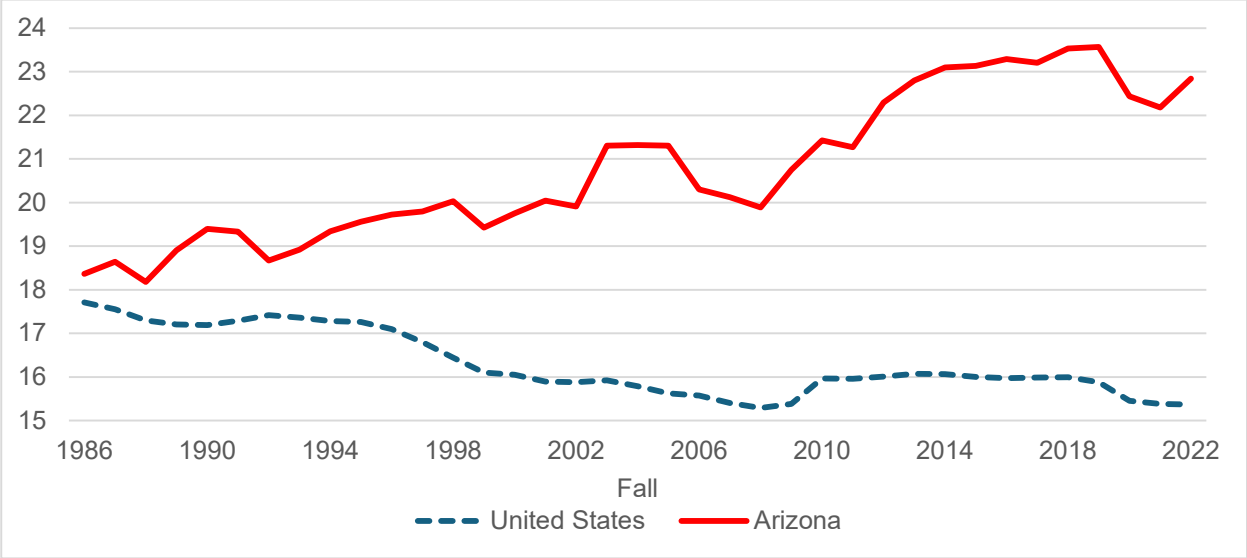
Class Size

In fall 1986, the earliest available data, the pupil-to-teacher ratio (the average number of pupils per teacher) in Arizona was 18.4, not much above the national average of 17.7. Since then, as seen in the first graph of Chart 8-1, the pupil-to-teacher ratio has increased in Arizona but decreased nationally, opening a wide gap. The fall 2022 figure was 15.4 nationally and 22.8 in

[3] This summary is based on Handel, Danielle Victoria, and Eric A. Hanushek, *U.S. School Finance: Resources and Outcomes*, Chapter 3 of the *Handbook of the Economics of Education*, Volume 7, 2023, pp. 143-226, https://www.sciencedirect.com/handbook/handbook-of-the-economics-of-education/vol/7/suppl/C.

[4] Mosteller, Frederick, "The Tennessee Study of Class Size in the Early School Grades," *Future Child*, Summer-Fall 1995, https://edsource.org/wp-content/uploads/old/STAR.pdf.

CHART 8-1
AVERAGE NUMBER OF PUPILS PER TEACHER, UNITED STATES AND SELECTED STATES



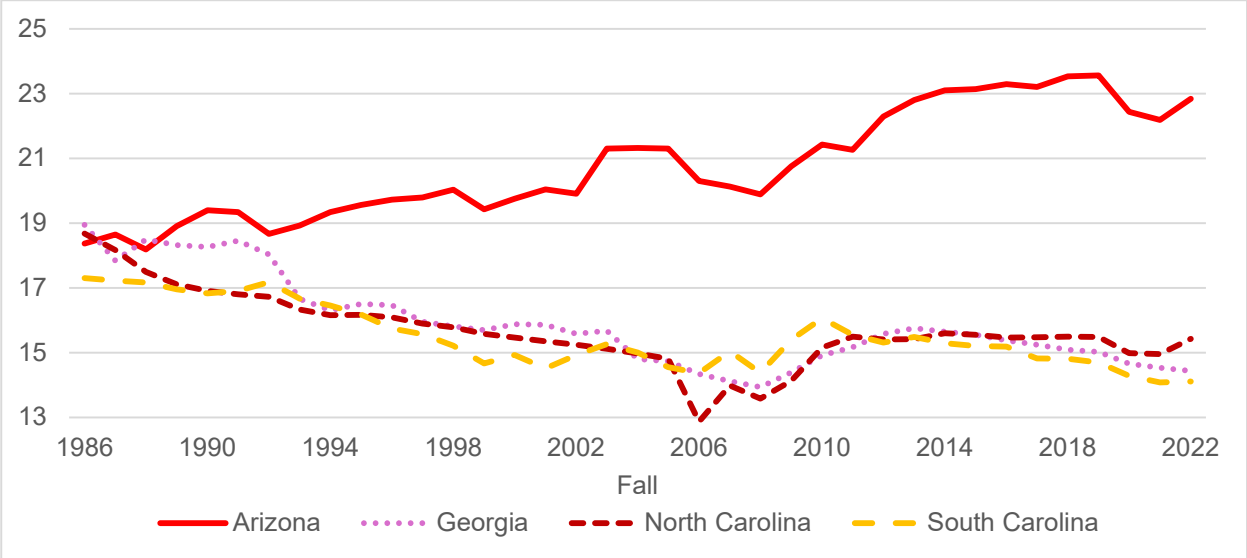


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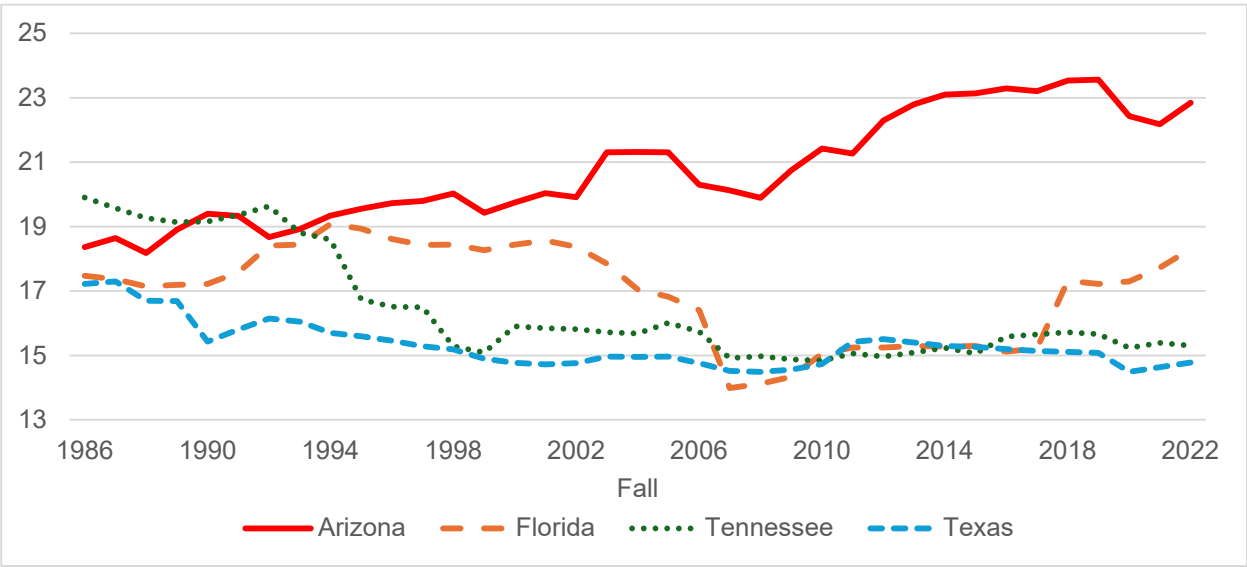
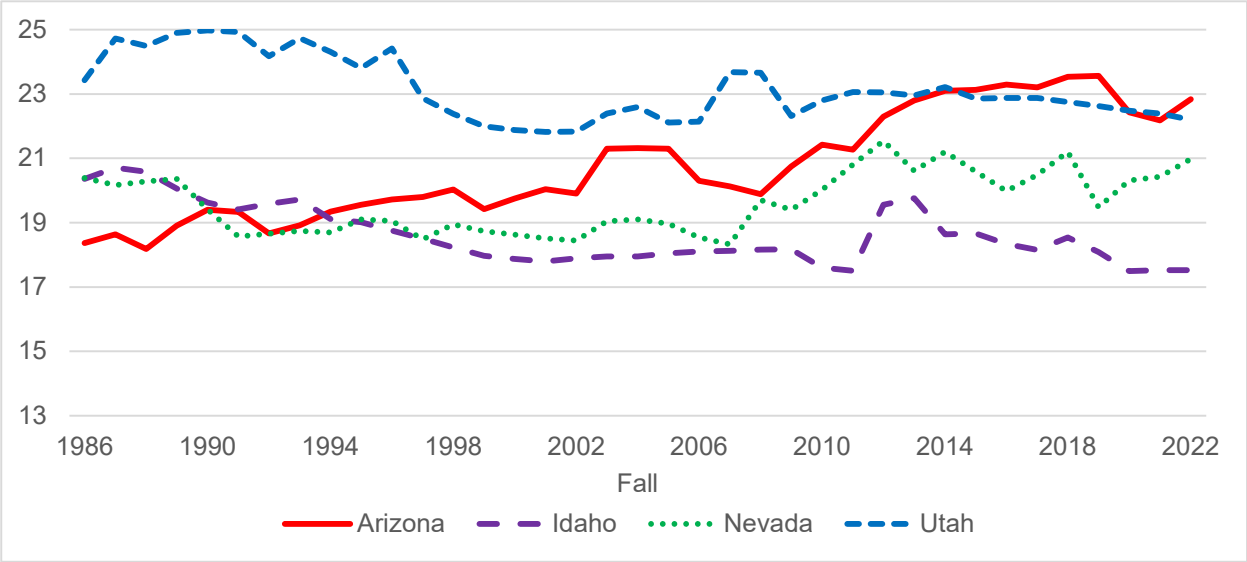
CHART 8-1 (continued)
AVERAGE NUMBER OF PUPILS PER TEACHER,
UNITED STATES AND SELECTED STATES





Source: Calculated from data of the U.S. Department of Education, National Center for Education Statistics.

Arizona (nearly 50 percent higher); Arizona had the highest figure in the nation. Similarly, the pupil-to-staff ratio fell over time nationally but increased in Arizona. In fall 2022, only Utah had a greater number of pupils per staff member than Arizona.

As seen in the other graphs of Chart 8-1, the pupil-to-teacher ratio fell over time in most of the comparison states. Only Utah's figure was close to that of Arizona in fall 2022.

Teacher Salaries

Data on instructional staff salaries date back to the early 1900s. The average salary in Arizona was considerably higher than the U.S. average in the 1910s, continued to exceed the national average through the mid-1960s, and was close to the U.S. average through the mid-1980s. As seen in Chart 8-2, the figure in Arizona then fell to well below average, stabilized for a time at this lower level, then fell further relative to the national average.

Adjusted for the cost of living, Arizona's figure bottomed out at approximately 19 percent below average in school years 2016-17 and 2019-20. From school year 2013-14 through 2019-20, Arizona's average teacher salary was second-or-third lowest among all states. An improvement relative to the U.S. average was registered in Arizona in school years 2020-21 and 2021-22. Arizona ranked sixth lowest in the nation in 2021-22 at 13.4 percent below average after adjusting for the cost of living.

The recent improvement in the average teacher salary in Arizona relative to the nation resulted from a legislative effort that was designed to raise teacher salaries by 20 percent over three years. The actual increase in the average salary was somewhat less than 20 percent, but was one of the highest in the nation over these years.

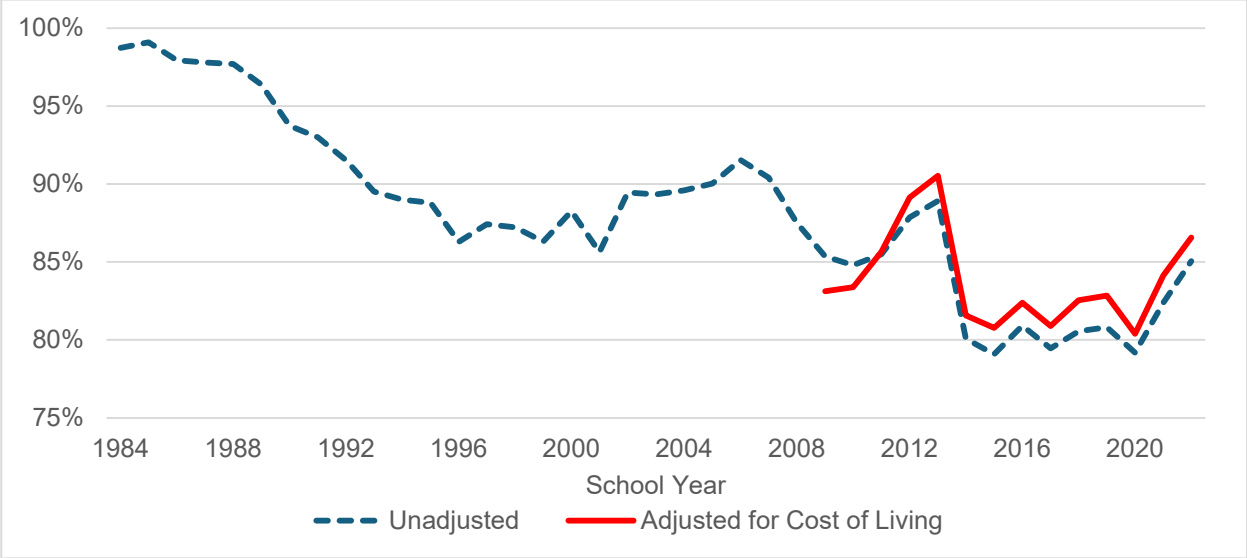
The average teacher salary after adjusting for the cost of living is shown in Chart 8-3 for the comparison states, expressed as a percentage of the U.S. average. In school year 2022 on a cost-of-living-adjusted basis, the adjusted average salary was lower than in Arizona only in Florida, but Arizona's figure was within 5 percent of that of six of the states.

NAEP Test Scores

The National Assessment of Educational Progress (NAEP), also known as "The Nation's Report Card," is administered by the National Center for Education Statistics (NCES), which is part of the U.S. Department of Education. Information on the NAEP and test results are available from https://www.nationsreportcard.gov/ and https://nces.ed.gov/nationsreportcard/. While students in private schools are tested, the results for private schools are available only for the nation.

NAEP results of public-school students began to be released at a state level during the 1990s, though not all states participated. Reading tests and mathematics tests of fourth graders and of eighth graders have been conducted regularly in all states, generally every two years, since 2003. (Due to COVID-19, the 2021 test was postponed to 2022.) Science and writing tests have been conducted only a few times, with the most-recent state results in writing in 2007 and in science in 2015. Other subject-matter tests also are administered, including testing of 12th graders, but these results generally are not available by state.

CHART 8-2
AVERAGE TEACHER SALARY, ARIZONA
AS A PERCENTAGE OF THE NATIONAL AVERAGE



Source: Calculated from data of the U.S. Department of Education, National Center for Education Statistics (teacher salaries) and the U.S. Department of Commerce, Bureau of Economic Analysis (regional price parities).

CHART 8-3
AVERAGE TEACHER SALARY ADJUSTED FOR THE COST OF LIVING,
SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE

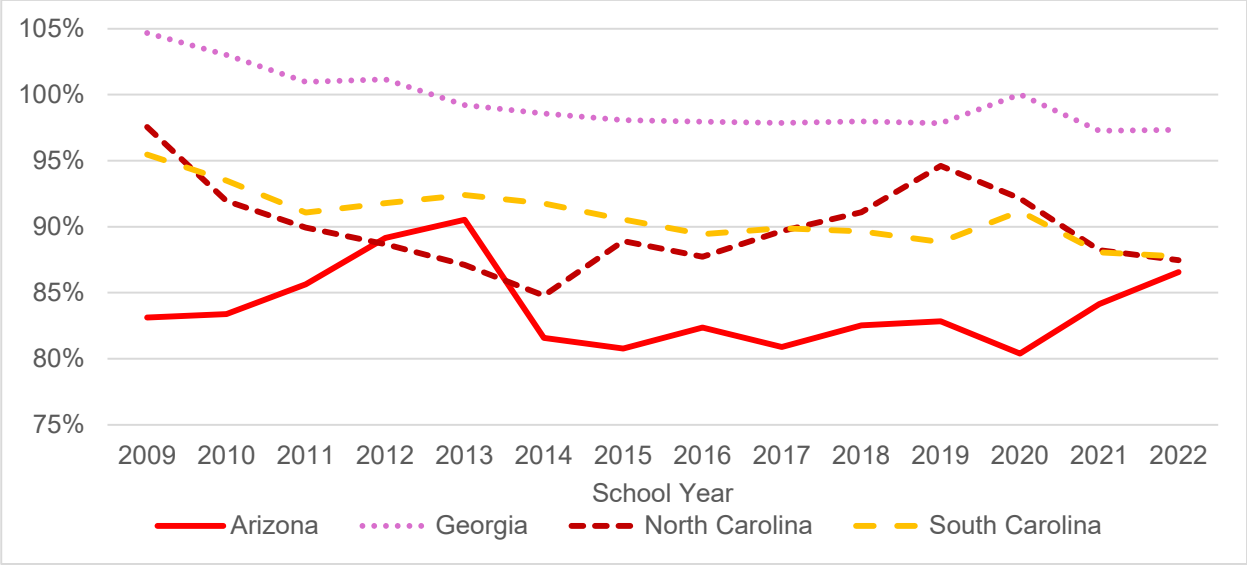


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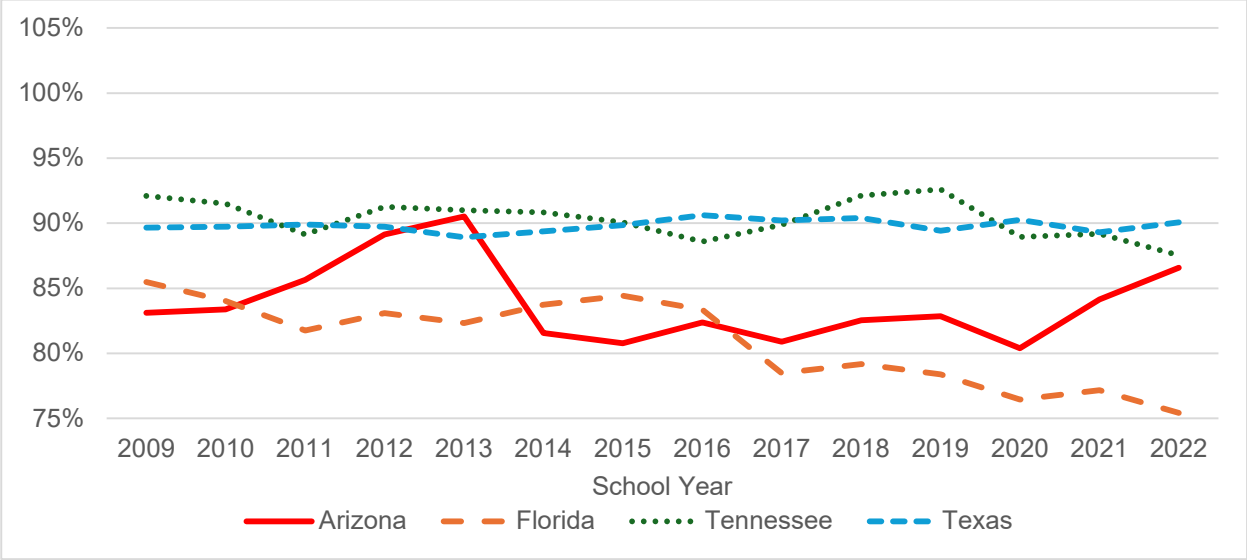
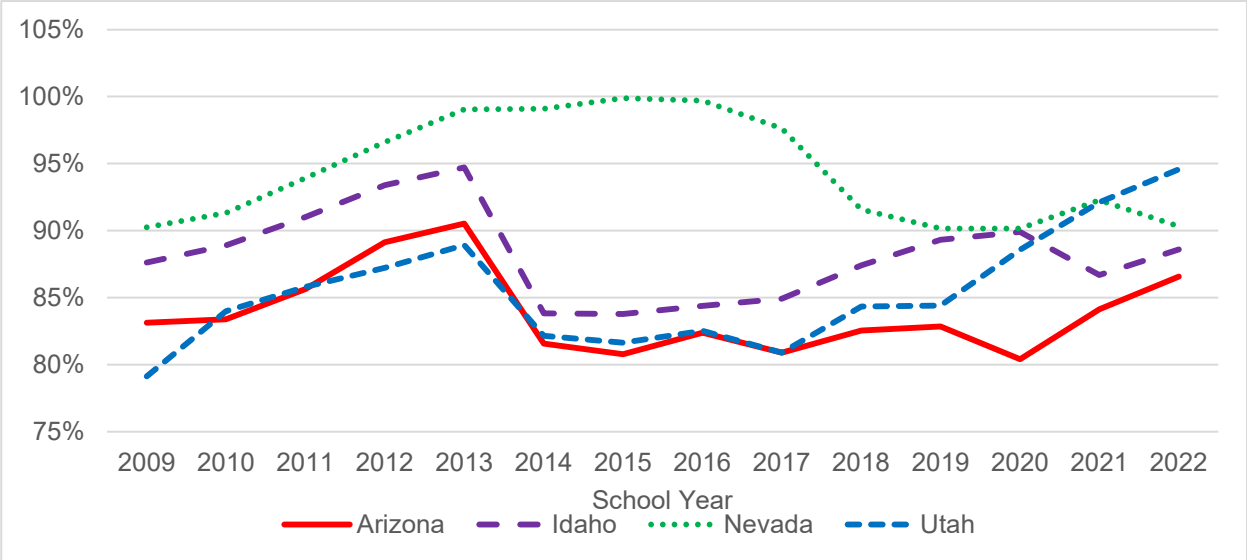
CHART 8-3 (continued)
AVERAGE TEACHER SALARY ADJUSTED FOR THE COST OF LIVING, SELECTED STATES AS A PERCENTAGE OF THE NATIONAL AVERAGE





Source: Calculated from data of the U.S. Department of Education, National Center for Education Statistics (teacher salaries) and the U.S. Department of Commerce, Bureau of Economic Analysis (regional price parities).

In addition to overall results, test scores are reported for various demographic groups, though some results are withheld due to small sample size. The demographic categories analyzed in this section follow:

- Race/Ethnicity: Hispanic students; and non-Hispanic individuals differentiated by these races: white, black, Native American, Asian and Pacific Islander, and those of two or more races.
- Disability: yes or no.
- English Learner: yes or no.
- Eligibility for the National School Lunch Program (NSLP): yes or no. The NSLP provides free or reduced-price lunches in schools. Eligibility for the NSLP largely is based on household income.

Students with disabilities and students learning English have been provided various testing accommodations, such as extended time to complete the test, since the late 1990s.

Unlike achievement tests administered by individual states that typically are unique to a given state, the NAEP is consistently applied across the states, allowing state-to-state comparisons. However, sampling error is rather large, especially for smaller demographic groups. For example, in Arizona, considerable variation is seen over time in the test scores of blacks, Native Americans, and Asians/Pacific Islanders relative to the national average for these groups. Each of these groups generally have accounted for 6 percent or less of test takers in Arizona.

Generally, to produce state-level results, approximately 3,000 students in 100 schools are tested in each grade and subject. However, this number varies by state and year. In 2022 in Arizona, the sample size was 1,900 for the fourth-grade math test and 1,800 students were selected for the eighth-grade math test and for each of the reading tests.

Schools are selected such that the sample is representative of the geographical, racial, ethnic, and socioeconomic diversity of the nation. Within each school, students are randomly selected. No individual student is tested in more than one subject.

The results are presented as the average test score, which is analyzed in this section, and as the percentage of test takers scoring at an advanced level, at a proficient level, at a basic level, and not reaching the basic level. Various demographics affect average test scores, particularly gender and socioeconomic status. Since socioeconomic status is correlated to race/ethnicity, this accounts for at least some of the variation in average test scores by race/ethnicity. For each of the four primary tests (grade 4 reading, grade 8 reading, grade 4 math, and grade 8 math) nationally in 2022, the Asian/Pacific Islander group scored highest, followed by whites, and those of 2-or-more races, with the latter group scoring only a little above the overall average. The average score was below the overall average in the other racial/ethnic groups, particularly blacks and Native Americans.

Average test scores were appreciably lower for students with disabilities and students learning English than in each of the racial/ethnic groups. Scores for the roughly one-half of students eligible for the NSLP exceeded the scores for blacks and Native Americans, but the average scores for the NSLP-eligible group were considerably lower than for those not eligible.

Results for Arizona Relative to the National Average. Table 8-1 presents Arizona's NAEP scores relative to the national average by subject and grade over time. Chart 8-4 presents the same results graphically for the four ongoing tests. Relative to the nation, Arizona's performance declined during the 2000s but improved during the 2010s. In recent years, the performance of Arizona students relative to the national average generally was similar to that in the 1990s, though better in fourth-grade reading. In 2022, the average score in Arizona was less than the national average in all four tests, but was significantly below average only in fourth-grade math.

Detail for the 2022 results are provided graphically in Chart 8-5 for Arizona by demographic group relative to the national average for each demographic group (due to small sample size, results for those of two-or-more races generally are not available). Sampling error is appreciable for several of the groups: blacks, Native Americans, Asians/Pacific Islanders, disabled students, and English learners. In 2022, the average score of Arizona students was similar to the national demographic group average for whites, blacks, and Hispanics, but was considerably below average for Native Americans, disabled students, and English learners.

Since average test scores vary widely by demographic group, the overall average can be affected by the demographic distribution of the test takers as well as by the scores in each demographic group. Relative to the nation in 2022, Arizona had a disproportionately large share of test takers in the below-average scoring Hispanic and Native American groups, and a disproportionately low share in the above-average scoring white and Asian/Pacific Islander groups. The

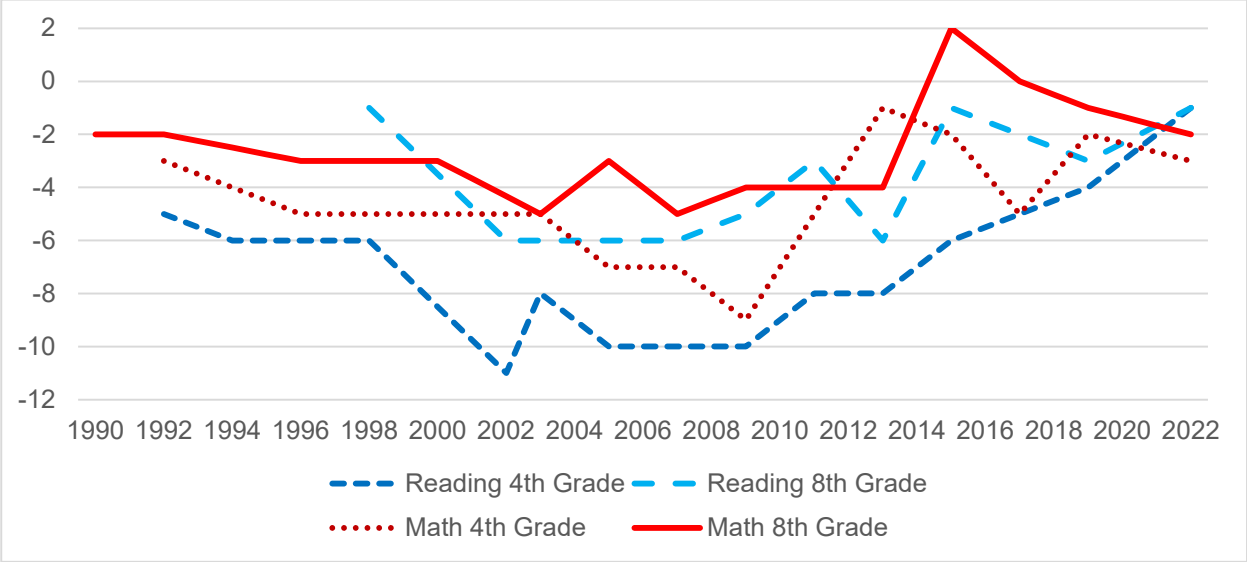
TABLE 8-1
NAEP SCORES BY SUBJECT, GRADE, AND YEAR,
ARIZONA MINUS THE NATIONAL AVERAGE

	Read 4	Read 8	Math 4	Math 8	Write 4	Write 8	Sci 4	Sci 8
1990				-2				
1992	-5*		-3*	-2				
1994	-6*							
1996			-5*	-3				
1998	-6*	-1				-4*		
2000			-5*	-3				
2002	-11*	-6*			-13*	-10*		
2003	-8*	-6*	-5*	-5*				
2005	-10*	-6*	-7*	-3*				
2007	-10*	-6*	-7*	-5*		-6*		
2009	-10*	-5*	-9*	-4*			-11*	-7*
2011	-8*	-3*	-5*	-4*				-7*
2013	-8*	-6*	-1	-4*				
2015	-6*	-1	-2*	2			-4*	-5*
2017	-5*	-2*	-5*	0				
2019	-4*	-3*	-2*	-1				
2022	-1	-1	-3*	-2				

Note: A value with an asterisk indicates that Arizona's score was significantly different from the national average.

Source: Calculated from data of the U. S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress.

CHART 8-4
READING AND MATH NAEP SCORES BY GRADE AND YEAR, ARIZONA MINUS THE NATIONAL AVERAGE



Source: Calculated from data of the U. S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress.

racial/ethnic distribution accounted for all of Arizona's below-average overall score in grade 4 reading, grade 8 reading, and grade 8 math, and for most of the differential in grade 4 math.

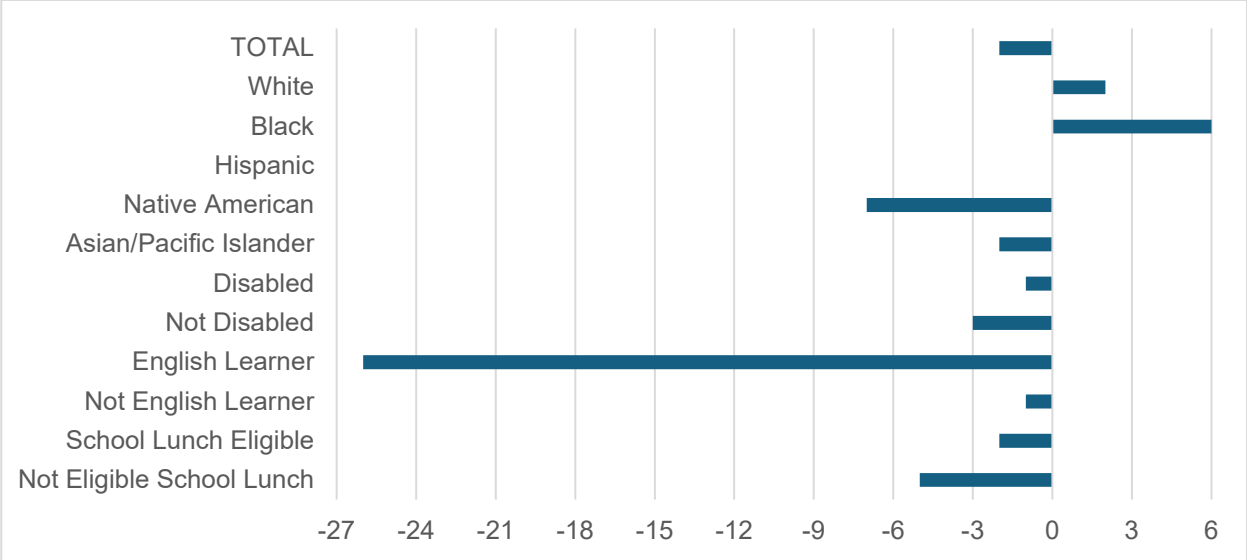
When Arizona's average scores were considerably further below the national average in the late 2000s and early 2010s, the demographic profile accounted for only about half of the deficit. During this period, scores generally were lower than the national average in each demographic group. Even in the white subgroup, the average score was below the U.S. average for white students, especially in reading. It is unclear why test scores in Arizona declined relative to the national demographic group averages during the 2000s, then improved during the 2010s. The relative improvement generally has ceased in recent years.

In addition to the lower test scores in Arizona by demographic group, the decrease in the overall average score in Arizona versus the national average during the 2000s was caused by a substantial increase in the share of lower-scoring Hispanic students offset by a considerable decrease in the share of higher-scoring white students, relative to the changes in the demographic distribution that were occurring nationally. Arizona also had a considerably higher share of students learning English than the U.S. average during this period.

The subsequent improvement in the overall Arizona average test scores versus the national average was a result of both improving scores by demographic group and by a reversal of the decline in the share of white students and the increase in the share of Hispanic students relative to the U.S. average. For example, in the fourth-grade math test, the percentage of white test takers was 9 percentage points less than the U.S. average in 2000, 16 percentage points less in

CHART 8-5
READING AND MATH NAEP SCORES BY GRADE AND DEMOGRAPHIC GROUP, ARIZONA MINUS THE NATIONAL AVERAGE, 2022

READING, FOURTH GRADE



READING, EIGHTH GRADE

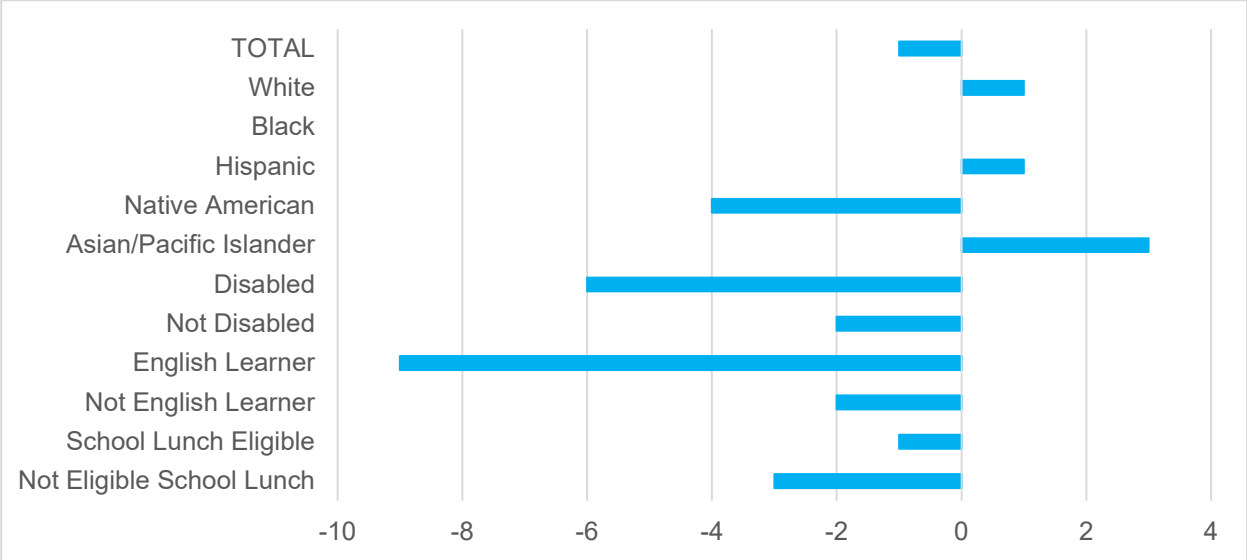


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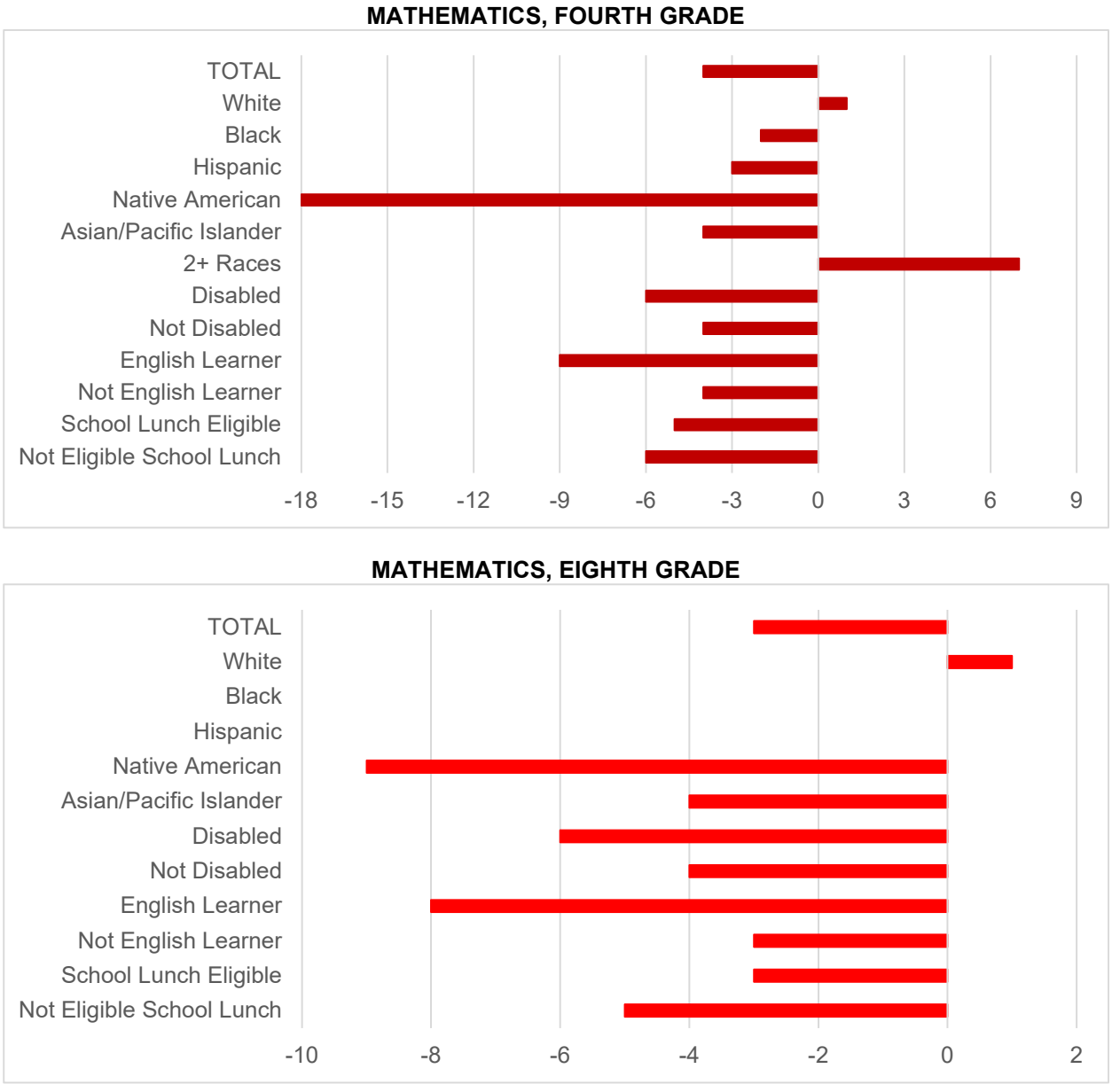
CHART 8-5 (continued)
READING AND MATH NAEP SCORES BY GRADE AND DEMOGRAPHIC GROUP, ARIZONA MINUS THE NATIONAL AVERAGE, 2022



Source: Calculated from data of the U. S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress.

2009, and 8 percentage points less in 2022, while the differential in the share of Hispanic test takers rose from 16 percentage points higher in 1996 to 24 percentage points higher in 2007 and 2009 before dropping back to 18 percentage points higher in 2022. Similarly, Arizona's share of students learning English went from 10 percentage points more than the U.S. average in 2005 to 4 percentage points below the national average in 2022.

Immigration to the United States, particularly from Spanish-speaking nations, increased substantially in the 1990s. Initially, Arizona was one of a relatively few destinations to experience a substantial increase in the number of immigrants. Beginning in the 2000s, immigrants spread across the nation, with relatively few moving to Arizona. In addition, Arizona's crackdown on undocumented immigrants that began in 2007 caused upwards of 100,000 undocumented Arizona residents to move to another U.S. state.[5]

Results for Arizona Relative to Other States. Since not all states participated in NAEP testing prior to 2003, Arizona's ranks among the 10 selected states and among all 51 "states" are expressed as a percentile, where a rank of last is equal to the 100th percentile, in Table 8-2. During the 2000s and early 2010s, Arizona ranked near the bottom of all states and the 10 selected states. Arizona's ranks in recent years have improved, though still mostly below the middle of the states. Arizona compared particularly unfavorably on the infrequently administered science and writing tests.

Among the selected states, Arizona frequently has scored higher than Nevada on the eighth-grade tests, and recently has scored better on the grade 4 math test. Otherwise, Arizona's results have not been frequently better than any of the other comparison states, with the exception of Georgia and Tennessee on the grade 8 math test.

Other Tests

The College Board administers the Advanced Placement (AP) program (https://reports.collegeboard.org/ap-program-results). AP courses, which are available in seven subjects, allow high school students to pursue college-level studies. Student participation is voluntary; an individual can choose to enroll in one or more AP course. At the end of the course, an AP exam is administered. Test scores are reported on a 1-to-5 scale. Scores of 3 or higher receive college credit at many institutions of higher education.

Participation rates, expressed as the percentage of students in grades 10 through 12 who took an AP exam, vary by state. Course offerings vary by school, accounting for some of the variation in participation rates. In 2023, the rate varied from 28.4 percent in the District of Columbia to 7.8 percent in Kansas. No correlation was present across the states between the average test score and the participation rate.

Arizona's participation rate has been below the national average (in 2023, 12.6 percent versus 18.6 percent). The average test score in Arizona in 2023 was 2.95, slightly higher than the national average of 2.91. Arizona ranked 27th among all states and fifth among the 10 selected states. Arizona's ranks have hardly changed over the last several years.

[5] See The Public Policy Institute of California's March 2011 report, *Lessons From the 2007 Legal Arizona Workers Act*, https://www.ppic.org/publication/lessons-from-the-2007-legal-arizona-workers-act/.

TABLE 8-2
NAEP SCORES BY SUBJECT, GRADE, AND YEAR, ARIZONA PERCENTILE RANKS

	Read 4	Read 8	Math 4	Math 8	Write 4	Write 8	Sci 4	Sci 8
Among All States								
1990				66				
1992	83		69	57				
1994	80							
1996			73	61				
1998	80	62				67		
2000			81	68				
2002	96	81			98	88		
2003	84	84	80	77				
2005	92	84	92	69				
2007	92	84	86	73		88		
2009	92	80	92	77			96	89
2011	88	77	84	77				88
2013	88	86	65	77				
2015	86	67	71	51			87	91
2017	82	69	80	49				
2019	86	73	71	61				
2022	55	59	73	65				
Among 10 Selected States								
1990				33				
1992	89		56	39				
1994	75							
1996			61	44				
1998	83	44				61		
2000			94	56				
2002	100	90			100	80		
2003	90	90	80	65				
2005	95	90	95	65				
2007	100	90	95	70		85		
2009	100	80	100	80			100	95
2011	100	75	90	60				95
2013	100	100	65	65				
2015	90	45	70	40			90	100
2017	75	55	85	35				
2019	85	75	75	45				
2022	65	55	90	65				

Note: If Arizona's score is the lowest among the states, its percentile rank is 100.

Source: Calculated from data of the U. S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress.

College entrance exams are standardized aptitude tests used to evaluate students for college admissions purposes. There are two primary tests used in the United States: the American College Test (ACT) and the Scholastic Aptitude Test (SAT).

While tempting to use the ACT and the SAT test results to compare states and to examine changes in test scores over time, significant variations in the percentage of high school students taking these tests — by state and over time — make such comparisons inappropriate. Some states mandate that all high school students take one of the tests (usually the ACT). Another cause of variation in the percentage taking a test is whether public universities in a given state require test scores from one of the tests as part of the admissions process. If so, the proportion of students taking that test is relatively high in that state. In any state, the average test score will decline as the percentage of students taking the test rises.

In 2023, the percentage of students taking the SAT was at least 90 percent in 12 states but was less than 5 percent in 16 states. Similarly, the percentage of students taking the ACT was at least 90 percent in 15 states but was less than 10 percent in 16 states.

Graduation Rates

Since school year 2010-11, the NCES has reported a four-year adjusted cohort graduation rate (ACGR) for public high schools. The ACGR is the percentage of public high school freshmen who graduate with a regular diploma, or a state-defined alternate high school diploma for students with the most significant cognitive disabilities, within four years of starting ninth grade. Students who are entering ninth grade for the first time form a cohort for the graduating class. This cohort is "adjusted" by adding any students who subsequently transfer into the cohort and subtracting any students who subsequently transfer out.

As seen in Chart 8-6, in school year 2011, Arizona's graduation rate was not substantially less than the U.S. average. Since then, the national graduation rate has increased while Arizona's rate has fluctuated, mostly lower than in school year 2011. Arizona's graduation rate in school year 2011 was higher than that in most of the comparison states and ranked 26th among the 48 states that reported the data. In school year 2022, Arizona ranked 48th of 49 states with data; Arizona's ACGR was lower than in each of the comparison states and higher than only the District of Columbia.

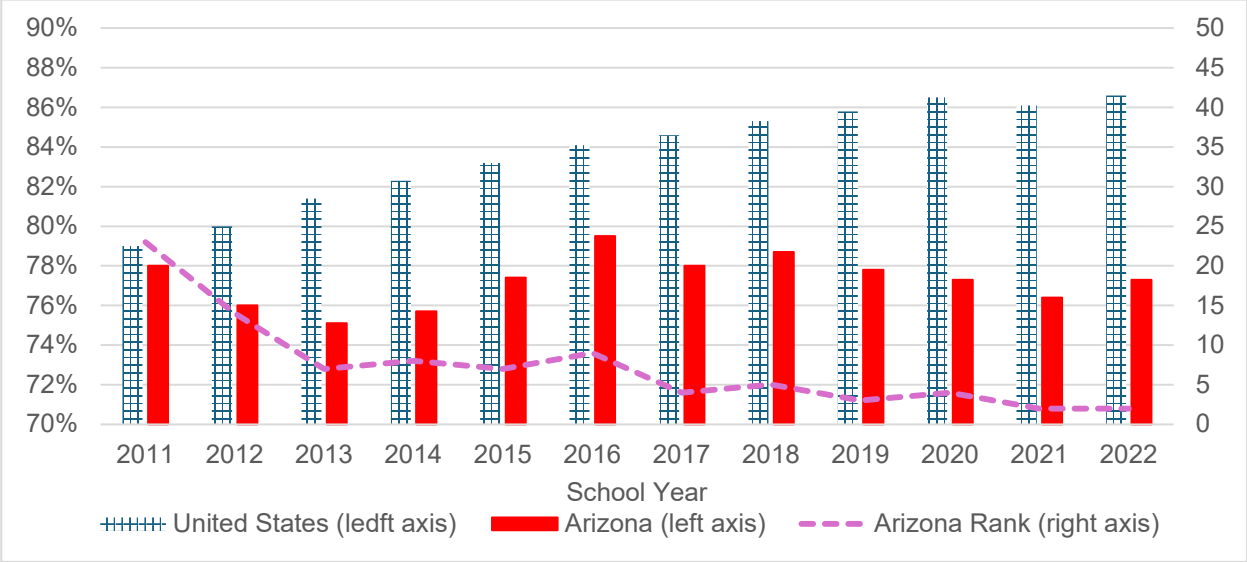
In school year 2022, Arizona's graduation rate was less than the national average in each racial/ethnic group, as well as in each of the other categories for which data are available: disabled students, English learners, economically disadvantaged students, and homeless students. The deficit was especially large among English learners and homeless students.

***Education Week* Report**

The publication *Education Week* produced the annual report "Quality Counts: Grading the States" for 25 years (https://www.edweek.org/leadership/quality-counts-2021-grading-the-states). The last report, released in 2021, evaluated states in three categories:

- Chance for Success. Indicators were grouped into three subcategories:
    - Early Foundations: family income, parental educational attainment, parental employment, and linguistic integration.

CHART 8-6
PUBLIC HIGH SCHOOL FOUR-YEAR ADJUSTED COHORT GRADUATION RATE, UNITED STATES AND SELECTED STATES



Note: A rank of 1 is assigned to the lowest graduation rate in the nation.

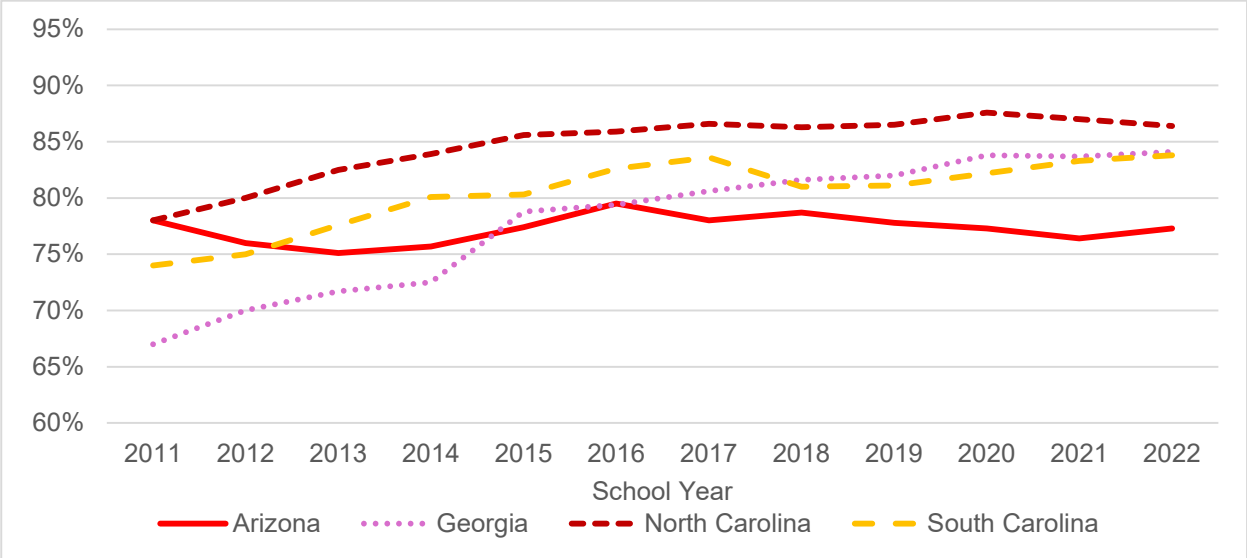


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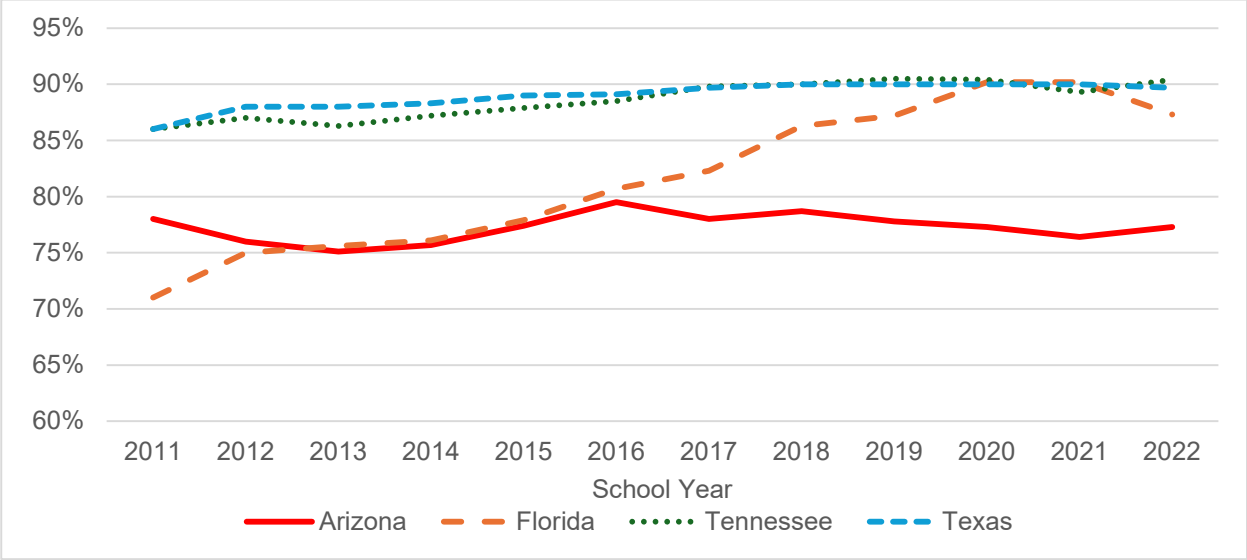
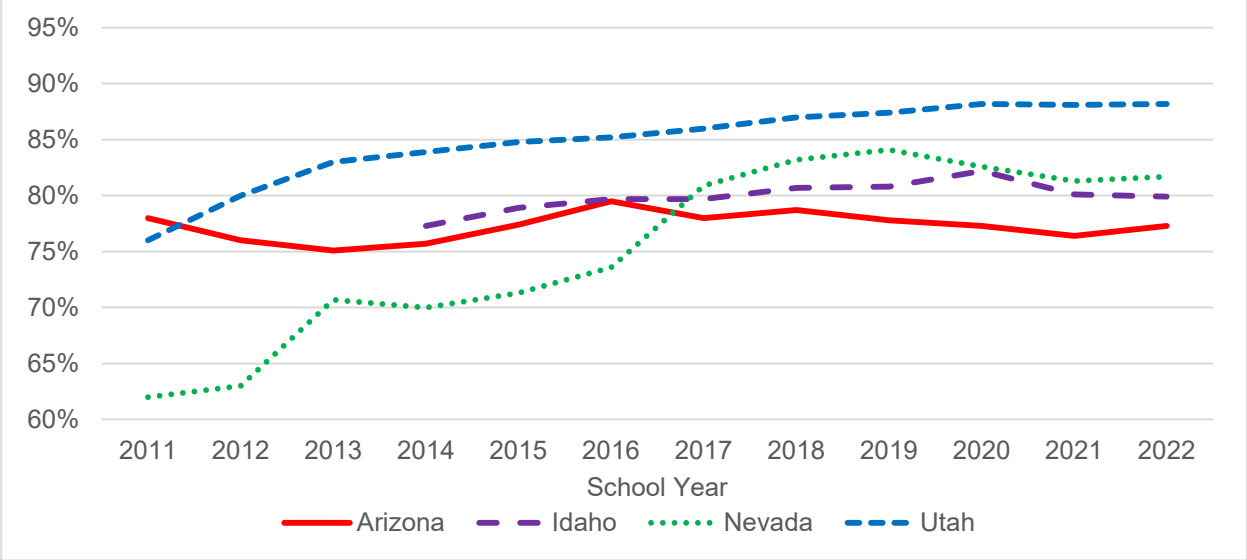
CHART 8-6 (continued)
PUBLIC HIGH SCHOOL FOUR-YEAR ADJUSTED COHORT GRADUATION RATE, UNITED STATES AND SELECTED STATES





Source: U.S. Department of Education, National Center for Education Statistics.

    - School Years: preschool enrollment, kindergarten enrollment, grade 4 reading NAEP score, grade 8 math NAEP score, high school graduation rate, and educational attainment of young adults.
    - Adult outcomes: educational attainment, annual income, and steady employment.
- School Finance. Indicators were grouped into two subcategories:
    - Spending Equity Within a state: consists of four measures.
    - Spending: consists of four measures.
- K-12 Achievement. Indicators were grouped into three subcategories:
    - Status: the percentage achieving a proficient score on each of the four primary NAEP tests in 2019.
    - Change: the change between 2003 and 2019 in the NAEP scores in the four primary tests.
    - Equity: 10 measures including the difference in NAEP scores between those eligible and not eligible for the school lunch program, the percentage achieving an advanced score on the NAEP grade 8 math test, high school graduation rates, and Advanced Placement test scores.

Arizona compared poorly in the chance for success category, ranking tied for 46th among all states and ninth among the 10 comparison states. It ranked 44th and eighth in the early foundations subcategory, 44th and ninth in the school years subcategory, and 39th and sixth in the adult outcomes subcategory. Arizona was not rated as above the U.S. average on any of the individual measures.

In the school finance category, Arizona ranked 47th of the 49 states which could be scored, and eighth among the comparison states. Only Utah was lower in the spending subcategory, but Arizona ranked in the middle of the states in the equity subcategory.

In the K-12 achievement category, Arizona ranked tied for 28th among all states and tied for seventh among the 10 comparison states. The subcategory ranks varied widely. In the status subcategory, Arizona ranked 40th among all states and ninth in the comparison group. However, Arizona ranked 11th and fifth in the change subcategory and seventh and third in the equity subcategory.

K-12 Arizona Summary

Class sizes have increased and teacher salaries have decreased in Arizona relative to the nation and to peer states, a result of declining K-12 educational funding compared to the nation and other states. In school year 2022, the pupil-teacher ratio was the highest in the nation and the adjusted average teacher salary was sixth lowest in the nation.

While NAEP test scores in Arizona have rebounded from the losses relative to the nation experienced during the 2000s, they remain below the national average. In contrast, on the other primary measure of student achievement — graduation rate — the situation in Arizona has deteriorated. In school year 2022, Arizona's graduation rate was second lowest among the states.

Educational Attainment

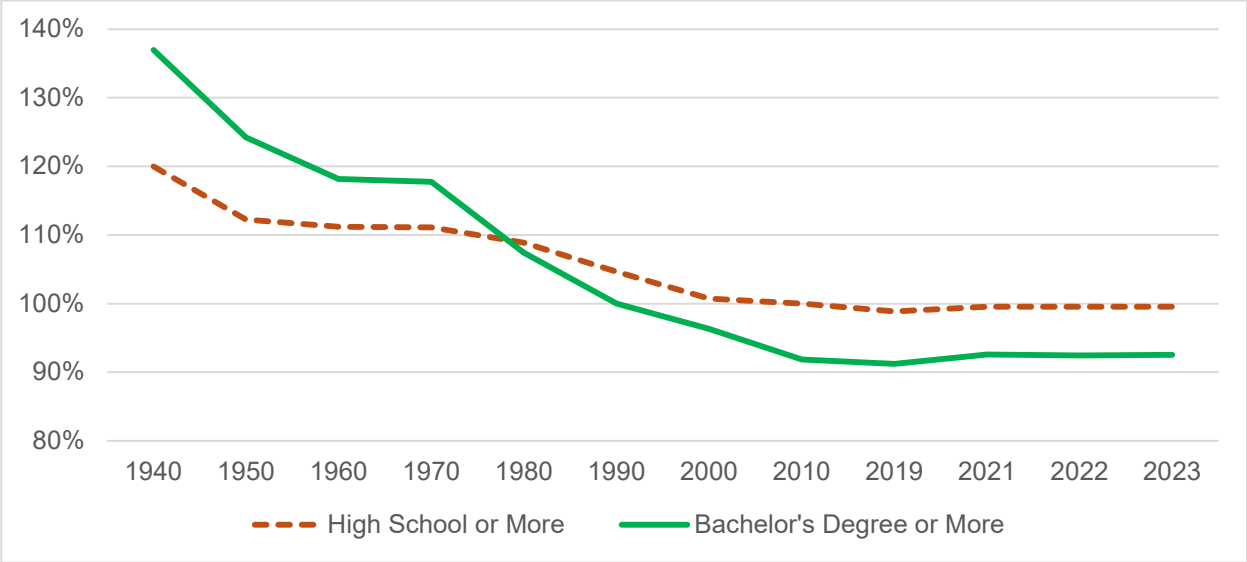
Educational attainment is not entirely dependent on a state's educational system, since so many people migrate — from other states and other countries — after completing their education. The educational attainment of migrants is in part dependent on the types of jobs available in a region.

Educational attainment data from 1940 through 2000 come from the decennial census (https://www.census.gov/data/tables/2000/dec/phc-t-41.html). More recent data come from the American Community Survey (https://www.census.gov/programs-surveys/acs/data.html).

As seen in Chart 8-7, attainment in Arizona considerably surpassed the national average in 1940, with the state ranking 11th on the percentage of high school graduates and fourth on the share earning at least a bachelor's degree. While relatively declining, the college graduation rate in Arizona continued to exceed the national average into the 1980s. By 1990, the percentage of adults 25 and older in Arizona who had earned at least a bachelor's degree had dropped to the U.S. average. The share continued to decline relative to the national average through 2010. Since then, Arizona's share has been approximately 8 percent less than the U.S. average. Arizona's rank among all states fell to 31st in 2023.

The share of high school graduates in Arizona dropped relative to the U.S. average into the 2010s. In recent years, the share of adults 25 and older in Arizona who had graduated from high school has stabilized at marginally below the U.S. average. Arizona's rank among all states was down to 40th in 2023.

CHART 8-7
EDUCATIONAL ATTAINMENT AMONG THOSE 25 AND OLDER, SHARE IN ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, Decennial Census (1940 through 2000) and the American Community Survey (2010 through 2023).

Arizona's educational attainment, as measured by the share of those 25 and older who had earned a bachelor's degree, is compared over time to the nine comparison states in Chart 8-8. In 1940, only Nevada had higher attainment. In 2023, Arizona ranked sixth among the 10 states.

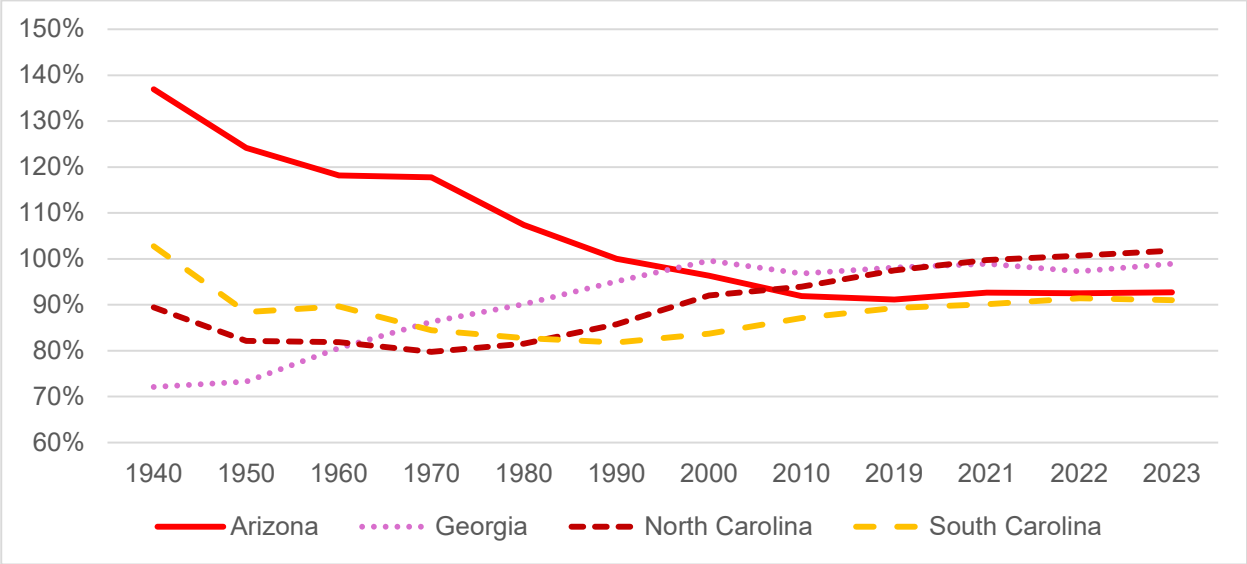
Chart 8-9 compares Arizona to the nation in 2023 by each level of educational attainment. Arizona's share of those attending college but not graduating was considerably higher than the U.S. average. In contrast, Arizona's share earning a bachelor's degree and each of the higher degrees was less than average.

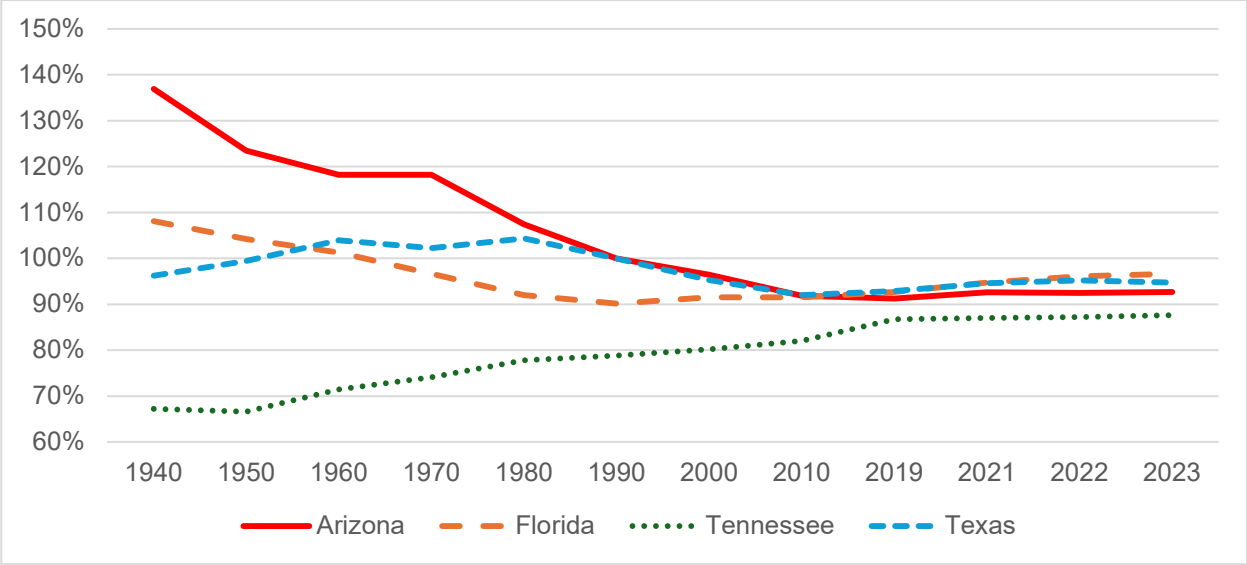
An examination of college graduation rates by age is instructive and important from the perspective of the workforce (see Chart 8-10). In 2023, Arizona's share with at least a bachelor's degree was substantially below the U.S. average in the 25-to-34 and 35-to-44 age groups. In contrast, Arizona's share was above average in the 65-and-older age group, few of whom are still active in the workforce. Thus, the focus on educational attainment among those 25 and older disguises the attainment shortfall in Arizona among those of working age.

As seen in Chart 8-11, educational attainment nationally in 2023 was considerably higher among those who had migrated from one state to another than among those living in the state in which they were born. The percentage who had earned at least a bachelor's degree was higher among the foreign-born population than of people living in their state of birth.

The share of those 25 and older who had earned at least a bachelor's degree in Arizona in 2023 was approximately 6 percentage points below the U.S. average in each of the three categories of place of birth shown in Chart 8-11. However, Arizona's overall figure of 33.5 percent was only 2.7 percentage points less than the national average. Arizona's overall educational attainment benefits from its much higher-than-average share of residents born in another state and much below-average share born in the same state.

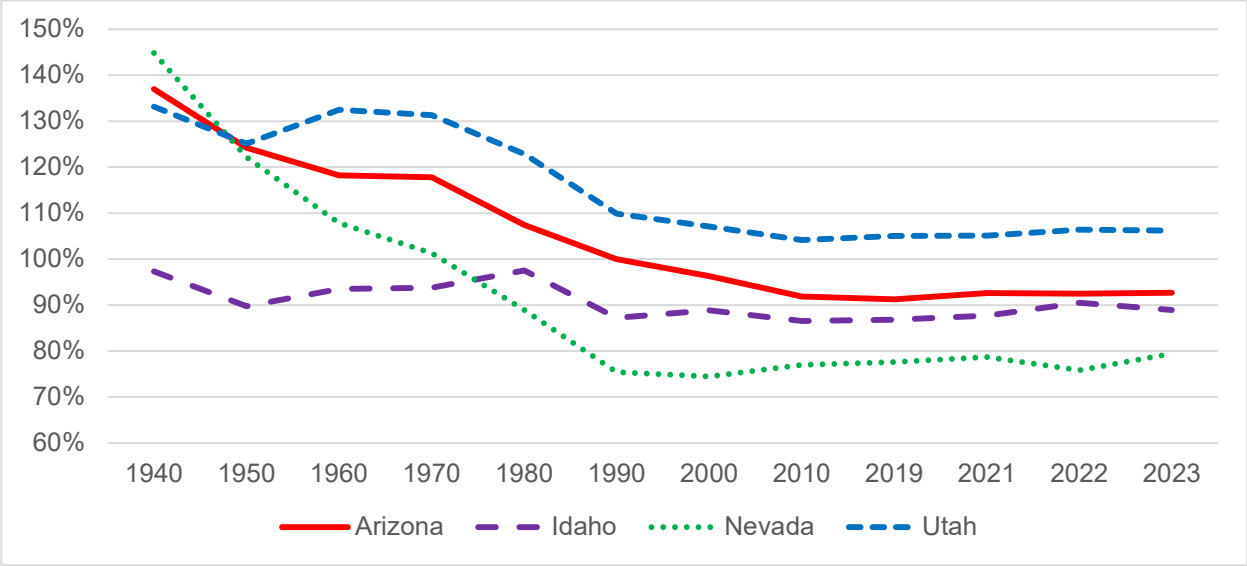
CHART 8-8
EDUCATIONAL ATTAINMENT AMONG THOSE 25 AND OLDER,
SHARE WHO EARNED AT LEAST A BACHELOR'S DEGREE
AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES





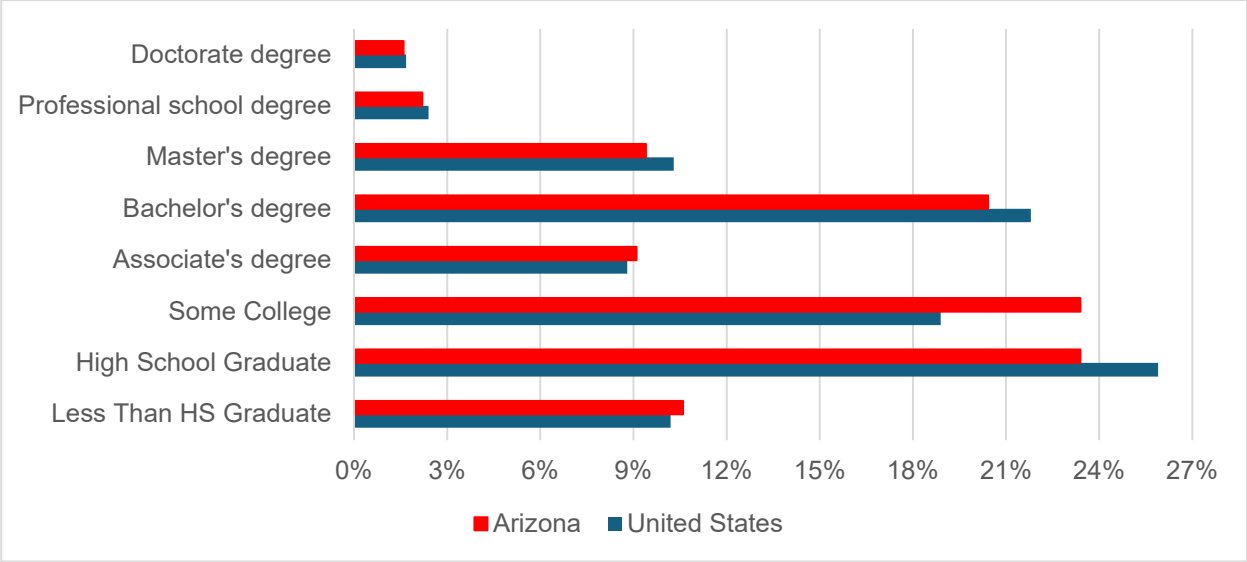
(continued)

CHART 8-8 (continued)
EDUCATIONAL ATTAINMENT AMONG THOSE 25 AND OLDER,
SHARE WHO EARNED AT LEAST A BACHELOR'S DEGREE
AS A PERCENTAGE OF THE NATIONAL AVERAGE, SELECTED STATES



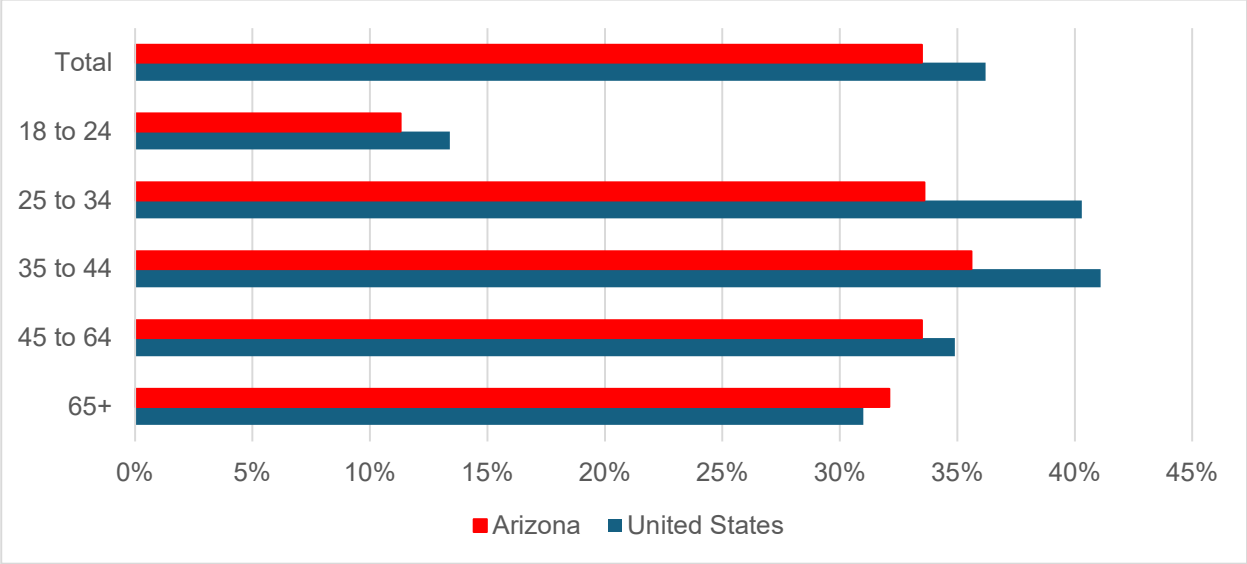
Source: Calculated from data of the U.S. Department of Commerce, Census Bureau, Decennial Census (1940 through 2000) and the American Community Survey (2010 through 2023).

CHART 8-9
EDUCATIONAL ATTAINMENT AMONG THOSE 25 AND OLDER,
SHARE OF TOTAL BY LEVEL OF ATTAINMENT, 2023



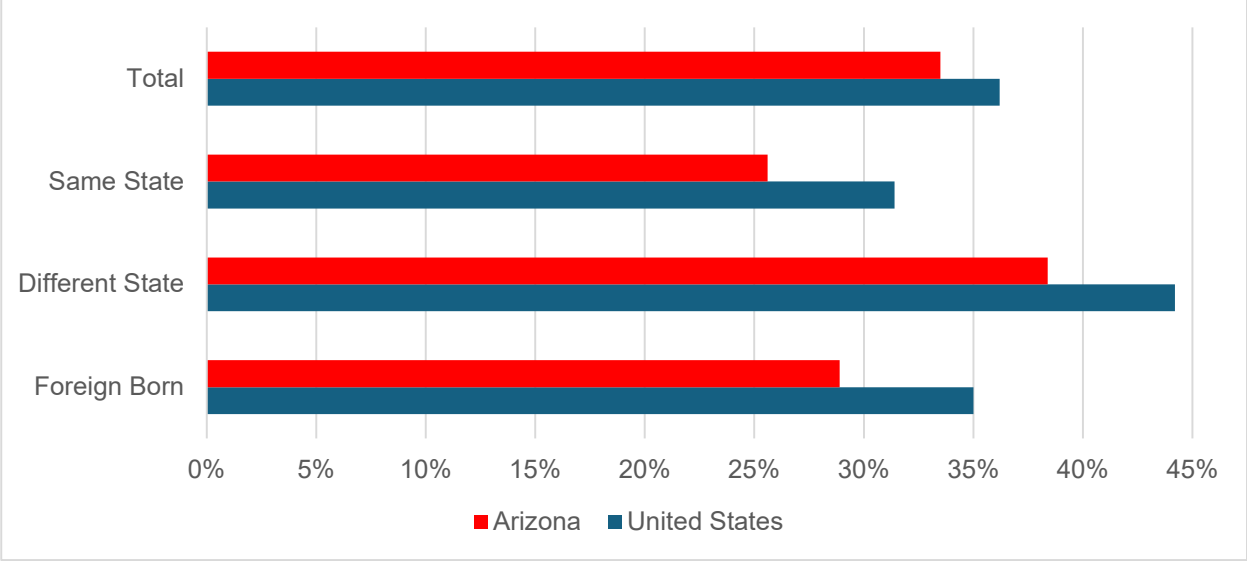
Source: U.S. Department of Commerce, Census Bureau, American Community Survey.

CHART 8-10
EDUCATIONAL ATTAINMENT BY AGE, SHARE WHO EARNED AT LEAST A BACHELOR'S DEGREE, 2023



Source: U.S. Department of Commerce, Census Bureau, American Community Survey.

CHART 8-11
EDUCATIONAL ATTAINMENT AMONG THOSE 25 AND OLDER BY PLACE OF BIRTH, SHARE WHO EARNED AT LEAST A BACHELOR'S DEGREE, 2023



Source: U.S. Department of Commerce, Census Bureau, American Community Survey.

CHAPTER 9. PUBLIC-SECTOR INVESTMENTS IN LIEU OF TAX CUTS

The debate over the role of taxes in state fiscal policy is often limited to analyses of the negative impact of taxing the private sector — suggesting that taking money from private decision makers is a significant negative for the economy. However, modelling the impacts of taxation in isolation is akin to measuring the economic impact of extracting money from private households and burying it in the desert. Any reasonable assessment of fiscal policy in a system where budgets are balanced annually will recognize that tax cuts must come with commensurate reductions in public expenditures while tax increases pave the way for additional public-sector investments. The tax-cut faction is quick to suggest that tax cuts are good since, in their absence, government would have wasted the money on inefficient spending programs. While some government programs have been singled out for ineffectiveness or inefficiency, public-sector needs remain in a number of areas — especially in Arizona.

Examples across a wide range of public need categories are provided in this chapter. The list is designed to be illustrative; it does not capture all needs nor does it build the case for particular investments. But the following possible uses of public revenue should be on the list of considerations and should be discussed when the topic of additional tax cuts is introduced. Some may be so compelling as to warrant a discussion of tax increases.

Examples of Public-Sector Needs in Arizona

K-12 Education

Much of this report has been devoted to demonstrating that tax cuts have resulted in the inability to fund public education adequately. In addition, the importance of education funding has been examined along with a review of the literature on the impact of spending on education outcomes.

Specific examples of potential K-12 education spending initiatives follow:

- Provide state-funded early childhood education for students, and assist with affordable child care for parents. A program for Arizona state-funded all-day kindergarten education was put in place in 2006 in a compromise in which education advocates received legislative support for the program and conservatives slashed income tax rates by 10 percent. Two years into the great recession the spending initiative was abandoned due to "lack of funding" while the tax cut remained in place until 2021, when even greater income tax cuts were enacted. Some school districts support all-day kindergarten programs, but there is no dedicated statewide funding available.
- Address teacher salaries and shortages by boosting pay. There is considerable rhetoric surrounding the endeavor to hire and retain excellent teachers in Arizona. However, school districts regularly report ongoing attrition and numerous unfilled openings. Higher salaries should be an emphasis in addressing the problem. Some argue that district budgets should simply reallocate more financial resources to the classroom but any cross-state assessment comparing Arizona with other states on a per pupil basis finds that other areas of K-12 need — including pupil support such as counselors, instructional staff support, pupil transportation, administration, and facilities — are underfunded as well.
- Create programs that support both a curriculum for college readiness and a separate avenue to support the development of students who wish to pursue vocational training and certification. The state could embrace the notion that there is a need for both college-

educated workers and workers trained in vocational skills that optimally apply to several alternative occupational paths.

Higher Education

- Create a set of scholarship and grant programs, as in Georgia and other states, to provide support to Arizona residents to attend public higher-education institutions across the state. Today, Arizona's universities must use their existing budgets to fund needs-based or merit-based financial-aid programs.
- Provide financial support for expanding healthcare educational and training opportunities to increase the supply of healthcare workers in the state. The straight-forward way to accomplish this goal would be to accelerate financial support for ASU's new medical school. But aid could come in a number of forms from scholarships targeted to healthcare degrees to state-sponsored programs to assist hospitals in providing internship opportunities for new medical school graduates.
- Restore state funding for the state's community colleges. Some funds could be linked to certification programs and dual-enrollment options for high school students attempting to secure training in any number of vocational pursuits that can be offered by the community colleges.

Housing and Homelessness

- Provide financial support to local communities to build more affordable housing. Support can come from state-supported infrastructure, public-private programs for construction financing, or the outright purchase of land from the State Land Trust.
- Finance mental health and job training programs that ultimately address the homelessness crisis in a comprehensive manner. Establish workforce training and mental health programs patterned after, or in partnership with, comparable efforts at the federal level. The programs need to recognize that workforce readiness and skill development must be combined with drug-use interdiction efforts to address the problem comprehensively.
- Furnish financial aid that lowers costs for renters and homeowners. Partner with efforts of foundations and/or the federal government to offset the costs of housing that have been fueled by pandemic-induced demand coupled with supply constraints. If unaddressed, the current challenges may leave the current new generation of potential homeowners behind with no ability to catch up.

Health Care

- Expand access to family-planning resources so that every Arizonan, regardless of their background or income, has access to proper reproductive care.
- Provide expanded support for the Arizona Department of Child Safety to ensure all children get the care they need through quality foster-care delivery.
- Expand telehealth opportunities to rural communities to ensure that all Arizonans have access to quality healthcare by partnering with private-sector healthcare providers.

Public Safety and Border Security

- Boost funding for the Department of Public Safety.

- Support the community centers and hospitals — especially in Yuma, Nogales, Douglas, and Pima County — that are overwhelmed. They need additional funding to ensure that no one is denied care due to a lack of doctors, nurses, and other resources.
- Add state resources to border communities adversely impacted by immigrants.

Water and Climate

- Provide financing to secure and modernize Arizona's water supply by better conserving and managing our water, and investing in and upgrading our infrastructure.
- Make investments to protect Arizona's precious natural resources, like our forests, parks, and bodies of water, from the devastating effects of climate change that are already affecting them.
- Develop public-private partnerships designed to provide affordable insurance options for rural families threatened by devastating wildfires. For many rural communities today, homeowners insurance is unaffordable or simply not available.

Transportation

- Accelerate development of mass transit options and availability across Arizona's metropolitan areas.
- Expand availability of high-occupancy vehicle lanes.
- Assemble funds to repair roads and bridges that are now 30-or-more years old.

Conclusions

Arizonans have traditionally embraced limited government and low taxes while repeatedly expressing support for quality public education, affordable housing, access to health care for all, public safety, border security, public transportation, and water infrastructure. Going forward, discussions of tax cuts should include the inevitable spending reductions that will be necessary when revenue declines due to the implementation of the tax reductions. Moreover, the needs noted above may be so important to elicit a debate about "clawing back" portions of recent tax cuts to help finance public-sector needs.

CHAPTER 10: TAX OPTIONS TO CONSIDER

For decades, Arizona's policymakers have embraced limited government and sought to limit revenue available for Arizona state government general fund initiatives, essentially a "starve-the-beast" strategy. As a result, the government "beast" in Arizona is quite emaciated. The numerous tax cuts have reduced revenue such that funding for education does not meet constitutional obligations.

Article 11, Section 10 of the Arizona Constitution states that "… the legislature shall make such appropriations, to be met by taxation, as shall insure the proper maintenance of all state educational institutions, and shall make such special appropriations as shall provide for their development and improvement." Moreover, Article 11, Section 6 of the Arizona Constitution states that "The university and all other state educational institutions shall be open to students of both sexes, and the instruction furnished shall be as nearly free as possible." University tuition in Arizona now is among the highest in the nation.

As we have seen in this report, concerted tax cuts are at the root of revenue shortfalls in the state. Once in place, it is very difficult for the Legislature to restore tax rates to original levels. Proposition 108, passed by voters in 1992, requires a two-thirds majority in each chamber of the Arizona Legislature to raise taxes. Regardless, since the Legislature continues to have conservative majorities, it is hard to envision consensus agreement on proposals to raise taxes.

Additional restrictions on taxes exist, including a ban on a real estate transfer tax, a prohibition on sales taxes on services, and a sales tax exemption for food purchased for home consumption. A long list of targeted sales tax exemptions continues to expand. Proposition 132, passed by Arizona voters in 2022, amended the Arizona Constitution to require any initiative measure, referendum measure, or constitutional amendment to raise taxes to be passed by at least 60 percent of the voters.

In contrast, Arizona voters have taken it upon themselves to vote for tax increases. In 1985, Maricopa County voters passed a 0.5 percent sales tax to support freeway construction in the Phoenix area; it was renewed by voters in 2004 and 2024 for a variety of transportation needs. Proposition 301 in 2000 levied an additional 0.6 percent sales tax dedicated to education. Tobacco taxes were increased four times between 1994 and 2006.

A temporary sales tax passed by voters in 2010 levied an additional 1.0 percent sales tax for three years to confront the budget crisis caused by the great recession and earlier tax reductions. Proposition 208 in 2020 added a 3.5 percent income tax surcharge on high-income taxpayers to fund education. However, Proposition 208 was ruled unconstitutional because of an expenditure-limit violation — not because of illegality of the tax rates enacted by passage of the proposition.

Should proponents of education spending or any other public-sector need desire to advance new tax initiatives at the ballot box, there are several options available. In the case of education it will be important to re-visit the state's antiquated school district expenditure limits which can prevent more spending on K-12 education despite Arizona's low per pupil spending levels.

Possible Options

An extensive list of options for raising state government revenue in Arizona was provided in an earlier Office of the University Economist paper.[6] More recently, the Center on Budget and Policy Priorities provided an extensive list specific to Arizona.[7]

In this chapter, a short list of modest revenue enhancements to the state government general fund are explored:

- Sales tax addition to Proposition 301 base.
- Income tax surcharge on Proposition 208 base.
- Increase in "sin tax" assessments on tobacco and alcoholic beverages.

Sales Tax Increase

Adding 0.2 percent to the 0.6 percent Proposition 301 base would add over $250 million in FY 2026 in funds designated for education. An increase of 0.4 percent would raise more than $500 million.

- Pros: This is a simple consumption tax, and voters have approved sales tax hikes before.
- Cons: Arizona already has a high sales tax rate relative to other states; sales taxes are regressive, increasing the burden on lower-income residents more than on higher-income residents; the sales tax base has been eroded somewhat by recent tax cuts; and sales tax revenues are lagging economic growth as consumers continue to shift purchases from taxable goods to nontaxable services. Moreover, consumers have complained in recent years about the high costs of goods. Raising the sales tax will exacerbate these types of concerns.

Income Tax Increase

Adding 0.4 percent for high-income taxpayers would make the tax rate 2.9 percent for the Proposition 208 base: those married filing jointly with incomes in excess of $500,000 and single filers with incomes above $250,000. This would yield about $250 million in FY 2026. An increase of 0.8 percent would raise $500 million.

- Pros: This is a much lower increment to tax rates than in Proposition 208, which voters passed. It would simply claw back about one-fifth (0.4 percent) or two-fifths (0.8 percent) of the tax cuts that high-income taxpayers realized from the individual income tax reduction passed by the Legislature in 2021. Since lower-income taxpayers would be unaffected, it would reduce regressivity of the current system.
- Cons: Income taxes are unpopular in Arizona; some think the rate should be flat, so there will be some voter opposition.

Sin Tax Increases

Raising total tax collections on tobacco by 50 percent could yield $125 million, but the additional revenue would have to be earmarked for the general fund. Currently, most tobacco tax

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[6] *Options for Raising State Government Revenue in Arizona*, January 2018, https://ccpr.wpcarey.asu.edu/sites/default/files/revoptions01-18.pdf.

[7] *State and Local Revenue Options for Advancing a Brighter Future*, https://www.cbpp.org/research/state-budget-and-tax/state-revenue-options-for-advancing-equity-and-prosperity#/states/AZ.

revenue goes to other funds. Raising total tax collections on alcoholic beverages by 50 percent could yield about $50 million. Thus, a sin tax increase would total only $175 million from what would be significant rate increases. Doubling sin taxes would only raise about $350 million.

- Pros: Arizona is a very low sin-tax state now and visitors contribute to tax payments. This proposal may have political support. In Texas, rates on alcoholic beverages are much higher than in Arizona because they have a gross receipts tax on alcoholic beverages purchased for restaurant and bar consumption.
- Cons: A substantial increase in tax rates is needed to generate significant money and the distributor lobby will fight it. Tobacco tax collections are declining as consumption falls. Expanding the tax base to vaping would yield very little revenue unless the tax rate is very high. Imposing higher taxes on tobacco products will likely result in a reduction in consumption — hurting current recipients such as First Things First.

Cross-State Comparisons

Sales Tax

A comparison of per capita general sales tax collections across states adjusted for the cost of living reveals that Arizona's combined state and local government sales tax collections are relatively high, ranking among the top 10 among all states in recent years and third behind Nevada and Tennessee among the 10 comparison states in FY 2022. A per capita comparison of sales tax collections adjusted for the cost of living for Arizona relative to the nation, Florida, and Texas is depicted in Table 10-1.

TABLE 10-1
GENERAL SALES TAX REVENUE PER CAPITA
ADJUSTED FOR THE COST OF LIVING

Fiscal Year	Arizona	United States	Florida	Texas
2009	$1,129	$954	$1,095	$1,121
2010	1,118	936	1,000	1,044
2011	1,289	981	1,058	1,106
2012	1,355	1,026	1,098	1,394
2013	1,472	1,061	1,157	1,459
2014	1,390	1,103	1,178	1,497
2015	1,365	1,148	1,182	1,539
2016	1,487	1,169	1,198	1,468
2017	1,542	1,209	1,328	1,477
2018	1,642	1,273	1,526	1,601
2019	1,751	1,325	1,465	1,664
2020	1,767	1,340	1,432	1,655
2021	1,890	1,438	1,548	1,711
2022	2,271	1,675	1,897	2,030

Sources: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of State and Local Government Finances* (sales tax collections), and the U.S. Department of Commerce, Bureau of Economic Analysis (population and regional price parities).

In FY 2022, the most recent year of complete data, Arizona's adjusted per capita sales tax burden was 36 percent higher than that of the nation, 20 percent higher than in Florida, and 12 percent higher than in Texas.

Individual Income Taxes

A comparison of per capita individual income tax collections across states adjusted for the cost of living reveals that Arizona's individual income tax collections rank low — third lowest in the nation among states that collected income taxes in FY 2022. Table 10-2 provides a comparison of Arizona with the United States, Utah, and Georgia (Texas and Florida do not levy individual income taxes).

In FY 2022, Arizona's per capita adjusted income tax collections were 42 percent below the national average, 41 percent below Georgia, and 51 percent below Utah. Moreover, Arizona slashed income taxes after FY 2022 by more than $2 billion, putting Arizona even further below comparison areas.

Taxes on Tobacco and Alcohol

A comparison of per capita alcoholic beverage and tobacco tax collections across states adjusted for the cost of living reveals that Arizona's current burden is relatively low. In FY 2022, Arizona ranked 40th among all states but fourth among the 10 comparison states on tobacco products. Arizona ranked 38th among all states and eighth among the 10 comparison states on alcoholic beverages. Comparisons with the U.S. average, Florida, and Texas are seen in Tables 10-3 and 10-4.

TABLE 10-2
INDIVIDUAL INCOME TAX REVENUE PER CAPITA
ADJUSTED FOR THE COST OF LIVING

Fiscal Year	Arizona	United States	Georgia	Utah
2009	$397	$887	$877	$874
2010	373	849	779	776
2011	447	918	835	834
2012	485	983	875	872
2013	529	1,076	928	999
2014	534	1,079	943	1,004
2015	575	1,151	1,008	1,085
2016	598	1,162	1,074	1,143
2017	615	1,182	1,113	1,253
2018	672	1,312	1,169	1,519
2019	783	1,356	1,216	1,607
2020	645	1,284	1,160	1,191
2021	923	1,643	1,389	2,123
2022	1,047	1,806	1,760	2,144

Sources: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of State and Local Government Finances* (individual income tax collections), and the U.S. Department of Commerce, Bureau of Economic Analysis (population and regional price parities).

In FY 2022, Arizona's adjusted per capita collections for tobacco products were 29 percent below the U.S. average, 15 percent below Florida, and 4 percent below Texas. Note the decline in Arizona's collections over time, as consumption of tobacco products falls.

For alcoholic beverage tax collections, Arizona's adjusted per capita figure was 55 percent below the national average, 23 percent below Florida, and 78 percent below Texas (with Texas' figures including the gross receipts tax on alcoholic beverages).

TABLE 10-3
TOBACCO TAX REVENUE PER CAPITA
ADJUSTED FOR THE COST OF LIVING

Fiscal Year	Arizona	United States	Florida	Texas
2009	$58	$56	$24	$65
2010	52	56	21	60
2011	51	57	21	61
2012	50	56	20	58
2013	49	58	63	60
2014	48	58	67	55
2015	48	57	59	56
2016	48	57	59	55
2017	46	58	57	54
2018	46	60	56	52
2019	45	58	54	50
2020	44	57	51	45
2021	42	59	50	48
2022	40	56	47	41

Sources: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of State and Local Government Finances* (tobacco tax collections), and the U.S. Department of Commerce, Bureau of Economic Analysis (population and regional price parities).

TABLE 10-4
ALCOHOLIC BEVERAGE TAX REVENUE PER CAPITA
ADJUSTED FOR THE COST OF LIVING

Fiscal Year	Arizona	United States	Florida	Texas
2009	$10	$19	$31	$34
2010	10	20	31	33
2011	10	20	29	35
2012	11	21	27	37
2013	11	21	25	38
2014	11	21	23	41
2015	11	22	23	43
2016	11	23	19	44
2017	11	22	15	45
2018	11	23	14	48
2019	11	23	15	49
2020	11	23	14	40
2021	13	25	15	44
2022	12	27	16	57

Sources: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of State and Local Government Finances* (individual income tax collections), and the U.S. Department of Commerce, Bureau of Economic Analysis (population and regional price parities).

APPENDIX A: ARIZONA'S REVENUE SHORTFALLS

Revenue shortfalls in Arizona relative to the national average and to other states are detailed in this appendix, using various means of standardizing the revenue data. This expands the information presented in the body of the report that presented shortfalls relative to the national average and to the comparison states based on the following measures:

- Revenue per capita adjusted for the cost of living in FY 2022, total own-source, own-source tax revenue. And own-source nontax revenue: Chart 5-3
- Projected own-source revenue per capita adjusted for the cost of living in FY 2025: Chart 6-2
- K-12 education revenue per student adjusted for the cost of living in FY 2022: Chart 7-5
- Higher education educational appropriations per FTE student adjusted for the cost of living in FY 2022: Chart 7-21

In this appendix, revenue shortfalls are presented for FY 2021 (since this is the most-recent year of data on total taxable resources), for FY 2022, and for FY 2023 (for higher education).

Shortfalls Relative to the National Average and to Other States

The total own-source revenue, own-source tax revenue, and own-source nontax revenue shortfalls are calculated as the amount of additional revenue that was needed in Arizona to match the revenue figure in each state and the U.S. average adjusted by either

- Total taxable resources, or
- Personal income, or
- Population and the cost of living (as measured by the regional price parity figures)

State and local government education revenue was first placed on a per student basis (per FTE student for higher education) and then adjusted by either

- Per capita taxable resources, or
- Per capita personal income, or
- Cost of living

Per capita personal income adjusted for the cost of living in FYs 2021 through 2023 was less than in Arizona in seven states: Alabama, Hawaii, Kentucky, Mississippi, New Mexico, South Carolina, and West Virginia. In addition to these seven states, per capita TTR in FY 2021 was less than in Arizona in Arkansas, Louisiana, Maine, and Oklahoma.

Fiscal Year 2021

Actual state and local government revenue in FY 2021 in Arizona totaled $45.5 billion for own-source revenue — $33.8 billion for own-source tax revenue and $11.7 billion for own-source nontax revenue. State and local government K-12 education revenue was $8.6 billion and educational appropriations for higher education equaled $1.8 billion.

Relative to the national average and to the majority of the states, Arizona's revenue shortfall in FY 2021 was greatest on a per capita/per student basis adjusted for the cost of living and least when adjusted by total taxable resources (see Table A-1). The exceptions were those states with lower adjusted PCPI or per capita TTR than Arizona.

Adjusted by TTR, the amount of total own-source revenue in Arizona necessary to equal the U.S. average in FY 2021 was $8.5 billion (19 percent higher than actual revenue). Taxes accounted for 54 percent of the total own-source revenue shortfall. The amount of revenue needed to equal the U.S. average was $4.6 billion (14 percent higher) for own-source tax revenue and $3.9 billion (33 percent higher) for own-source nontax revenue.

For K-12 education revenue in Arizona to match the national per student average as adjusted by per capita TTR, an additional $2.9 billion (34 percent higher than actual revenue) was needed. This amount equals 34 percent of the total own-source revenue deficiency. For educational appropriations for higher education in Arizona to match the U.S. per FTE student average as adjusted by per capita TTR, an additional $470 million (26 percent higher) was needed. This amount equals 5.5 percent of the total own-source revenue deficiency.

Among the comparison states in FY 2021 adjusted by TTR, Arizona's total own-source revenue was greater than that in Florida, Georgia, Nevada, and Tennessee. In contrast, Arizona had a small deficiency versus Texas and a large total own-source revenue shortfall relative to Idaho, North Carolina, South Carolina, and Utah, ranging from $6.0-to-15.9 billion. Most of the deficiency in each of these states was due to own-source nontax revenue. Arizona's shortfall versus these four states ranged from $4.0-to-14.6 billion for own-source nontax revenue.

Arizona's own-source tax revenue adjusted by TTR was greater than in Florida, Georgia, Nevada, and Tennessee. Arizona's shortfall versus these four states ranged from $0.7-to-2.2 billion.

Based on the per student figure adjusted by per capita TTR, Arizona had a shortfall in higher education educational appropriations compared to each of the nine states, ranging from $84 million to $1.5 billion. A shortfall in K-12 revenue was present versus Georgia, North Carolina, South Carolina, Tennessee, and Texas, ranging from $33 million to $4.6 billion.

Compared to each of the 11 states with a lower per capita TTR than Arizona, a large total own-source revenue shortfall as adjusted by TTR was present in Arizona in FY 2021, ranging from $9.0-to-25.8 billion. In some states, taxes accounted for most of the own-source shortfall while in other states, nontax revenue accounted for the majority. Across the 11 states, Arizona's own-source tax revenue deficiency ranged from $1.3-to-20.1 billion; the own-source nontax deficiency ranged from $0.3-to-16.3 billion. Based on per student revenue adjusted by per capita TTR, Arizona had a K-12 education revenue shortfall versus each of the 11 states, ranging from $1.4-to-7.4 billion; Arizona had a higher education revenue shortfall versus 10 states, ranging from $0.3-to-4.0 billion.

Fiscal Year 2022

Actual state and local government revenue in FY 2022 in Arizona totaled $50.6 billion for total own-source revenue — $38.3 billion for own-source tax revenue and $12.3 billion for own-source nontax revenue. State and local government K-12 education revenue was $9.7 billion and educational appropriations for higher education equaled $1.9 billion.

Arizona's revenue deficiency based on the adjustment by the cost of living was higher than the shortfall adjusted by personal income except in the seven states in which adjusted PCPI was less than in Arizona (see Table A-2). Adjusted by personal income, the amount of total own-source revenue in Arizona necessary to equal the U.S. average in FY 2022 was $13.8 billion (27 percent higher than actual revenue). Taxes accounted for 59 percent of the total own-source revenue shortfall. The amount of revenue needed to equal the U.S. average was $8.1 billion (21 percent higher) for own-source tax revenue and $5.7 billion (46 percent higher) for own-source nontax revenue.

For K-12 education revenue in Arizona to match the national per student average as adjusted by per capita personal income, an additional $3.2 billion (33 percent higher than actual revenue) was needed. This amount equals 23 percent of the total own-source revenue deficiency. For educational appropriations for higher education in Arizona to match the U.S. per FTE student average as adjusted by per capita personal income, an additional $955 million (51 percent higher) was needed. This amount equals 7 percent of the total own-source revenue deficiency.

Among the comparison states in FY 2022, Arizona's total own-source revenue adjusted by personal income was less than that in each state except Tennessee. The deficiency across the eight states ranged from $781 million to $21.0 billion. Most of the deficiency in each of these states except Nevada was due to own-source nontax revenue. Arizona's shortfall versus these eight states ranged from $217 million to $14.6 billion for own-source nontax revenue.

Arizona's own-source tax revenue adjusted by personal income was less than in each of the comparison states except Tennessee and Texas. Arizona's shortfall versus these seven states ranged from $0.7-to-6.4 billion. Arizona had a shortfall in higher education educational appropriations compared to each of the nine states, ranging from $414 million to $2.0 billion. A shortfall in K-12 revenue was present versus Georgia, Nevada, South Carolina, and Texas, ranging from $380 million to $4.3 billion.

Based on a per capita/per student basis adjusted for the cost of living, Arizona had a total own-source revenue shortfall against each of the nine comparison states, ranging from $2.8-to-$25.9 billion; the shortfall relative to the U.S. average was $20.8 billion. An own-source nontax revenue shortfall was present versus each of the nine states, ranging from $1.3-to-16.4 billion; the shortfall relative to the U.S. average was $7.6 billion. Arizona had an own-source tax revenue shortfall against each of the comparison states except Florida and Tennessee, ranging from $0.6-to-$9.5 billion; the shortfall relative to the U.S. average was $13.2 billion. A higher education educational appropriation shortfall was present versus each of the nine states, ranging from $0.4-to-2.0 billion; the shortfall relative to the U.S. average was $1.3 billion. Arizona had a K-12 education revenue shortfall against each of the comparison states except Florida, Idaho, and Utah, ranging from $0.4-to-$4.1 billion; the shortfall relative to the U.S. average was $4.9 billion.

Compared to each of the seven states with a lower per capita personal income than Arizona, a large total own-source revenue shortfall as adjusted by personal income was present in Arizona in FY 2022, ranging from $10.3-to-58.8 billion. In some states, taxes accounted for most of the own-source shortfall but in most states, nontax revenue accounted for the majority. Arizona's

TABLE A-1
SHORTFALLS IN ARIZONA'S REVENUE RELATIVE TO THE NATIONAL AVERAGE AND EACH STATE, FISCAL YEAR 2021
(in Millions of Dollars)

	Own-Source Revenue			Own-Source Tax Revenue			K-12 Own-Source Revenue Per Student			Higher Education Educational Appropriations Per FTE Student		
	TTR^	PCPI*	RPP**	TTR^	PCPI*	RPP**	TTR^	PCPI*	RPP**	TTR^	PCPI*	RPP**
US	$8,483	$11,594	$17,923	$4,603	$6,815	$11,314	$2,914	$3,575	$4,922	$470	$603	$874
AL	17,163	15,452	14,467	1,928	953	392	2,835	2,523	2,343	542	477	439
AK	21,611	24,429	31,540	0	0	0	3,695	4,211	5,515	3,300	3,515	4,059
AR	10,076	8,581	9,089	5,889	4,822	5,185	2,348	2,053	2,154	708	640	663
CA	17,289	20,681	33,020	12,594	15,098	24,210	1,728	2,287	4,317	646	780	1,267
CO	5,256	7,920	17,230	1,881	3,753	10,293	471	947	2,612	0	0	0
CT	4,493	9,824	29,899	9,145	13,722	30,955	5,137	6,602	12,120	673	940	1,945
DE	3,611	21,171	25,253	415	12,640	15,482	3,009	7,158	8,126	0	428	566
DC	7,092	20,647	55,087	10,414	21,801	50,734	3,546	6,677	14,634	5,146	6,943	11,524
FL	0	1,292	3,723	0	0	0	0	68	519	308	418	534
GA	0	2,492	3,188	0	0	362	1,930	2,799	2,964	631	834	872
HI	30,253	27,519	22,803	20,068	18,124	14,779	5,153	4,657	3,801	3,968	3,760	3,399
ID	6,070	4,816	6,462	2,027	1,157	2,300	0	0	0	1,475	1,394	1,500
IL	7,104	10,769	18,753	8,307	11,238	17,624	5,345	6,316	8,434	2,593	2,901	3,572
IN	10,703	12,025	15,610	4,341	5,237	7,668	2,659	2,923	3,642	0	0	40
IA	13,663	20,733	27,612	3,888	8,389	12,767	2,167	3,454	4,707	0	0	103
KS	12,872	18,275	25,494	3,723	7,194	11,831	2,198	3,198	4,535	287	483	745
KY	8,950	7,640	7,226	4,504	3,583	3,292	3,325	3,037	2,947	556	499	487
LA	9,736	6,842	8,318	4,397	2,397	3,417	4,282	3,606	3,951	1	0	0
ME	16,123	13,040	15,440	15,835	13,354	15,285	7,432	6,631	7,256	773	643	744
MD	4,260	7,534	14,542	5,988	8,604	14,203	3,720	4,531	6,266	569	727	1,065
MA	1,145	4,840	21,942	2,961	5,871	19,338	3,839	4,824	9,386	344	516	1,313
MI	10,898	8,619	11,139	3,338	1,838	3,496	5,410	4,843	5,469	426	335	436
MN	13,971	15,283	25,969	10,997	11,985	20,030	3,284	3,546	5,683	922	983	1,477
MS	23,832	16,735	12,574	9,838	5,373	2,756	3,025	1,834	1,137	973	686	518
MO	2,312	3,333	6,253	0	0	1,894	2,911	3,156	3,860	618	670	819

(continued)

TABLE A-1 (continued)
SHORTFALLS IN ARIZONA'S REVENUE RELATIVE TO THE NATIONAL AVERAGE AND EACH STATE, FISCAL YEAR 2021
(in Millions of Dollars)

	Own-Source Revenue			Own-Source Tax Revenue			K-12 Own-Source Revenue Per Student			Higher Education Educational Appropriations Per FTE Student		
	TTR^	PCPI*	RPP**	TTR^	PCPI*	RPP**	TTR^	PCPI*	RPP***	TTR^	PCPI*	RPP***
MT	$5,532	$3,049	$7,984	$4,182	$2,336	$6,007	$2,669	$2,120	$3,211	$595	$477	$711
NE	5,660	12,774	22,520	2,807	7,893	14,862	1,119	2,471	4,324	709	1,062	1,545
NV	0	2,957	6,394	0	1,462	3,961	0	527	1,174	84	251	399
NH	0	0	3,417	0	0	3,085	4,832	5,484	8,473	0	0	0
NJ	8,478	10,598	21,526	9,192	10,879	19,577	7,046	7,661	10,831	0	0	151
NM	25,773	23,745	20,966	9,434	8,205	6,520	4,564	4,190	3,676	3,338	3,192	2,989
NY	12,702	24,377	38,067	12,305	21,547	32,388	8,120	11,474	15,408	459	918	1,456
NC	7,836	9,870	12,686	661	1,974	3,792	33	362	818	953	1,059	1,206
ND	12,697	19,762	35,137	5,183	9,912	20,205	1,880	3,152	5,923	219	468	1,009
OH	7,996	10,022	14,292	2,640	4,019	6,925	4,598	5,097	6,152	32	102	251
OK	11,172	7,785	9,680	2,508	340	1,553	1,443	842	1,178	279	153	224
OR	21,571	20,905	23,294	9,643	9,262	10,759	4,476	4,346	4,812	395	373	453
PA	10,520	10,145	18,572	6,155	5,887	11,894	7,687	7,577	10,029	0	0	0
RI	9,592	10,754	15,050	7,198	8,063	11,257	6,310	6,624	7,787	75	115	263
SC	15,887	14,846	14,209	1,323	728	363	4,634	4,409	4,272	520	480	456
SD	0	0	6,326	0	0	2,882	0	0	1,881	0	0	371
TN	0	0	3,195	0	0	0	389	635	1,398	1,123	1,204	1,454
TX	1,719	5,485	7,578	0	37	1,425	771	1,518	1,934	277	445	539
UT	12,609	20,966	23,396	2,201	7,375	8,879	0	0	294	369	685	777
VT	21,729	18,733	22,525	18,819	16,475	19,442	12,115	11,190	12,361	510	406	538
VA	5,887	8,857	15,888	2,382	4,472	9,419	1,318	1,891	3,249	0	0	215
WA	1,345	9,195	18,444	0	3,546	9,856	1,538	3,238	5,241	301	658	1,079
WV	18,049	16,151	12,294	7,215	5,991	3,503	5,364	4,946	4,099	317	253	123
WI	8,500	9,394	15,812	4,408	5,040	9,577	3,417	3,615	5,045	561	601	885
WY	13,123	20,950	42,137	0	0	6,548	2,886	4,420	8,574	3,202	3,873	5,717

Notes: The figure shown is the amount of additional revenue that was needed in Arizona to match the adjusted figure. The comparison states are shown in **bold**. ^ Adjusted by per capita total taxable resources * Adjusted by per capita personal income. ** Adjusted by population and the regional price parities (cost of living). *** Adjusted by the regional price parities (cost of living).

Sources: Calculated from data of the U.S. Department of the Treasury (TTR); the U.S. Department of Commerce, Census Bureau, *Annual Survey of State and Local Government Finances* (revenue); the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances* (revenue and enrollment); the State Higher Education Executive Officers Association, *State Higher Education Finance* (revenues and enrollment); and the U.S. Department of Commerce, Bureau of Economic Analysis (personal income, population, and regional price parities).

TABLE A-2
SHORTFALLS IN ARIZONA'S REVENUE RELATIVE TO THE NATIONAL AVERAGE AND EACH STATE, FISCAL YEAR 2022
(in Millions of Dollars)

	Own-Source Revenue		Own-Source Tax Revenue		K-12 Own-Source Revenue Per Student		Higher Education Educational Appropriations Per FTE Student	
	PCPI*	RPP**	PCPI*	RPP**	PCPI*	RPP***	PCPI*	RPP***
US	$13,785	$20,802	$8,098	$13,158	$3,166	$4,893	$955	$1,266
AL	16,184	14,834	1,054	258	2,410	2,215	981	924
AK	28,533	36,639	5,326	9,798	3,171	4,809	4,039	4,645
AR	7,197	9,414	3,335	4,954	1,154	1,766	956	1,065
CA	25,686	38,150	18,604	27,906	2,465	5,081	1,280	1,796
CO	8,936	22,662	3,124	12,681	430	3,052	0	270
CT	6,830	27,210	11,117	28,664	6,277	12,420	1,957	3,318
DE	24,057	28,845	14,930	18,346	6,281	7,482	642	804
DC	26,290	65,073	25,820	58,182	4,475	12,668	5,194	8,766
FL	781	3,448	0	0	0	0	701	835
GA	5,360	5,433	1,198	1,249	2,856	3,099	1,995	2,000
HI	39,263	32,988	27,435	22,843	4,697	4,262	4,125	3,705
ID	5,791	8,138	687	2,310	0	0	1,227	1,357
IL	13,490	21,810	12,995	19,658	5,770	8,320	3,621	4,335
IN	10,477	14,661	3,820	6,708	2,255	3,276	154	294
IA	22,691	32,529	7,098	13,196	2,553	4,406	47	305
KS	18,153	27,518	5,958	11,990	2,445	4,342	554	886
KY	10,267	9,739	4,144	3,775	2,959	3,232	852	828
LA	10,173	12,062	3,878	5,190	3,553	4,517	248	314
ME	11,657	13,684	12,479	14,133	6,019	6,829	911	1,002
MD	11,109	18,852	10,552	16,685	3,996	6,088	964	1,321
MA	7,820	27,111	8,572	24,060	3,565	8,341	774	1,649
MI	8,260	10,143	905	2,160	4,786	5,647	884	973
MN	14,625	26,853	11,520	20,866	2,652	5,338	546	1,000
MS	17,956	11,949	4,994	1,198	1,243	540	583	367
MO	1,573	4,998	0	818	2,323	3,299	1,065	1,258

(continued)

TABLE A-2 (continued)
SHORTFALLS IN ARIZONA'S REVENUE RELATIVE TO THE NATIONAL AVERAGE AND EACH STATE, FISCAL YEAR 2022
(in Millions of Dollars)

	Own-Source Revenue		Own-Source Tax Revenue		K-12 Own-Source Revenue Per Student		Higher Education Educational Appropriations Per FTE Student	
	PCPI*	RPP**	PCPI*	RPP**	PCPI*	RPP***	PCPI*	RPP***
MT	$4,531	$11,471	$2,778	$7,953	$1,201	$2,517	$220	$484
NE	12,345	25,860	5,574	15,001	1,687	4,322	1,342	2,033
NV	4,573	9,499	4,356	8,168	380	1,477	790	1,028
NH	0	2,712	0	2,325	4,562	7,777	0	0
NJ	13,558	26,212	13,414	23,620	8,102	12,152	475	939
NM	58,750	54,941	25,613	23,388	3,995	3,869	3,899	3,698
NY	36,543	53,660	31,960	45,784	11,936	17,470	1,386	2,027
NC	8,991	11,901	671	2,576	0	431	1,494	1,659
ND	40,789	67,488	17,285	33,535	2,016	5,532	539	1,245
OH	11,731	15,706	3,971	6,669	4,593	5,531	97	223
OK	6,803	10,546	0	2,277	315	761	338	482
OR	21,415	23,050	8,118	9,172	4,030	4,868	755	815
PA	8,010	15,974	5,463	11,414	7,530	10,420	0	58
RI	11,951	14,640	8,549	10,564	6,284	7,559	319	413
SC	18,918	16,973	1,692	572	4,285	4,063	414	350
SD	0	6,274	0	2,834	0	1,376	0	580
TN	0	2,836	0	0	1	1,040	1,344	1,617
TX	4,917	8,579	0	1,908	400	1,221	751	925
UT	20,956	25,906	6,396	9,490	0	0	997	1,196
VT	19,938	23,518	17,670	20,512	11,631	12,020	189	294
VA	10,340	18,411	4,234	9,871	1,298	3,058	295	583
WA	10,601	20,194	3,953	10,581	2,436	4,737	698	1,102
WV	15,190	10,426	7,606	4,280	3,706	3,091	668	484
WI	7,877	14,713	3,016	7,849	3,049	4,907	801	1,114
WY	19,127	44,417	0	10,859	3,672	8,906	2,111	3,559

Notes: The figure shown is the amount of additional revenue that was needed in Arizona to match the adjusted figure. The comparison states are shown in **bold**. * Adjusted by per capita personal income. ** Adjusted by population and the regional price parities (cost of living).
*** Adjusted by the regional price parities (cost of living).
Sources: Calculated from data of the U.S. Department of Commerce, Census Bureau, *Annual Survey of State and Local Government Finances* (revenue); the U.S. Department of Commerce, Census Bureau, *Annual Survey of School System Finances* (revenue and enrollment); the State Higher Education Executive Officers Association, *State Higher Education Finance* (revenues and enrollment); and the U.S. Department of Commerce, Bureau of Economic Analysis (personal income, population, and regional price parities).

own-source tax revenue deficiency ranged from $1.1-to-27.4 billion; the own-source nontax deficiency ranged from $6.1-to-33.1 billion. Based on per student revenue adjusted by per capita personal income, Arizona had a K-12 education revenue shortfall versus each of the seven states, ranging from $0.4-to-4.1 billion; Arizona had a higher education revenue shortfall versus each state, ranging from $0.4-to-4.1 billion. Deficiencies versus these seven states were somewhat smaller using the per capita/per student adjusted for the cost of living standardization.

Fiscal Year 2023

The shortfalls in higher education educational appropriations per FTE student in FY 2023 are shown in Table A-3. The deficiency based on the adjustment by the cost of living was higher than the shortfall adjusted by per capita personal income except in the seven states in which adjusted PCPI was less than in Arizona.

Actual educational appropriations in Arizona in FY 2023 were $2.12 billion. The amount needed to reach the national average was $917 million (43 percent higher than actual revenue) adjusted by PCPI and $1,305 (62 percent higher) adjusted by the cost of living.

Using PCPI as the adjustor, to match the per FTE student figures in the nine comparison states required additional educational appropriations ranging from $301 million relative to South Carolina to $1,963 million versus Tennessee. To match the figures in the seven states with lower adjusted PCPI than Arizona required additional revenue ranging from $301 million versus South Carolina to $4,848 relative to New Mexico.

TABLE A-3
SHORTFALLS IN ARIZONA'S HIGHER EDUCATION EDUCATIONAL APPROPRIATIONS PER FULL-TIME-EQUIVALENT STUDENT RELATIVE TO THE NATIONAL AVERAGE AND EACH STATE, FISCAL YEAR 2023
(in Millions of Dollars)

	PCPI*	RPP**		PCPI*	RPP**
United States	$917	$1,305	Montana	$72	$418
Alabama	2,431	2,356	Nebraska	1,186	2,093
Alaska	4,317	5,198	**Nevada**	604	871
Arkansas	634	866	New Hampshire	0	0
California	1,315	1,864	New Jersey	420	957
Colorado	0	8	New Mexico	4,848	4,795
Connecticut	1,652	3,075	New York	1,485	2,293
Delaware	0	162	**North Carolina**	1,400	1,606
District of Columbia	4,573	8,168	North Dakota	228	1,034
Florida	585	785	Ohio	0	136
Georgia	1,792	1,812	Oklahoma	232	492
Hawaii	4,794	4,585	Oregon	559	638
Idaho	1,563	1,756	Pennsylvania	0	174
Illinois	3,413	4,311	Rhode Island	153	280
Indiana	0	53	**South Carolina**	301	278
Iowa	0	141	South Dakota	164	931
Kansas	515	992	**Tennessee**	1,963	2,319
Kentucky	953	921	**Texas**	568	837
Louisiana	145	275	**Utah**	1,109	1,395
Maine	998	1,188	Vermont	0	0
Maryland	1,304	1,850	Virginia	201	596
Massachusetts	977	2,046	Washington	734	1,253
Michigan	717	850	West Virginia	424	296
Minnesota	305	795	Wisconsin	596	948
Mississippi	828	579	Wyoming	1,981	3,777
Missouri	356	606			

Notes: The figure shown is the amount of additional revenue that was needed in Arizona to match the per FTE student figure adjusted by either per capita personal income or the cost of living. The comparison states are shown in **bold**.

* Adjusted by per capita personal income.
** Adjusted by the regional price parities (cost of living).

Sources: Calculated from data of the State Higher Education Executive Officers Association, *State Higher Education Finance* (revenues and enrollment), and the U.S. Department of Commerce, Bureau of Economic Analysis (personal income and regional price parities).

APPENDIX B: TOTAL TAXABLE RESOURCES AND EFFECTIVE TAX RATES

Total taxable resources per capita in Arizona were below the national average throughout the FY 1996-through-FY 2021 period. From FY 2010 through FY 2021, Arizona's shortfall ranged from 16-to-21 percent, with the rank among all states varying from 38th to 44th. In each of these years, Arizona ranked eighth among the 10 comparison states.

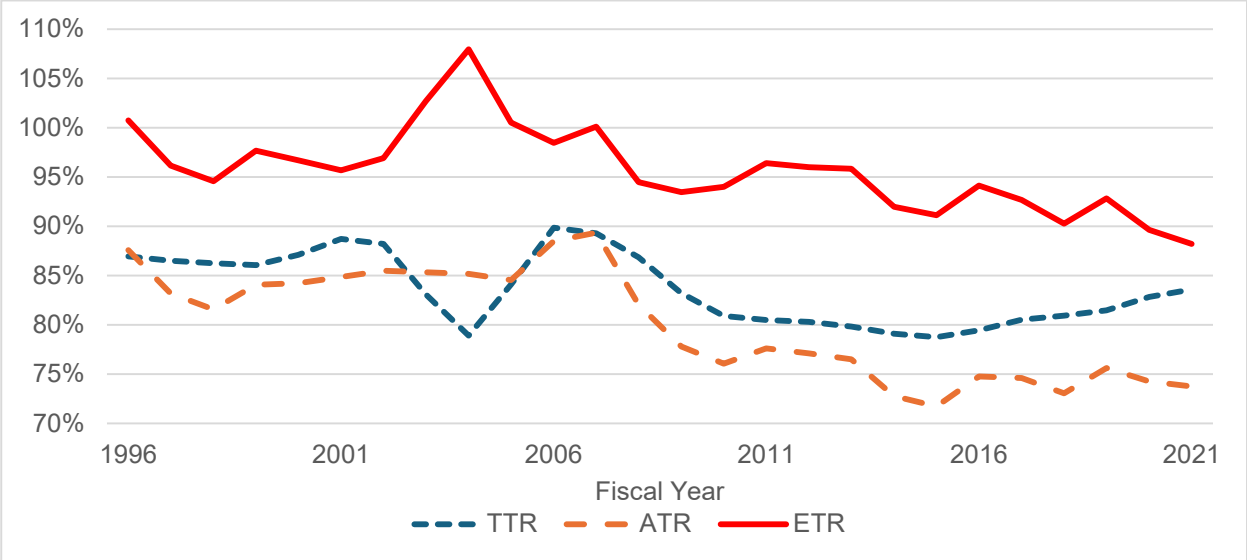
Actual state and local government tax revenue per capita in Arizona also was below the national average from FY 1996 through FY 2021. From FY 2009 through FY 2021, Arizona's shortfall ranged from 22-to-28 percent, with the rank among all states varying from 40th to 46th. Arizona's rank among the 10 comparison states generally was fifth or sixth.

The effective tax rate in Arizona was less than the U.S. average from FY 2008 through FY 2021, falling during this period to 12 percent below average in FY 2021. The rank slid over this period, to 40th among all states and fifth in the comparison group.

Chart B-1 displays the time series of these three indicators as a percentage of the national average. The year-to-year fluctuations generally reflect the influence of the economic cycle.

If the effective tax rate in Arizona in FY 2021 had equaled the national average, and the state's TTR was the amount estimated by the Treasury department, Arizona' state and local governments would have realized an additional $4.52 billion in revenue.

CHART B-1
TOTAL TAXABLE RESOURCES PER CAPITA, ACTUAL TAX REVENUE PER CAPITA, AND EFFECTIVE TAX RATE IN ARIZONA AS A PERCENTAGE OF THE NATIONAL AVERAGE



Sources: Calculated from data of the U.S. Department of the Treasury (total taxable resources) and the U.S. Department of Commerce, Census Bureau (actual tax revenue and population).