

State Pension Contributions and Their Impact on State Education Budgets

Joshua D. Rauh and Gregory Kearney

INTRODUCTION AND BACKGROUND

Despite much of the political rhetoric pointing toward insufficient funds allocated to education in the United States,¹ education expenditures have increased dramatically over the last halfcentury. A 2014 Cato Institute report found that between 1970 and 2010, total inflation-adjusted costs associated with K-12 education increased approximately 190 percent, from just under \$57,000 in 1970 to over \$164,000 for each graduating student in 2010.² These trends continued through 2023, with education expenditures reaching 240 percent of 1970 levels in real terms.³ And while these costs have increased dramatically, overall student performance in math, reading, and science have remained largely unchanged over this entire period.⁴

Most of this growth is tied not to growing student counts but rather to the explosion of administrator employee counts in school districts. For example, between 2000 and 2019, while student and teacher counts grew by relatively modest rates of 7.6 and 8.7 percent, respectively, the number of district administrators grew by a staggering *87.6 percent*.⁵

The salaries of these employees are carried by current budgets, but the costs of the benefits while supposedly borne nominally by current budgets—are often pushed into the future. Just as consumers who borrow money using credit cards see their interest payments increase over time, so too do state and local governments that underfund public employee pensions see their pension contributions increase over time.

For the vast majority of states, state employees have access to what are called "defined benefit" (DB) pension plans upon retirement. After serving for a predetermined number of years based on individual state-level requirements, an employee's benefit is determined by a formula typically involving the employee's age, years of service, and salary in their final year of working.

A Hoover Institution Essay

Consider the state of California, for example, where an employee is an elementary school principal at a medium-sized school with thirty-five years of service, makes \$150,000 in their final year,⁶ and retires at the age of sixty-five. This employee then receives a yearly pension benefit determined by the following calculation:⁷

Pension Benefit = Service Credit × Age Factor⁸ × Final Year Salary

= 35 years \times 2.4% \times \$150,000 = \$126,000.

This ultimately amounts to a state-funded pension benefit of \$126,000 per year plus retiree health benefits provided by the state, in addition to federal Medicare.⁹ The state also offers a yearly cost of living adjustment of 2 percent to each employee's pension benefits. Assuming this employee lives for another twenty years, the total benefit for this individual employee would amount undiscounted to approximately \$3,061,469 *excluding retiree healthcare benefits*. This is just the pension benefit *for one employee*.

Needless to say, these benefits can add up quite quickly, placing immense pressure on state budgets. A 2023 study found that as of 2022, state and local governments are struggling to manage the ever-increasing costs of public employee pensions generally and that state and local governments currently report an underfunding level of \$1.572 trillion for their pension systems across all public employees.

However, most states are severely underestimating their expenses by assuming that high investment returns will make up a great deal of their shortfalls, often using rates as high as 7.5 percent.¹⁰ For example, using an assumed investment rate of return of 7.5 percent, a state can say that a \$100,000 payment due in about ten years is "fully funded" even though only \$50,000 is set aside today.¹¹ Using more realistic assumptions tied to the Treasury yield curve, the authors of the above study find that a more accurate approximation of the underfunding level is *\$5.12 trillion*.¹²

Due to these concerns, states have largely ignored the possibility of making major shifts away from DB plans, instead attempting to offset some of the DB costs by increasing the contribution rates assigned to employees, school districts, and to a lesser extent, the state governments themselves. For example, in California, the employee contribution rate increased from 8 percent of pay to 10.25 percent of pay from 2014 to 2024. During this same time frame, the employer contribution rate increased from 8.25 percent of pay to 19.1 percent of pay. The state government's own contribution rate sits at 8.328 percent, and this may only increase by, at most, 0.5 percent year-to-year.¹³ Without such contribution increases, which are largely passed along to school districts, the unfunded liability will continue to grow even faster.

With that in mind, this report aims to give a snapshot of the implications of these dynamics for district-level education expenditures. More specifically, how much are these increasing expectations on districts and states consuming school budgets and potentially eroding other forms of education spending? For the purposes of this report, we look at the changes in

pension contributions as a percentage of relevant education expenditures in Massachusetts, California, Florida, Georgia, Texas, and Minnesota from 2015 to 2022.

DATA SOURCES

To estimate the extent to which the composition of education expenditures has changed over this period, we rely primarily on three sources: (1) Governmental Accounting Standards Board (GASB) 68 reports; (2) GASB 67 reports; and (3) yearly National Center for Education Statistics (NCES) Local Education Agency finance surveys.

GASB 68 reports became a requirement for state and local pension systems, with the intended purpose of showing just how much each district contributes to the state pension system.¹⁴ These contribution amounts are often provided in the aggregate without separating district versus state contributions.

To apportion contributions to districts versus the state, we rely on the GASB 67 reports, which provide financial data at the pension system level on a yearly basis.¹⁵ We then apply those proportions to the district-by-district contribution totals listed in GASB 68 reports in order to determine the breakdown of state versus district level funds for each district.

This assumption of homogenous contribution proportions between states and districts only holds insofar as the contribution rates are consistently applied across the states and districts. For the six states studied for this report, we have verified that this is the case.¹⁶

Finally, we leverage the yearly NCES Local Education Agency finance surveys to determine the change in proportions of contributions to the total expenditures associated with the relevant employee categories that are covered by each state's respective teacher retirement system. This step addresses the fact that each state covers different employees within its retirement system for teachers. To ensure that all potential contribution categories are included, we determine each state's membership criteria, and then include those categories in the total expenditure category as the denominator when determining the total proportion pension contributions encompassed over the 2015-2022 period. For example, California's school maintenance workers are covered by the California Public Employees' Retirement System (CalPERS), whereas in Georgia, they are included in the Teachers Retirement System of Georgia (TRSGA). As such, we adjusted the variables included in the total expenditures calculation depending on the employees included in each state's teacher retirement system. For a full description of each state and each variable included by state, see appendix A.

PENSION CONTRIBUTION RESULTS

Across the six states studied, we found increases in both state and district contributions as a percentage of relevant expenditures. However, we document significant heterogeneity across states (see table 1). The changes were primarily concentrated in Massachusetts, California, Georgia, and, to a lesser extent, Florida.

State	2022 Unweighted levels			Unweighted 2015-2022 change		
	District	State	Total	District	State	Total
6-State Average	6.38%	1.49%	7.47%	1.90%	0.55%	2.20%
Massachusetts	0.00%	14.10%	14.10%	0.00%	4.90%	4.90%
California	5.00%	4.24%	8.20%	1.82%	2.56%	3.36%
Georgia	9.13%	0.02%	9.25%	2.16%	-0.02%	2.22%
Florida	5.95%	0.00%	5.95%	1.71%	0.00%	1.71%
Texas	1.41%	1.21%	2.62%	0.5%	0.16%	0.65%
Minnesota	4.39%	0.32%	4.72%	0.55%	-0.14%	0.39%

TABLE 1PENSION CONTRIBUTIONS AS SHARE OF EXPENDITURES AT DIFFERENTLEVELS IN 2022 AND CHANGES FROM 2015 TO 2022

Notes: (i) Florida does not provide state funds toward their retirement system, thus the entire change occurs on the district level; (ii) Massachusetts's state government provides contributions on behalf of districts, thus we classified these contributions as "state contributions."

For the purposes of our analysis, we do not analyze changes to employee contributions, as our focus is on the fiscal health of district and state budgets. Insofar as spending on district and state contributions increases, there is less money available for other services from these respective budgets.

MASSACHUSETTS

Massachusetts saw the largest increase in requirements on the part of states to contribute to the state pension fund over the period studied—almost a 5 percentage point increase (see figure 1a).

Massachusetts, unlike the other five states, has the state government provide pension contributions on behalf of districts in their entirety. Thus, while Massachusetts's GASB 68 reports do provide district-level contribution amounts, these contributions are not coming out of district-level budgets but instead are coming from the state.

CALIFORNIA

California similarly saw significant increases to pension contributions as a percentage of total spending on its education system (a 3.4 percentage point increase); however, unlike Massachusetts, the distribution of this increase was similar between its state and district contributions (see figure 1b). In large part, this has to do with the California state government passing bills such as Senate Bill (SB) 90 in 2019 and the 2019-2020 Budget Act—two policy decisions that increased the availability of state funds for public employee pensions.¹⁷ More specifically, SB 90 allocated additional state funds to the state's retirement systems (i.e.,

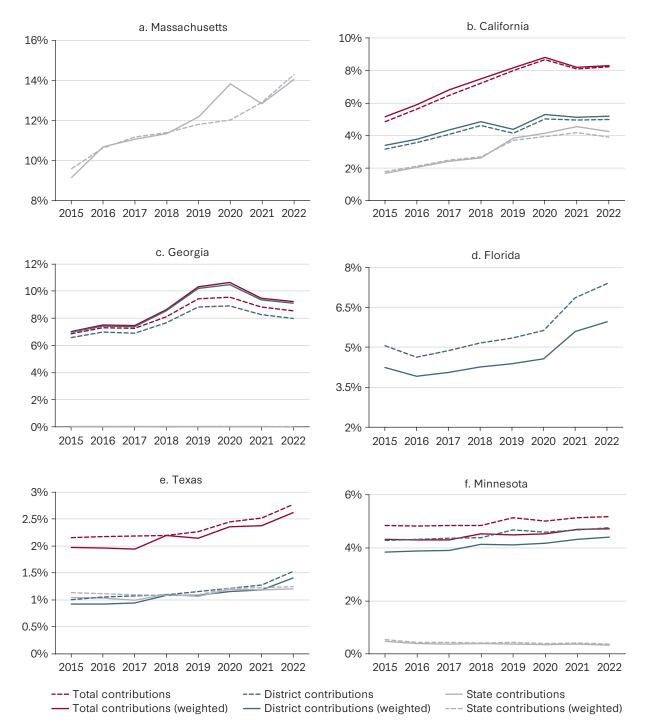


FIGURE 1 State-by-state weighted and unweighted averages of contributions as a percentage of associated education expenditures, 2015-2022

Sources: GASB 67 reports, GASB 68 reports, and the NCES Local Education Agency finance surveys.

\$2.25 billion to California State Teachers Retirement System [CalSTRS] and \$3.5 billion to CalPERS), and the 2019-2020 Budget Act allocated an additional \$3.15 billion of state funds to state retirement systems (i.e., \$1.64 billion for CalSTRS and \$660 million for CalPERS) in order to reduce pension obligations for school districts.¹⁸

GEORGIA

Georgia, like California and Massachusetts, saw an increase in its pension contributions as a percentage of total relevant education expenditures; however, this increase was entirely driven by its district-level pension spending increases (i.e., a 2.2 percentage point increase from 2015 to 2022). State contributions as a percentage of education expenditures actually fell during this period (see figure 1c).

FLORIDA

Unlike other states, Florida's state government does not contribute to its state pension system. Thus, while Florida saw a modest increase in the level of pension contribution spending as a proportion of total relevant education expenditures, this was entirely on the district level (i.e., a 0.71 percentage point increase; see figure 1d).

TEXAS

Texas saw modest increases to both state and district level proportions of pension contributions as a percentage of relevant education expenditures, equating to a 0.65 percentage point increase from 2015 to 2022 (see figure 1e).

MINNESOTA

Finally, Minnesota saw the most modest changes over the period studied. While district level contributions increased by 0.55 percentage points, state contributions fell by 0.14 percentage points (see figure 1f).

ARE THE CONTRIBUTIONS FIXING THE PROBLEM?

Are these pension contributions sufficient to improve the funding of teacher retirement systems, or are much higher contributions needed in the absence of benefit reform? We analyze retirement system level ratios—both the ratio directly reported in GASB 67 reports and the ratio ascertained through more realistic investment assumptions—and we find almost no change to the funding ratios across the six states from 2015 to 2022.¹⁹

Despite the increase in contributions across the six states over the years studied, funding ratios remained largely unchanged. Thus, even though Massachusetts increased its contributions by 5 percentage points, the funding ratio was just under 60 percent using the standard funding ratio or around 40 percent using the market value funding ratio.

POLICY IMPLICATIONS

We have shown that despite significant contribution increases on the part of districts and states in funding their retirement systems, the funding of these systems has failed to improve, pointing to the need for changes to benefits to ensure that the burden of funding public employee retirement is bearable without crowding out other public spending. Government

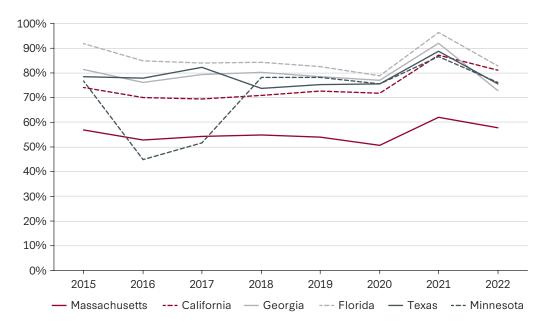
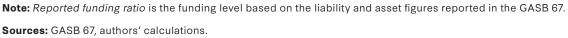


FIGURE 2 State-by-state reported funding ratios, 2015-2022



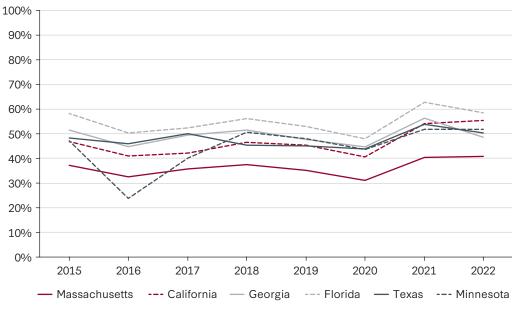


FIGURE 3 State-by-state market value funding ratios, 2015-2022

Note: *Market value funding ratio* adjusts investment expectations using the relevant Treasury bond yield. **Sources:** GASB 67, authors' calculations.

money devoted to pension contributions is, of course, taxpayer money that could be used for other purposes.

Consider a basic example using the 5 percentage point change in Massachusetts from 2015 to 2022. Suppose a hypothetical state has a budget for education expenditures that totals \$15 billion, and pension contributions make up approximately 10 percent of this total, equating to only \$1.5 billion per year in contributions to the Massachusetts Teachers' Retirement System (MTRS). Suppose that over a seven-year period, this percentage climbs to 15 percent, increasing the annual amount of money dedicated to the MTRS by \$750 million.

This means the state has \$750 million less per year to dedicate to important expenditures, such as salaries for new teachers, assorted classroom resources, or additional support services such as counselors, technicians, or librarians.

State budgets are, of course, often not operated using a yearly fixed number, as this example implicates. Yearly state revenue expectations also play an important role in determining the extent to which states and districts are fiscally constrained. State revenues have continued to increase over the period studied (see table 2), but, of course, that does not mean such increases will necessarily continue and be sustained in the future.

At present, most other expenditures outside of pension contributions have been able to continue increasing alongside pension contributions (albeit at a slower pace), but what happens if state revenues grow slower than inflation, or even fall?

A recent report from the National Association of State Budget Officers (NASBO) has found that in fiscal year 2025, total general fund spending is anticipated to fall by more than \$1.2 trillion, which equates to a 6 percent drop from 2024 levels.²⁰ The growth in spending over the last few years, as the report explains, was driven in large part by "one-time expenditures of surplus funds" due to pandemic-related funds.²¹ As of 2023 Q1, there are already signs that this is the case. By the end of 2023 Q1, there were three straight quarters of declines in state tax revenues.²² With pension contributions growing at a faster rate than tax revenues (see table 2), it stands to reason that this will ultimately become a bigger problem in the near future.

Insofar as cuts to spending are necessary, pension benefits are often a highly restricted margin of adjustment. In every state across the country, there are protections—most typically through common law—that protect pension benefits against legislative action.²³ Some states even have pension benefits protected through their state constitutions (e.g., Illinois, Michigan, Louisiana, and New York).²⁴

To put into perspective how effective these protections can prove, consider Detroit's 2013 bankruptcy, which was driven in large part by the underfunding of the city's pension system.²⁵ Despite Michigan having constitutional protections for pension benefits, a judge ultimately ruled that pensioners were expected to experience *some* loss in their benefits in order to

Year	Total contributions PP (\$)								
	Massachusetts	California	Georgia	Florida	Texas	Minnesota			
2015	\$1,124.6	\$408.9	\$648.0	\$321.4	\$171.4	\$352.6			
2016	\$1,231.9	\$511.1	\$709.5	\$296.6	\$175.5	\$369.7			
2017	\$1,351.6	\$615.4	\$740.7	\$309.1	\$180.8	\$373.2			
2018	\$1,449.7	\$711.6	\$896.6	\$329.9	\$188.4	\$403.4			
2019	\$1,598.6	\$910.4	\$1,126.6	\$352.0	\$198.0	\$425.4			
2020	\$1,719.1	\$963.1	\$1,216.7	\$368.4	\$231.4	\$441.7			
2021	\$2,014.9	\$966.2	\$1,130.8	\$469.4	\$252.5	\$474.9			
2022	\$2,354.3	\$1,095.9	\$1,227.5	\$517.8	\$306.7	\$511.4			
	Total revenues PP (\$)								
Year	Massachusetts	California	Georgia	Florida	Texas	Minnesota			
2015	\$18,960.6	\$14,844.3	\$10,884.2	\$9,943.0	\$13,729.5	\$13,787.7			
2016	\$19,172.8	\$16,684.5	\$11,195.2	\$10,449.3	\$13,787.7	\$14,540.7			
2017	\$20,201.2	\$17,130.8	\$11,814.2	\$10,403.9	\$13,506.1	\$14,740.2			
2018	\$21,073.3	\$17,739.6	\$12,452.2	\$10,800.8	\$14,035.8	\$15,746.5			
2019	\$19,861.0	\$20,722.0	\$13,005.3	\$11,382.4	\$15,123.2	\$16,119.1			
2020	\$20,381.6	\$19,944.0	\$13,722.4	\$11,541.7	\$16,313.4	\$16,597.7			
2021	\$22,720.6	\$23,057.9	\$14,973.4	\$12,323.1	\$15,951.9	\$17,659.3			
2022	\$22,915.4	\$24,862.1	\$16,880.7	\$12,980.0	\$17,241.2	\$18,368.3			
	Percent change in total contributions PP and total revenues PP from 2015 to 2022								
Variable	Massachusetts	California	Georgia	Florida	Texas	Minnesota			
Contributions PP	109.4%	168.0%	89.4%	61.1%	78.9%	45.1%			
Revenues PP	20.9%	67.5%	55.1%	30.5%	25.6%	33.2%			

TABLE 2 STATE-BY-STATE TOTAL CONTRIBUTIONS PP AND TOTAL REVENUES PP, 2015-2022

Note: *PP* stands for *per pupil*. Revenue figures indicate all district-level revenues coming from the state, local, and federal sources.

Source: NCES Local Education Agency Finance Survey.

place Detroit back on a more sustainable fiscal track; however, the cuts pensioners were expected to take paled in comparison to those expected on the part of bondholders. While pensioners ultimately incurred what amounted to a 4.5 percent haircut to their benefits, bondholders lost as much as *66 percent* of their investments.²⁶

Absent significant changes to the structure of these pension obligations, this problem will only become much worse, particularly in a situation in which states lack the revenues to cover the expected increases in pension contributions.

As such, we recommend the following policy changes for states facing these fiscal challenges:

1. INTRODUCTION OF DEFINED CONTRIBUTION OR HYBRID PLANS IN PLACE OF DEFINED BENEFIT PLANS

A major weakness of DB plans, as we discussed above, is that the pension promises are often based on a formula determined by the number of years worked, the final year of an employee's salary, and the age of the retiree. Defined contribution (DC) plans (e.g., 401(k) plans), in contrast, simply require an employer to contribute a percentage of an employee's salary, which is set aside in an employee's account for when they retire. This is the beginning and end of expectations for the employer, an arrangement that makes contribution requirements much more predictable.

An additional added benefit of DC plans relative to DB plans is that the retirement benefits follow an employee if they decide to leave their place of work. Due to the structure of DB plans currently, to the extent an employee leaves earlier in their tenure relative to the state's retirement system, they often lose most, if not all, of their retirement benefits.²⁷

While not as common, significant numbers of public employees are, at present, already currently enrolled in DC plans, albeit in some cases supplemental to their DB pension. According to a 2024 Congressional Research Service report on American workers' retirement choices, researchers found that while 39 percent of public employees have access to a DC plan, 18 percent of all public employees are currently enrolled.²⁸ Some cities have already begun introducing reforms to their pension systems, moving from DB to DC plans. Norfolk, VA, Baltimore, MD, Jacksonville, FL, Ann Arbor, MI, Fort Worth, TX, and Birmingham, AL, are all key examples of cities that have instituted DC plans, or versions of them, to manage their long-term retirement costs.²⁹

Political realities in most states are such that, broadly speaking, it is unlikely that they will entirely shift from DB to DC plans at any point in the near future. A more realistic shortterm remedy would be to encourage states to embrace a hybrid of DC and DB plans. For example, instead of a state like California offering a 2.4 percent age factor adjustment, the state could reduce this benefit factor to 1 percent in exchange for employers offering a higher DC contribution. This would be similar to the reforms made to federal pensions when, effective January 1987, new employees of the federal government were enrolled in the Federal Employee Retirement System (FERS) reduced-factor DB plan, but also enrolled in the new Thrift Savings Plan (TSP) that functions like a 401(k).

Research has shown that workers often show a strong preference for DC plans relative to DB plans. A 1999 study showed that in the context of new hires at North Carolina State University,

new employees tended to choose DC plans if they were concerned about losing their pension benefits in the event they left the university.³⁰ A 2020 study found that in the corporate sector, the gradual shift from DB to DC plans could in part be explained by workers' preferences for greater flexibility.³¹ Particularly among younger employees, recent survey-based research also finds a strong preference among public employees for DC plans over DB plans.³²

2. REDUCING INVESTMENT RETURN EXPECTATIONS

As we mentioned earlier in this report, retirement systems often rely on high investment return assumptions to at least make it appear that pensioners are more adequately funded for their retirements. However, as explained earlier, the degree to which they are underfunded is often much worse when using more realistic investment assumptions (i.e., \$1.5 versus \$5.2 trillion).

As such, we would strongly recommend that pension funds reduce their expectations to capture their unfunded liabilities more accurately. While adopting a ten-year Treasury bond yield may be an unrealistic expectation to place on states, even simply adopting a blended risk investment approach (e.g., 50 percent of investments being placed in a low-risk bond portfolio with an expected rate of return of 4 percent and 50 percent of investments being placed in a stock portfolio with an expected rate of return of 8 percent) is still much more manageable than the current approach.

Making seemingly small adjustments of this sort would allow states to more properly manage their state budgets and assess risk for the future.

3. CUTTING INVESTMENT COSTS

Finally, pension funds face decisions about whether or not they should delegate their investment choices to external investment managers (e.g., hedge funds), but decisions of this sort increase investment costs significantly.

Theoretically, doing so could yield better returns since these external managers could conceivably have better industry knowledge, which makes the added costs worth it.

However, evidence suggests this is not the case. A 2015 research paper examined different investment approaches among different pension funds with respect to real estate. Larger funds that relied on in-house investors (versus external money managers) saw much lower investment costs, as well as higher returns, than those funds which outsourced investment management.³³

Pension systems should, therefore, look to keep their investment decisions in-house and focus on low-cost indexed investing in publicly traded securities, rather than outsourcing those activities to expensive intermediaries.

CONCLUSION

From 2015 to 2022, pension contributions as a percentage of relevant education expenditures have increased significantly, increasing 2 percentage points across Massachusetts, California, Georgia, Florida, Texas, and Minnesota with significant heterogeneity at the state level. The most sizable impacts occurred in Massachusetts, California, Georgia, and, to a lesser extent, Florida, with Texas and Minnesota remaining relatively stable over the period studied.

Due to the structure of DB plans and the present condition of state finances, this will certainly only get worse, particularly in an economic environment in which state revenues are expected to decrease in the coming years. As pension contributions continue to grow as a share of expenditures, this will almost certainly place pressure on states to cut funding elsewhere, which may ultimately hamper efforts to hire new teachers or purchase better resources for classrooms.

In order to get these costs under control, states must make significant policy adjustments in order to make retirement systems solvent for the long-run and to avoid state-level bankruptcy events similar to those in Detroit and San Bernadino.

We have provided several policy recommendations that could ameliorate these funds' current conditions: (i) shift from DB plans to DC plans; (ii) reduce investment returns assumptions; and (iii) cut investment costs by relying on in-house money managers (versus outsourcing those responsibilities to other managers, such as hedge funds). These policy changes would ultimately protect both public employees and taxpayers.

In future research, we hope to capture these changes for all fifty states in order to give a more comprehensive perspective on the current condition of state-level finances and the extent to which pension contributions are impacting other spending priorities.

APPENDIX A: EXPENDITURE ATTRIBUTION

For each retirement system, there are different types of employees covered by the relevant state teacher pension system. This matters insofar as how much we can directly attribute to "Total Instruction Expenditures" (i.e., TCURINST in the NCES dataset), which only includes teachers' pension contributions, and how much we can draw from other variables for other employee classifications in the NCES dataset. Failing to properly include the relevant employees, as well as their salaries and contributions, will necessarily make the contribution percentage inflated if we only attribute these proportions to instruction spending alone.

For example, California's maintenance workers are covered by CalPERS, whereas in Georgia, they are covered by TRSGA. As such, we adjusted the variables included in the total expenditures calculation depending on the employees included in each state's teacher retirement system. For full transparency, we have included the relevant variables of interest, their definitions, and the specific variables we have included for each state based upon the definitions laid out in each state's respective description of employee membership criteria.

NCES DEFINITIONS FOR RELEVANT VARIABLES

TCURELSC: Total Current Expenditures for Elementary / Secondary Education

(TCURINST + TCURSSVC + TCUROTH)

- **TCURINST:** Total Current Expenditures Instruction
- TCURSSVC: Total Current Expenditures Support Services
 - E17: Current Expenditures Support Services Pupils
 - E08: Current Expenditures Support Services General Administration
 - E07: Current Expenditures Support Services Instructional Staff
 - E09: Current Expenditures Support Services School Administration
 - V40: Current Expenditures Support Services Ops & Maintenance Staff
 - V45: Current Expenditures Support Services Student Transportation
 - V90: Current Expenditures Support Services Business / Central / Other
 - V85: Current Expenditures Support Services Nonspecified
- TCUROTH: Total Expenditures Other Elementary / Secondary
 - E11: Current Expenditures Food Services
 - V60: Enterprise Operations
 - V65: Current Expenditures Other Elementary / Secondary

TCURSSVC

- **E17:** Expenditures for attendance recordkeeping, social work, student accounting, counseling, student appraisal, record maintenance, and placement services. This category also includes medical, dental, nursing, psychological, and speech services.
- **E08:** Expenditures for board of education and executive administration (office of the superintendent) services.
- **E07:** Expenditures for supervision and instruction service improvements, curriculum development, instructional staff training, and instructional support services, such as libraries, multimedia centers, and computer stations for students that are outside of the classroom.
- **E09:** Expenditures for the office of the principal services.
- **V40:** Expenditures for building services (heating, electricity, air conditioning, property insurance), care and upkeep of grounds and equipment, nonstudent transportation vehicle operation and maintenance, and security services.
- **V45:** Expenditures for the transportation of public school students, including vehicle operation, monitoring riders, and vehicle servicing and maintenance.
- **V90:** Expenditures for business support, central support, and other support services. Business support services include payments for fiscal services (budgeting, receiving and disbursing funds, payroll, internal auditing, and accounting), purchasing, warehousing, supply distribution, printing, publishing, and duplicating services. Central support services include planning, research, development, and evaluation services. They also include information services, staff services (recruitment, staff accounting, noninstructional in-service training, staff health services), and data processing services.
- **V85:** Expenditures that pertain to more than one of the above categories. In some cases, reporting units could not provide distinct expenditure amounts for each support services category. These expenditures are included in "nonspecified" instead of "other support services."

TCUROTH

Current expenditures for other than instruction and support service activities. Included in this category are food services, enterprise operations, and other elementary / secondary current expenditures.

STATE-BY-STATE DESCRIPTIONS OF COVERED EMPLOYEES

California³⁴

- Teachers
- Vocational or guidance counseling
- Services related to school curriculum development and a variety of administrative duties

Massachusetts³⁵

- Teachers
- School psychologist
- School adjustment counselor
- School social workers
- Director of occupational guidance and placement
- Principal
- Assistant principals
- Supervisor or superintendent of any public school
- Assistant superintendent
- Supervisor or teacher of adult civic education

Georgia³⁶

- Teachers
- Administrators
- Supervisors
- Clerks
- Teacher aides
- Secretaries
- Paraprofessionals
- Public school nurses
- Lunchroom workers
- Maintenance
- Warehouse and transportation managers
- Supervisors

Florida

Using Florida's GASB reports, we focused on the school board entities for each district. This meant the contribution totals were strictly focused on board-related employment for each district. As such, we included only those positions that were typical of school district employment. These included the following:³⁷

- Teachers
- Classroom assistants
- Administrative work
- Facilities
- Food service
- Maintenance
- Nurses and counselors
- Security
- Classroom aides and assistants
- Information technology
- Transportation

Texas³⁸

• The definition is expansive in Texas and includes anyone employed full-time at a Texas public educational institution.

Minnesota³⁹

- Teachers
- Administrator
- Community education director
- Counselor
- Curriculum writer
- Dean of students
- Librarian
- Principal
- Psychologist
- Social worker
- Substitute teacher
- Superintendent
- Teacher and tutor

VARIABLES INCLUDED BY STATE

California

TCURINST, E17, E08, E09

Massachusetts

TCURINST, E17, E08, E09

Georgia

TCURINST, E17, E08, E09, E11, V40, V45, V90

Florida

TCURINST, E17, E08, E09, E11, V40, V45, V90

Minnesota

TCURINST, E17, E08, E09

Texas

TCURINST, E17, E08, E09, E11, V40, V45, V90

ACKNOWLEDGMENTS

We thank Aaron Gelberg for excellent research assistance.

NOTES

1. Daarel Burnette II, "States Are Spending Way Too Little on Schools, Report Concludes," *Education Week*, April 23, 2019, https://www.edweek.org/education/states-are-spending-way-too-little-on-schools-report -concludes/2019/04.

2. Andrew J. Coulson, "The Way of the Future: Education Savings Accounts for Every American Family," Cato Institute, Policy Analysis No. 746, August 28, 2013, https://www.cato.org/sites/cato.org/files/pubs/pdf/pa746.pdf. As of 2021, the increase in total costs has reached 245 percent since 1970—see Elbaum's *Washington Examiner* article cited in the next note for more details.

3. Jack Elbaum, "Test Scores Have Barely Risen Since 1970 Despite 245 Percent Spending Increase," *Washington Examiner*, October 5, 2015, https://www.washingtonexaminer.com/opinion/2572941/test -scores-have-barely-risen-since-1970-despite-245-spending-increase/.

4. Elbaum, "Test Scores Have Barely Risen."

5. Catrin Wigfall, "District Admin Growth 10x Greater than Student, Teacher Growth," Center of the American Experiment, June 20, 2023, https://www.americanexperiment.org/district-admin-growth-10x -greater-than-student-teacher-growth/.

6. \$150,000 is roughly the *average* salary of a principal at a medium-sized elementary school. Their finalyear salary is likely higher. The CalSTRS uses the highest annual average salary over twelve consecutive months in the benefit formula for employees with more than twenty-five years of service, and the highest average over thirty-six consecutive months for employees with less than twenty-five years of service. See "Certificated Staff: Average Salaries & Expenditures," California Department of Education, accessed October 29, 2024, https://www.cde.ca.gov/fg/fr/sa/cefavgsalaries.asp.

7. "Retirement Benefit Calculator," CalSTRS, accessed October 29, 2024, https://resources.calstrs.com /CalSTRSComResourcesWebUI/Calculators/Pages/RetirementBenefit.aspx.

8. "Age Factor," CalSTRS, accessed October 29, 2024, https://www.calstrs.com/age-factor#:~=The%20 age%20factor%20is%20the,which%20your%20retirement%20is%20effective.

9. Total healthcare spending on retirees in California was approximately \$3 billion in 2022: "Health Insights That Might Surprise You," CalPERS, https://news.calpers.ca.gov/health-insights-that-might-surprise-you/. This covers about 685,457 retirees: "2022-23 Transparency Report," CalPERS, December 1, 2023, https://www.calpers.ca.gov/docs/forms-publications/transparency-report-fy-2022-23.pdf. This means each CalPERS employee receives approximately \$4,377 per year. Assuming a retiree lives for another twenty years, this amounts to \$87,533 in additional benefits over this time frame.

10. "Latest Return Assumptions," National Association of State Retirement Administrators, accessed October 29, 2024, https://www.nasra.org/latestreturnassumptions.

11. Joshua D. Rauh, "Hidden Debt, Hidden Deficits: How Pension Promises Are Consuming State and Local Budgets," *Hoover Institution Press*, May 15, 2017, https://www.hoover.org/research/hidden-debt -hidden-deficits-2017-edition#:~=Hidden%20Debt%2C%20Hidden%20Deficits%20%E2%80%93%20 a,consuming%20state%20and%20local%20budgets.

12. Joshua D. Rauh and Oliver Giesecke, "State and Local Pension Funds 2022" (research paper no. 4671133, Stanford University Graduate School of Business, December 27, 2023), https://papers.ssrn.com/sol3/papers .cfm?abstract_id=4671133.

13. "Contributions," CalSTRS, accessed October 29, 2024, https://www.calstrs.com/contributions.

14. "Summary of Statement No. 68," GASB, accessed October 29, 2024, https://gasb.org/page /pronouncement?pageId=/standards-and-guidance/pronouncements/summary-statement-no-68 .html&isStaticPage=true.

15. GASB, "Summary of Statement No. 68."

16. For individual state contribution details, see "Chart of Contribution Rate Increases as Passed in the 2019 Texas Legislative Session," Teacher Retirement System of Texas, https://www.trs.texas.gov /Pages/re_chart_contribution_rate_increase_2019.aspx; "Employer and Employee Contribution Rates," Teacher Retirement System of Georgia, https://www.trsga.com/employer/contribution-rates/; "Contribution Rates," Teachers Retirement Association of Minnesota, https://minnesotatra.org/employers/; "How Do Teacher Pensions Work in Massachusetts?" Teacherpensions.org, https://www.teacherpensions.org/state /massachusetts; "Contributions," CalSTRS, https://www.calstrs.com/contributions. Florida does not provide state-level contributions to its pension system. Its funds come from the districts and employees only.

17. California Senate Bill 90, LegiScan, accessed October 29, 2024, https://legiscan.com/CA/text/SB90/id /2036456.

18. California Senate Bill 90.

19. Minnesota's large changes in its funding ratios between 2016–2018 have to do with changes in investment return assumptions. Minnesota briefly reduced its investment assumptions from 8 percent in 2015 to 4.66 percent in 2016. In 2017, the state reversed course and increased its assumed rate of return to 7.5 percent.

20. Liz Farmer, "State Budgets Are Downsizing," Pew Charitable Trusts, July 15, 2024, https://www.pewtrusts .org/en/research-and-analysis/articles/2024/07/15/state-budgets-are-downsizing.

21. "Spring 2024 Fiscal Survey of States," NASBO, accessed October 29, 2024, https://higherlogicdownload .s3.amazonaws.com/NASBO/9d2d2db1-c943-4f1b-b750-0fca152d64c2/UploadedImages/Fiscal%20Survey /NASBO_Spring_2024_Fiscal_Survey_of_States_S.pdf.

22. Justin Theal and Alexandre Fall, "State Tax Revenue Declines from Record Highs," Pew Charitable Trusts, September 27, 2023, https://www.pewtrusts.org/en/research-and-analysis/articles/2023/09/27 /state-tax-revenue-declines-from-record-highs.

23. Greg Mennis, "Legal Protections for State Pension and Retiree Health Benefits," Pew Charitable Trusts, May 30, 2019, https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/05/legal-protections -for-state-pension-and-retiree-health-benefits.

24. Mennis, "Legal Protections for State Pension and Retiree Health Benefits."

25. "Detroit's Pension Benefit Restoration Should Remain Limited," Citizens Research Council of Michigan, April 24, 2024, https://crcmich.org/detroits-pension-benefit-restoration-should-remain-limited#:~=When %20Detroit%20filed%20for%20bankruptcy,The%20pension%20funds%20were%20underfunded.

26. Michael Aneiro, "Seven Lessons from Detroit's Bankruptcy for Muni Investors," *Barron's*, October 24, 2014, https://www.barrons.com/articles/seven-lessons-from-detroits-bankruptcy-for-muni-investors-1414183339.

27. "Retirement Plan Portability in the Public Sector," Bolton, April 2, 2018, https://www.boltonusa.com /retirement-plan-portability-public-sector/.

28. John J. Topoleski and Elizabeth A. Myers, "Federal Employees' Retirement System: Budget and Trust Fund Issues," *Congressional Research Service*, April 8, 2014, https://crsreports.congress.gov/product/pdf /R/R43439.

29. Seamus Duffy and Oliver Giesecke, "Pension Reform: Conceptual Foundations and Practical Challenges" April 28, 2023, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4432839.

30. Robert L. Clark and M. Melinda Pitts, "Faculty Choice of a Pension Plan: Defined Benefit Versus Defined Contribution," *Industrial Relations: A Journal of Economy and Society* 38, no. 1 (1999): 18-45.

31. Joshua D. Rauh, Irina Stefanescu, and Stephen P. Zeldes, "Cost Saving and the Freezing of Corporate Pension Plans," *Journal of Public Economics* 188 (2020): 1-18, https://www.nber.org/papers/w27251.

32. Oliver Giesecke and Joshua D. Rauh, "How Much Do Public Employees Value Defined Benefit Versus Defined Contribution Retirement Benefits?" (research paper no. 4308471, Stanford University Graduate School of Business, December 21, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4308471.

33. Aleksandar Andonov, Piet Eichholtz, and Nils Kok, "Intermediated Investment Management in Private Markets: Evidence from Pension Fund Investments in Real Estate," *Journal of Financial Economics* 118, no. 3 (2015): 548–64.

34. "Membership Eligibility," CalSTRS, accessed October 29, 2024, https://www.calstrs.com/membership -eligibility.

35. "MTRS Membership Eligibility," MTRS, accessed October 29, 2024, https://mtrs.state.ma.us/service /mtrs-membership-eligibility/.

36. "Teachers Retirement System of Georgia Member's Guide," Savannah State University Human Resources, accessed October 29, 2024, https://www.savannahstate.edu/human-resources/documents /TRSMemberGuide.pdf.

37. "Active BCPS Employees," Broward County Public Schools, accessed October 29, 2024, https://careers .browardschools.com/lp/Active%20BCPS%20Employees/c8add5a49652c0c4/?locale=en_US.

38. "Re-Employment Eligibility," Teacher Retirement System of Texas, accessed October 29, 2024, https:// www.trs.texas.gov/Pages/re_employment_eligibility.aspx.

39. "Eligibility Rules," Minnesota Teachers Retirement Association, accessed October 29, 2024, https:// minnesotatra.org/employers/eligibility-rules/.



The publisher has made this work available under a Creative Commons Attribution-NoDerivs license 4.0. To view a copy of this license, visit https://creativecommons.org/licenses/by-nd/4.0.

Copyright © 2024 by the Board of Trustees of the Leland Stanford Junior University

The views expressed in this essay are entirely those of the authors and do not necessarily reflect the views of the staff, officers, or Board of Overseers of the Hoover Institution.

30 29 28 27 26 25 24 7 6 5 4 3 2 1

ABOUT THE AUTHORS



JOSHUA D. RAUH

Joshua D. Rauh is a senior fellow at the Hoover Institution and the Ormond Family Professor of Finance at Stanford's Graduate School of Business. He was formerly principal chief economist on the President's Council of Economic Advisers and taught at the University of Chicago's Booth School of Business (2004-9) and the Kellogg School of Management (2009-12).



GREGORY KEARNEY

Gregory Kearney is a senior research analyst with the State and Local Governance Initiative at the Hoover Institution. He previously worked as a research economist at the President's Council of Economic Advisers at the White House and, before entering public policy research, in transfer pricing consulting in New York City.

State and Local Governance Initiative

Hoover scholars of the State and Local Governance Initiative partner with lawmakers and agency officials in jurisdictions across America to generate research-based recommendations that will positively impact state and local government policies.

For more information about this Hoover Institution initiative, visit us online at hoover.org/research-teams/state-and-local -governance-initiative.

Hoover Institution, Stanford University 434 Galvez Mall Stanford, CA 94305-6003 650-723-1754 Hoover Institution in Washington 1399 New York Avenue NW, Suite 500 Washington, DC 20005 202-760-3200

