Unintended Consequences:

How Scaling Back Public Pensions Puts Government Revenues at Risk **2020 Update**



National Conference on Public Employee Retirement Systems *The Voice for Public Pensions*

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The National Conference on Public Employee Retirement Systems (NCPERS) is grateful for the contribution of NCPERS Director of Research and Education Michael Kahn, Ph.D., in bringing this seminal work to light.

TABLE OF CONTENTS

3	Acknowledgement				
5	Endorsement of the 2018 Edition				
6	Executive Summary				
9	Introduction				
11	Section I. Literature Review				
	The Economy and Revenues				
	Pension Assets and the Economy				
	Pensions Assets, the Economy, and Revenues				
15	Section II. Data and Methodology				
	Estimating the Impact of Pension Fund Assets on State and Local Economies and Revenues				
	Estimating the Impact of Pension Checks on State and Local Economies and Revenues				
	Assessing Whether Revenues Generated by Public Pensions Exceed Taxpayer Contributions to Those Pensions				
17	Section III. Results				
	The US Economic Impact of Investment of Pension Assets				
	Contribution of Investment of Pension Fund Assets to State Economies and Revenues				
	Contribution of Spending of Pension Checks to State Economies and Revenues				
	Are Public Pensions Net Revenue Positive?				
	Trends in the Economic and Revenue Impacts of Public Pensions				
	 Trend in Economic Impact 				
	 Trend in Revenue Impact 				
	 Trend in States' Net Revenue Positions 				

28 Section IV. Conclusions

2 Unintended Consequences: How Scaling Back Public Pensions Puts Government Revenues at Risk | 2020 Update

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4 Unintended Consequences: How Scaling Back Public Pensions Puts Government Revenues at Risk | 2020 Update

Endorsement of the 2018 Edition

IT his is the first study of its kind that examines the impact of investment of pension fund assets and spending of pension checks by retirees on state and local economies and revenues. It shows that pension funds play an important role in our economy and are net revenue producers. If there were no public pensions, taxpayers will have to pay more to receive the same level of services. Legislators should think twice before they convert public pensions into do-it-yourself retirement plans."

> —Robert Reich, Chancellor's Professor and Carmel P. Friesen Chair in Public Policy, Goldman School of Public Policy, UC Berkeley.

Unintended Consequences: *How Scaling Back Public Pensions Puts Government Revenues at Risk* 2020 Update

EXECUTIVE SUMMARY

In 2018, NCPERS' landmark Unintended Consequences study documented the beneficial ripple effects that occur in communities and states due to retirees' spending their pension checks and because of investments made by pension funds. This biennial update continues to quantify these effects as well as to demonstrate what is at stake if state and local governments buckle under to short-term policy pressures with ill-advised efforts to "reform" public pensions.

Our study shows that the benefits pensions confer on communities grew between 2016 and 2018, the years covered by the 2018 and 2020 studies, respectively. Overall, when we add the impact of investment of assets and spending of pension checks by retirees, public pensions in 2018 contributed \$1.7 trillion to the US economy and \$341.4 billion to state and local tax revenues. Compare these results with those of our earlier study, which found that in 2016, public pensions contributed \$1.3 trillion to the economy and \$277.6 billion to state and local revenues.¹ The positive impacts of public pensions on the economy and revenues became more pronounced between 2016 and 2018.

We undertook both the 2018 and 2020 studies against the backdrop of sustained attacks on public pensions. Unfortunately, the argument that taxpayers cannot afford public pensions continues to sway some policy makers despite a woeful lack of empirical evidence to support it. Legislators across the nation are contemplating options for the future funding of public-sector worker retirement benefits at a time when competition for finite state and local resources is fierce. The reasons are familiar: The lingering effects of recession, misguided budget priorities, and a regressive revenue structure have taken a toll. Time and again, defined-benefit pensions for firefighters, police officers, teachers, and other public servants are placed at risk, even though

1 Unintended Consequences: How Scaling Back Public Pensions Puts Government Revenues at Risk (Washington, DC: NCPERS, 2018), <u>https://www.ncpers.org/files/NCPERS%20Unintended%20Consequences%20Report_2018_Aug_v1.pdf</u>.

plan participants have consistently held up their end of the bargain. Changes proposed or enacted in the name of "reform" are often thinly disguised efforts to dismantle public pensions rather than reckon with correcting decades of short-sighted government decisions to withhold funding.

As the positive effects of public pensions increase, it only stands to reason that the risks of dismantling pensions are rising, too.

The question we asked is this: How does the payment of defined pension benefits and the investment of pension assets impact state and local economies and revenue generation? It is common sense that consumer spending and investment fuel the economy, which in turn expands tax revenues. We hear this all the time in the context of tax cuts. Yet opponents of public pensions seem to believe that pension spending and investment do not grow the economy. True, the pension money comes from taxpayers, but it should be understood that it is part of the compensation of workers providing public services. If these services were privatized, they would cost taxpavers more for the simple reason that the goal of private companies is to make profit, whereas the goal of a public service is to ensure the public good. In addition to yielding economic benefits, pensions play an important role in the recruitment and retention of a quality public workforce to ensure our collective good.²

Previous research has shown that pension beneficiaries bolster the economy by feeding resources back into the local communities where they live and spend their pension checks. However, research on how state economies and tax revenues grow when pension funds invest their assets is very limited. Our research fills this gap. We examine the broader question of state and local revenues generated by public pensions, and whether these revenues exceed taxpayer contributions to the pensions. We hypothesize that the joint impact of spending of retirement checks and investment of pension fund assets exceeds taxpayer pension contributions in most states.

Our original methodology draws on historical data from various public sources, including the US Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics. These data span the years 1977 to 2018. The analysis was done in three steps. First, we developed an econometric model to estimate the impact of investment of pension fund assets on state and local economies and revenues. Second, we estimated the impact of spending of pension checks by retirees on state and local economies and revenues. Third, we assessed whether the total revenues generated by public pensions exceed taxpayer contributions to those pensions, and if so, how much taxpayers would have to pay in additional taxes if public pensions were not there.

We measured the economy in terms of personal income. We found that the economy grows by \$1,362 with the investment of each \$1,000 of pension fund assets. This amount may seem small, but due to the size of the pension fund assets, \$4.3 trillion in 2018, the effect on the economy and revenues is significant. The results show that investment of pension fund assets contributed \$872.4 billion to the US economy, which in turn yielded \$178.8 billion in state and local revenues, in 2018. Similarly, the results show that \$335.2 billion paid to retirees in pension checks during 2018 contributed \$836.9 billion to the economy and \$162.6 billion to state and local tax revenues.

² Laura D. Quinby, Geoffrey T. Sanzenbacher, and Jean-Pierre Aubry, "How Have Pension Cuts Affected Public Sector Competitiveness?" State and Local Pension Plans no. 59 (Boston: Center for Retirement Research at Boston College, 2018), http://crr.bc.edu/wp-content/uploads/2018/04/slp_59.pdf.

Are public pension funds net revenue generators? The results show that in 2018, pension funds generated approximately \$341.4 billion in state and local revenues. The taxpayer contribution to pension plans in the same year was \$162 billion. In other words, pension funds generated \$179.4 billion more in revenues than taxpayers contributed to the pension funds. The state-bystate results indicate that pensions in 40 states were net revenue positive – revenues generated by public pensions were more than taxpayer contributions. In the remaining 10 states, pensions were revenue neutral or taxpayer contributions were heavily subsidized by state and local revenues generated by public pensions.

The data that underpin our conclusions forcefully rebut the argument that taxpayers cannot afford public pensions. The evidence we present here shows that if public pensions did not exist, the burden on taxpayers would rise by about \$179.4 billion just to maintain the current level of public services. This "no pensions" taxpayer burden is now 30.1 percent higher than the \$137.3 billion noted in the 2018 Unintended Consequences study. In short, the consequences of dismantling pensions have become more severe. The implication of our findings is clear: Taxpayers cannot afford continued assaults on public pensions. Instead, policy makers must preserve and enhance public pensions, building on this time-honored method of ensuring a dignified retirement for those who have dedicated their lives to public service, including firefighters, police officers, and teachers.

In other words, the question isn't whether governments can afford to support public pensions; the question is whether they can afford not to.

Unintended Consequences: How Scaling Back Public Pensions Puts Government Revenues at Risk 2020 Update

INTRODUCTION

This 2020 biennial update of NCPERS' Unintended Consequences study quantifies the impact of pension policy actions on state and local economies and revenues. Such policy actions are often made in reaction to short-term pressures to dismantle public pensions. Now that we have two more years of data, the update also examines whether the impact has become more severe since our first such study in 2018.

The argument that taxpayers cannot afford public pensions has taken hold with an almost mythological force, seeping into public opinion as an accepted truth. Opponents of public pensions have advanced an us-versus-them storyline in their concerted efforts to undermine and ultimately dismantle public pensions. The fervor with which they argue their case underscores the ideological imperatives that drive them. Factual information, however, has been in short supply.

NCPERS has a long history of providing reliable and verifiable data and analysis on public pensions, which are fundamentally a long-term investment, not a short-term budget issue.

Using state and local data for the last 41 years, this study sets out to examine the following questions:

How much state and local tax revenue is generated as a result of the mere existence of public pensions?

- Do these revenues exceed taxpayer contributions to public pensions?
- How much would taxpayers have to pay in additional taxes if public pensions were dismantled?

Public pensions generate state and local revenues in two ways. First, when retirees spend their pension checks in local economies, the overall economy benefits. When the economy grows, tax revenues increase. Second, when pension funds invest their assets in the economy, the economy grows, and tax revenues grow. While invested assets flow into both national and international companies, significant economic and revenue impacts accrue to states and local communities. It is logical to expect that the total state and local revenues generated by the spending of retiree checks and the investment of pension fund assets would exceed taxpayer contributions to these pensions in most states, if not all of them.

Policy makers are steadily seeking to undermine and even dismantle public pensions based on misleading information from opponents of public pensions. These opponents disseminate huge "unfunded liability" numbers arrived at by distorting various assumptions. To make matters worse, they then compare these already distorted 30-year numbers with one-year state and local revenues instead of 30-year revenues. Further, they overlook the positive role pensions play in economic and revenue growth. Based on these flawed assumptions, they argue that taxpayers cannot afford public pensions, proposing that public pensions be converted into do-it-yourself retirement savings plans or that benefits be cut and employee contributions increased. Policy makers often fail to think beyond the current budget cycle—or election cycle—and thus do not recognize that dismantling public pensions would actually increase the tax burden on their constituents.

Poor policy decision making has strong potential to harm state and local economies. Our earlier study showed that dismantling public pensions increases economic inequities and slows economic activity.³ If all public pensions were dismantled overnight, our economy would suffer a loss of about \$3 trillion by 2025.⁴ The present study again examines the revenue impact of pensions for each of the 50 states so that policy makers can see how much additional revenue they would need to raise if they stayed on a path toward dismantling public pensions.

The study is divided into four sections. Section 1 examines the existing literature on the relationship between pensions and economic and revenue growth. Section 2 describes the data and methodology. Section 3 presents results, and Section 4 offers concluding remarks.

³ Income Inequality: Hidden Economic Cost of Prevailing Approaches to Pension Reforms (Washington, DC: NCPERS, n.d.), www.ncpers.org/files/NCPERS%20Income%20Inequality%20Paper_Web(1).pdf.

⁴ Economic Loss: The Hidden Cost of Prevailing Pension Reforms (Washington, DC: NCPERS, 2017), www.ncpers.org/files/NCPERS_2017%20Economic%20Loss.pdf.

Section I

The main purpose of this study is to estimate state and local revenues generated through the spending of pension checks by retirees and the investment of pension assets, and then compare these revenues with taxpayer contributions to public pensions. In the end, we want to determine whether public pensions are net revenue positive, revenue neutral, or revenue negative. In order to do so, as discussed further in Section 2, we must first examine how much economic gr owth is attributable to spending by retirees and investment of pension assets. We can then determine how much state and local tax. revenue is generated by this economic growth, by examining the relationship between economic growth and revenues.

Until we produced our 2018 research, literature on whether public pensions in the United States are revenue-positive, -neutral, or -negative was severely lacking. A few studies had partially explored the economic and revenue impact of public pensions, mainly by measuring revenues generated by spending of retiree checks. Studies on the impact of the investment of pension fund assets on the economy and revenues, however, were practically nonexistent. In this section we review literature on the relationships between the economy and revenues; between pension assets and the economy; and between pensions, the economy, and revenues.

The Economy and Revenues

Most of the literature in this area has focused on the debate about whether tax cuts grow the economy and hence tax revenues. According to a 2015 National Tax Journal article, "The Relationship between Taxes and Growth at the State Level: New Evidence," the effects of state tax policy on economic growth, entrepreneurship, and employment remain controversial.⁵ While conservatives argue that tax cuts grow the economy, most of the literature and data do not support this finding.

It is common sense that when governments cut taxes, they will have less revenue. When they have less revenue, they must cut programs or borrow money. The expected positive impact of tax cuts on the economy is thus wiped out by the negative impact of spending cuts and/or borrowing. More often than not, the net effect of tax cuts on the economy is negative. Consider the fact that as president from 2001 to 2009, George W. Bush presided over two major tax cuts, yet the outcome was the Great Recession, which lasted from December 2007 to June 2009.

5 William Gale, Aaron Krupkin, and Kim Rueben, "The Relationship between Taxes and Growth at the State Level: New Evidence," National Tax Journal 68, no. 4 (December 2015): 919–942.

In a 2003 New York Times Magazine article titled "The Tax-Cut Con,"⁶ economist Paul Krugman described what was already a well-established conservative strategy of bait-and-switch. First, lawmakers would ram through huge tax cuts for corporations and the wealthy, claiming that lower taxes would actually increase revenue via the magic of supply-side economics. Then, when budget deficits soared, they would declare that the nation's dire fiscal straits demanded draconian cuts in social programs, such as safety net programs, health care, and education.

Krugman noted that given how many times this taxcut con job has been tried, one might reasonably expect that conservatives would eventually take a different tack. But it turns out to be an unkillable zombie of a political strategy. Early in President Trump's term, even before the 2017 tax cut was passed, Krugman predicted that it would blow up the deficit and Republicans would then revert to the pretense of being deficit hawks, demanding cuts in Social Security, Medicare, and Medicaid.⁷ We can see that happening now, in the years since President Trump signed the 2017 tax-cut legislation passed by the Republican-controlled House and Senate.

Remember the argument that tax cuts will grow the economy? In return, it says, tax revenues will grow, and the tax cuts will be a wash. Unfortunately, the outcome has not matched that argument; instead, it has been consistent with the previous tax-cut experiences described by Krugman. The 2017 tax cut has increased the federal deficit to more than a trillion dollars, and the economy has slowed down after an initial bump in 2018. Figure 1 shows the nation's real gross domestic product

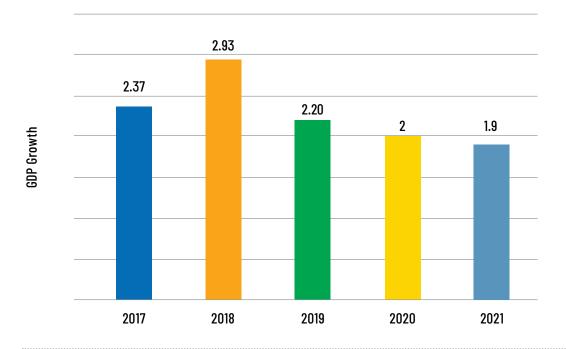


Figure 1. U.S. Real GDP Growth, 2017-2021

6 Paul Krugman, "The Tax-Cut Con," The New York Times Magazine, Sept. 14, 2003, <u>www.nytimes.com/2003/09/14/magazine/the-tax-cut-con.</u> html?te=1&nl=paul-krugman&emc=edit_pk_20200211&campaign_id=116&instance_id=15901&segment_id=21170&user_id=e45ca3b58a87d7b-9b3ca0ad74e0fdea9®i_id=6911078020200211.

7 Paul Krugman, "The Biggest Tax Scam in History," The New York Times, November 27, 2017, <u>www.nytimes.com/2017/11/27/opinion/senate-tax-bill-scam.html?partner=rss&emc=rss&te=1&nl=paul-krugman&emc=edit_pk_20200211&campaign_id=116&instance_id=15901&segment_id=21170&user_id=e45ca3b58a87d7b9b3ca0ad74e0fdea9®i_id=69110780edit_pk_20200211.</u>

(GDP) growth from 2017 to 2021. Between 2017 and 2018, the economy grew from 2.37 percent to 2.93 percent. But in 2019, it grew by only 2.20 percent. Growth is projected to be 2.00 percent in 2020 and 1.90 percent in 2021.⁸ History has taught us that the best way to grow the economy is through a progressive tax system and investment in education and infrastructure, as we did during the post–World War II period.

On the question of what drives revenues, there is again a dearth of literature. Among the few recent studies addressing the question is one by the Tax Foundation.⁹ Based on data from *The Economist*,¹⁰ this study implied that economic growth is a key driver of revenues – when the economy is doing well, tax revenues grow, and vice versa. For example, the study noted that during the mid-1980s to late 1990s the economy grew. So did tax revenues. On the other hand, during 2007 and 2009, the economy declined. So did revenues.

Another study that looked at this question at the state level was conducted by the Oklahoma Council of Public Affairs.¹¹ Mainly focusing on income tax revenues, it showed that economic growth, as measured by job growth, drives revenue growth.

Our own analysis, however, shows that state and local revenues lag economic growth. If the economy grows by 1 percent, state and local revenues grow only by about 0.8 percent. That is because state and local governments have made their revenue systems more regressive by cutting stable and progressive taxes, such as income and property taxes, in good economic times and filling the revenue shortfall in bad economic times through risky revenue schemes such as casinos and excise taxes.¹²

Pension Assets and the Economy

Do pension fund assets contribute to economic growth? The literature on this subject is in short supply. One study that has addressed this question focused on 38 countries, including both European Union countries and emerging economies. Published as a discussion paper of the Economics and Finance Section, School of Social Sciences, Brunel University, London,¹³ the study found a positive correlation between growth in pension fund assets and growth in the economy.

Another study that showed a positive correlation between pension assets and economic growth focused on 69 industrial sectors in 34 Organisation for Economic Co-operation and Development (OECD) countries over the decade of 2001–2010.¹⁴ The authors of this study concluded that a higher level of pension assets has a significant impact on economic growth through growth in the sectors in which the assets are invested.

⁸ Kimberly Amadeo, "US Economic Outlook for 2020 and Beyond: Experts Forecast Steady Growth," *The Balance*, March 3, 2020, www.thebalance.com/us-economic-outlook-3305669.

⁹ Andrew Lundeen, "Economic Growth Drives the Level of Tax Revenue," Tax Foundation, October 25, 2014, taxfoundation.org/economic-growth-drives-level-tax-revenue.

¹⁰ Buttonwood, "Is There a Limit to Revenue-Raising?," The Economist, October 13, 2014, www.economist.com/blogs/buttonwood/2014/10/tax-policy-and-economy.

¹¹ Curtis Shelton, "What Drives Income Tax Revenues: Tax Rates or Economic Growth?," Oklahoma Council of Public Affairs, March 27, 2017, www. ocpathink.org/post/what-drives-income-tax-revenues-tax-rates-or-economic-growth-2.

¹² Peaceful Coexistence: The Facts about Pensions and Education Funding (Washington, DC: NCPERS, 2019), www.ncpers.org/files/NCPERS_peaceful-coexistence_revised_pages%20for%20web.pdf.

¹³ E. Philip Davis and Yuwei Hu, "Is There a Link between Pension-Fund Assets and Economic Growth? A Cross-Country Study," Public Policy Discussion Papers 04-23 (London, UK: Economics and Finance Section, School of Social Sciences, Brunel University, 2004), abstract at ideas.repec.org/p/bru/bruppp/04-23.html.

¹⁴ Michiel Bijlsma, Casper van Ewijk, and Ferry Haaijen, "Economic Growth and Funded Pension Systems," CPB Discussion Paper 279 (The Hague: CPB Netherlands Bureau for Economic Policy Analysis, 2014), <u>www.cpb.nl/sites/default/files/publicaties/download/cpb-discussion-paper-279-eco-nomic-growth-and-funded-pension-systems.pdf</u>.

Studies examining the relationship between pension fund assets and economic growth in individual countries are even rarer. A study focusing on Kenya¹⁵ took an in-depth look at data on the growth of pension fund assets and economic growth during the period 2002–2011. It found a positive relationship between pension assets and economic growth.

Pensions, the Economy, and Revenues

One of the best-known studies that regularly assess the impact of pensions on the economy and revenues is conducted by the National Institute on Retirement Security (NIRS).¹⁶ This study, popularly known as "Pensionomics," assesses the economic and revenue impact of benefits paid to retirees by public and private defined-benefit pensions in the United States. In 2016, the NIRS study found, about \$578 billion was paid in pension benefits to 26.9 million retirees, generating \$1.2 trillion in total economic activity. This economic activity, in turn, generated \$202.6 billion in federal, state, and local revenues. The NIRS study also assessed the impact of public pensions on a state-by-state basis. However, it did not assess the economic and revenue impact of investment of pension assets.

Several individual pension plans conduct economic impact studies for their respective states. For example, the Teacher Retirement System of Texas does such a study on a regular basis. The 2019 study showed that the system paid \$19.1 billion in retirement benefits to more than 420,000 retirees, which contributed \$22.4 billion to economy and generated \$1.6 billion in state and local revenues.¹⁷ Similarly, a 2018 study conducted by the Colorado Public Employees' Retirement Association (PERA) showed that the system provides significant economic benefit to Colorado. This economic benefit amounts to more than \$6.5 billion, which in turn generates \$343 million in tax revenue for state and local governments.¹⁸

The foregoing review of studies on the economic and revenue impact of public pensions suggests that these studies focus on only part of the equation – benefits paid to retirees – and omit the economic and revenue impact of investment of pension fund assets. Two pension plans, however – the California Public Employees' Retirement System (CalPERS) and the California State Teachers' Retirement System (CalSTRS) – have conducted studies on the economic impact of investment of their assets on the California economy. In an earlier Research Series paper, we used the economic impact data from the CalPERS and CalSTRS studies to estimate the revenue impact of such investments.¹⁹

In the absence of studies such as those done by CalPERS and CalSTRS, from other states or the nation as a whole, it is necessary to develop a methodology to assess the economic and revenue impact of investment of pension fund assets as well as pension benefits paid to retirees for all 50 states. The next section describes the methodology used in this report.

¹⁵ Wanjala Christopher Mungoma, "The Relationship between Pension Fund Assets and Economic Growth in Kenya," master's thesis, School of Business, University of Nairobi, 2013, <u>erepository.uonbi.ac.ke/bitstream/handle/11295/58501/The%20Relationship%20Between%20Pension%20</u> Fund%20Assets%20And%20Eco-nomic%20Growth%20In%20Kenya?sequence=3.

¹⁶ Ilana Boivie, "Pensionomics 2018: Measuring the Economic Impact of Defined Benefit Pension Expenditures," National Institute on Retirement Security, January 2019, www.nirsonline.org/reports/pensionomics-2018-measuring-the-economic-impact-of-defined-benefit-pension-expenditures/.

¹⁷ https://www.trs.texas.gov/TRS%20Documents/trs_value_brochure.pdf#search=impact%20annuity%20payments%20by%20trs

¹⁸ https://www.copera.org/sites/default/files/documents/pacey.pdf

^{19 &}quot;Public Pensions Are a Good Deal for Taxpayers," NCPERS Research Series (Washington, DC: NCPERS, August 2017), <u>www.ncpers.org/files/</u> NCPERS%20Research%20Series_2017%20Public%20Pensions%20Are%20A%20Good%20Deal%20for%20Taxpayers_Web.pdf.

Section II data and methodology

As the foregoing review suggests, there is a dearth of studies addressing the revenue and economic impact of pensions. Some studies, such as those by NIRS and by the retirement systems of Texas and Colorado, partially address the economic and revenue impact, as they focus only on the impact of the spending of retiree pension checks. We sought to fill this gap by conducting the first series of nationwide studies to assess the economic and revenue impact of pension assets. We developed our methodology from scratch to study the total impact of public pensions, including pension checks plus pension assets, on the economy and revenue of all 50 states.

We drew together historical data from various public sources, including the US Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics. These data span 1977 through 2018 in most instances. With each year's data constituting one observation, the total number of observations was 41. Our analysis was performed in three steps. First, we estimated the impact of investment of pension fund assets on state and local economies and revenues. Second, we estimated the impact of spending of pension checks by retirees on state and local economies and revenues. Third, we assessed whether revenues generated by public pensions exceed taxpayer contributions to those pensions. If so, how much would taxpayers have to pay in additional taxes to maintain the current level of services in the event public pensions were dismantled?

Estimating the Impact of Pension Fund Assets on State and Local Economies and Revenues

Pension fund assets constitute an important source of capital for start-up and existing businesses. Growth in these businesses grows jobs, income, and consumer spending, which in turn grow the economy and tax revenues. We estimate the impact of pension fund assets on state and local economies and revenues as follows:

- Using historical data, we develop a model to examine the contribution of investment of public pension fund assets to the economy at the national level, controlling for other variables that also impact the economy. We measure the economy for the purposes of this study in terms of personal income (the dependent variable in the model). The other variables used in the model include the following:
 - Education spending on K–12
 - Education spending on higher education
 - Multifactor productivity
 - Infrastructure spending
 - Pension fund assets
 - Income inequality

All variables are measured in thousands of dollars except multifactor productivity and income inequality. Multifactor productivity is measured as an index, and income inequality is measured as the ratio of income in the top quintile to that in the bottom quintile.

- Next, we apply the beta value for the pension assets variable in the model to the pension fund assets of each state to estimate their contribution to the state economy. The beta coefficient measures the change in the economy for a unit change in a variable used in the model.
- We then adjust this contribution to the state economy by taking into account the multiplier effect and the size of the state economy in relation to the national economy. We use the multiplier effect of 2.5 in our analysis.²⁰ This figure should probably be higher, as most Americans spend 80 cents of every dollar of their income. However, we choose to use 2.5 in our analysis based on some of the studies cited in the literature review section. The adjustment for the size of the state economy is made by multiplying the contribution to the state economy by the ratio of the state and national economies.
- To convert the contribution of pension assets to the economy into state and local revenues, we use historical data to develop a model to estimate a revenue quotient for each state by examining the relationship between the economy (personal income) and state and local revenues since 1977.
- We apply this revenue quotient to the adjusted contribution of pension assets to the economy to estimate state and local revenues attributable to pension assets.

Estimating the Impact of Pension Checks on State and Local Economies and Revenues

The impact of spending of retirement checks on state and local economies and revenues is estimated as follows:

- We consider the pension payments made by state and local pension plans as a direct contribution to the economy (in the form of personal income).
- We then adjust this contribution to the economy by using the multiplier effect specified above.
- To convert this adjusted contribution to the economy into state and local revenues, we use the revenue quotient specified above.

Assessing Whether Revenues Generated by Public Pensions Exceed Taxpayer Contributions to Those Pensions

The assessment of whether revenues generated by public pensions exceed taxpayer contributions is done as follows:

- We estimate the total state and local revenues by adding the revenues generated through investment of pension fund assets and those generated through spending of pension checks by retirees.
- We then compare the total state and local revenues with taxpayer contributions to determine whether these revenues exceed taxpayer contributions.
- This comparison also allows us to determine how much additional revenue taxpayers would have to make up to receive the current level of services if public pensions were not there.

The data and analysis show that state and local revenues generated by the mere existence of public pensions far exceed taxpayer contributions to those pensions. Taxpayers would have to pay additional taxes to receive the current level of services if public pensions did not exist. Details of these findings are discussed in the next section.

²⁰ The marginal propensity to consume (MPC) is equal to ΔC / ΔY, where ΔC is change in consumption and ΔY is change in income. For example, if consumption increases by 80 cents for each additional dollar of income, then MPC is equal to 0.8 / 1 = 0.8. If the MPC is equal to 0.8, then the multiplier can be calculated as follows: Multiplier = 1 / (1 - MPC) = 1 / (1 - 0.8) = 1 / 0.2 = 5.

Section III RESULTS

he discussion of results is organized as follows. First, we describe the results of the econometric model to measure the economic impact of pension fund assets, taking into account other variables that also impact the economy. Second, we examine the impact of pension fund assets on the economy and the tax revenues of each state. Third, we measure the impact of spending of pension checks by retirees on state economies and tax revenues. Fourth, we evaluate the total impact of pensions (pension assets plus retiree spending) on state and local revenues. Finally, we compare state and local revenues with taxpayer contributions to examine whether or not pensions are net revenue generators, and if they are, how much more taxpayers would have to pay to receive the current level of services if there were no public pensions.

The US Economic Impact of Investment of Pension Assets

Due to lack of research focusing on the economic impact of investment of public pension assets, we have developed a new model and methodology – let us call it the NCPERS model. The purpose of the model is to estimate the economic impact, as measured by personal income, of pension assets, controlling for other variables such as investment in education, infrastructure spending, multifactor productivity, and income inequality (this model combines the elements of both supply-side economics and modern Keynesian economics). All of these variables have significant impacts on the economy.

The results of our model are shown in Table 1. This table shows the beta coefficients for various variables used in the model. The model is highly predictive of economic impact, with an *R*-squared of 0.99, which means that the model explains 99 percent of variations in the economy. Since we are using the entire population, all 50 states, and all available data, we need not worry about sampling statistics such as the level of significance of the beta coefficient. Nevertheless, the beta coefficients of all variables in the model are significant, at 0.05 or better.

Table 1

Coefficients of variables used in the NCPERS model to estimate the impact of each variable on the economy, 2018

Variable	Coefficient
Intercept	7,422,302,510
Investment in Infrastructure	-8.792
Investment in K–12 Education	1.235
Investment in Higher Education	44.263
Multifactor Productivity	-32,178,727.52
Pension Assets	1.362
Income Inequality	-391,763,953.2

Table 1 shows that while investments in education and pension assets have a positive impact on the economy, multifactor productivity, infrastructure investment, and income inequality have a negative impact. In the past, when labor unions were strong and income inequality was low, productivity and infrastructure used to have a positive impact on the economy. With rising income inequality and declining influence of labor unions, these relationships are reversed. Most of the economic growth resulting from productivity growth and infrastructure investment now goes to the top 1 percent of income earners. Another reason infrastructure investment may not have a positive impact is that a great deal of current expenditure is on mere maintenance that does not truly merit being called "investment" that spurs new economic activity.

Table 1 shows that the investment of pension fund assets has a positive effect on the economy. This impact is relatively small compared with that of other variables in the model, but due to the size of the country's pension fund assets, \$4.3 trillion in 2018, the magnitude of the effect on the economy and on tax revenues is significant. The results in Table 1 show that the economy grows by \$1,362 for each \$1,000 of pension fund assets invested.

Contribution of Investment of Pension Fund Assets to State Economies and Revenues

Using the methodology outlined in Section 2 and the beta coefficients from Table 1, we have calculated the impact of pension assets on state economies and revenues. The results are shown in Table 2. Column 2 in this table shows state-bystate pension assets, column 3 the contribution of these assets to the economy, and column 4 the revenues attributable to investment of pension assets. The results in Table 2 show that in 2018, overall, \$4.3 trillion in pension assets contributed about \$872.4 billion to state economies, which resulted in about \$178.8 billion in state and local revenues.

Table 2

Impact of investment of pension assets on state and local economies and revenues, 2018 (all data are in \$1,000s)

State	Pension Assets	Contribution to State Economy (Personal Income)	State & Local Revenues Attributable to Investment of Pension Assets
Alabama	\$40,425,517	\$1,595,365	\$307,906
Alaska	\$15,474,855	\$129,617	\$32,275
Arizona	\$52,817,295	\$3,209,693	\$545,648
Arkansas	\$30,490,331	\$759,407	\$145,806
California	\$911,200,593	\$437,905,902	\$92,836,051
Colorado	\$58,455,358	\$3,720,257	\$647,325
Connecticut	\$45,417,216	\$2,371,400	\$355,710
Delaware	\$11,000,363	\$106,784	\$21,784
Florida	\$201,654,896	\$41,108,081	\$6,988,374
Georgia	\$109,554,224	\$10,239,654	\$1,679,303
Hawaii	\$16,668,130	\$250,817	\$51,919

Table 2 (continued)

Impact of investment of pension assets on state and local economies and revenues, 2018 (all data are in \$1,000s)

State	Pension Assets	Contribution to State Economy (Personal Income)	State & Local Revenues Attributable to Investment of Pension Assets
Idaho	\$16,803,769	\$247,369	\$42,795
Illinois	\$185,339,489	\$25,656,602	\$4,720,815
Indiana	\$30,369,043	\$1,831,604	\$337,015
lowa	\$35,985,290	\$1,088,186	\$226,343
Kansas	\$21,662,798	\$620,550	\$114,181
Kentucky	\$33,482,586	\$1,214,242	\$227,063
Louisiana	\$53,284,092	\$2,194,832	\$401,654
Maine	\$14,556,823	\$182,130	\$34,058
Maryland	\$75,992,716	\$5,561,038	\$861,961
Massachusetts	\$85,767,439	\$8,111,483	\$1,354,618
Michigan	\$93,770,614	\$8,675,970	\$1,622,406
Minnesota	\$70,002,382	\$4,318,452	\$816,187
Mississippi	\$29,105,921	\$628,647	\$136,416
Missouri	\$80,582,509	\$4,505,727	\$811,031
Montana	\$11,638,374	\$112,347	\$19,548
Nebraska	\$18,729,249	\$367,892	\$75,418
Nevada	\$41,248,292	\$1,176,544	\$211,778
New Hampshire	\$9,118,199	\$144,915	\$20,868
New Jersey	\$77,924,537	\$9,054,709	\$1,575,519
New Mexico	\$29,223,486	\$487,048	\$106,177
New York	\$533,598,384	\$136,875,025	\$33,671,256
North Carolina	\$98,216,028	\$8,990,246	\$1,672,186
North Dakota	\$5,853,521	\$47,160	\$11,271
Ohio	\$191,252,703	\$20,828,277	\$4,457,251
Oklahoma	\$33,272,398	\$1,159,457	\$193,629
Oregon	\$80,324,193	\$3,271,509	\$706,646
Pennsylvania	\$110,594,796	\$15,222,664	\$2,709,634
Rhode Island	\$10,190,119	\$112,964	\$21,576
South Carolina	\$32,143,412	\$1,365,191	\$288,055
South Dakota	\$12,858,169	\$113,225	\$16,984
Tennessee	\$61,955,161	\$3,760,285	\$639,249

Table 2 (*continued*) Impact of investment of pension assets on state and local economies and revenues, 2018 (all data are in \$1,000s)

State	Pension Assets	Contribution to State Economy (Personal Income)	State & Local Revenues Attributable to Investment of Pension Assets
Texas	\$281,017,674	\$77,635,783	\$12,654,633
Utah	\$32,335,757	\$905,045	\$175,579
Vermont	\$4,647,668	\$30,143	\$5,787
Virginia	\$95,980,567	\$9,032,408	\$1,436,153
Washington	\$95,574,091	\$8,539,003	\$1,554,098
West Virginia	\$16,252,072	\$229,296	\$49,987
Wisconsin	\$115,775,463	\$6,637,729	\$1,247,893
Wyoming	\$8,512,277	\$56,743	\$14,072
United States	\$4,338,904,372	\$872,389,415	\$178,853,891

State-by-state data in Table 2 show that the economic and revenue impacts of pension assets in the four largest states by population - California, Texas, Florida, and New York – are very significant. In California, for example, state and local pension fund assets of \$911.2 billion resulted in a \$437.9 billion contribution to the economy and \$92.8 billion to state and local revenues. Similarly, in New York, state and local pension fund assets of \$533.6 billion contributed \$136.9 billion to the economy and \$33.7 billion to state and local revenues. The economies and revenues of even small states, such as Vermont, South Dakota, and Wyoming, benefited significantly from investment of their pension fund assets. For example, Vermont added \$30.1 million to its economy and \$5.8 million to state and local tax revenues through investment of \$4.6 billion in pension assets.

Contribution of Spending of Pension Checks to State Economies and Revenues

The impact of spending by retirees has a direct and significant impact on the economy and on state and local revenues because of both the dollar-for-dollar addition to personal income and the multiplier effect. Table 3 shows the state-bystate impact of the spending of pension checks on the economy and revenues. Column 2 shows the dollar amount of the pension checks paid to retirees in each state. Column 3 shows the contribution of spending these checks to the economy, and column 4 shows state and local revenues attributable to pension checks.

Table 3

Impact of spending of pension checks on state economies and state and local tax revenues, 2018 (all data are in \$1,000s)

State	Pension Checks	Contribution to Economy (Personal Income)	State & Local Revenues Attributable to Pension Checks
Alabama	\$3,775,108	\$9,437,770	\$1,821,490
Alaska	\$1,344,014	\$3,360,035	\$836,649
Arizona	\$4,979,774	\$12,449,435	\$2,116,404
Arkansas	\$2,107,288	\$5,268,220	\$1,011,498
California	\$59,336,581	\$148,341,453	\$31,448,388
Colorado	\$5,682,652	\$14,206,630	\$2,471,954
Connecticut	\$5,196,905	\$12,992,263	\$1,948,839
Delaware	\$772,777	\$1,931,943	\$394,116
Florida	\$12,907,687	\$32,269,218	\$5,485,767
Georgia	\$7,891,830	\$19,729,575	\$3,235,650
Hawaii	\$1,489,496	\$3,723,740	\$770,814
Idaho	\$1,002,195	\$2,505,488	\$433,449
Illinois	\$21,113,989	\$52,784,973	\$9,712,435
Indiana	\$2,963,596	\$7,408,990	\$1,363,254
lowa	\$2,431,021	\$6,077,553	\$1,264,131
Kansas	\$2,019,878	\$5,049,695	\$929,144
Kentucky	\$4,443,610	\$11,109,025	\$2,077,388
Louisiana	\$5,018,902	\$12,547,255	\$2,296,148
Maine	\$1,082,981	\$2,707,453	\$506,294
Maryland	\$6,061,046	\$15,152,615	\$2,348,655
Massachusetts	\$8,430,605	\$21,076,513	\$3,519,778
Michigan	\$9,570,957	\$23,927,393	\$4,474,422
Minnesota	\$5,161,801	\$12,904,503	\$2,438,951
Mississippi	\$2,974,606	\$7,436,515	\$1,613,724
Missouri	\$6,233,876	\$15,584,690	\$2,805,244
Montana	\$935,996	\$2,339,990	\$407,158
Nebraska	\$1,200,736	\$3,001,840	\$615,377
Nevada	\$2,521,786	\$6,304,465	\$1,134,804
New Hampshire	\$832,290	\$2,080,725	\$299,624
New Jersey	\$11,167,736	\$27,919,340	\$4,857,965
New Mexico	\$2,499,874	\$6,249,685	\$1,362,431
New York	\$35,340,483	\$88,351,208	\$21,734,397

Table 3 (continued)

Impact of spending of pension checks on state economies and state and local tax revenues, 2018 (all data are in \$1,000s)

State	Pension Checks	Contribution to Economy (Personal Income)	State & Local Revenues Attributable to Pension Checks
North Carolina	\$6,788,423	\$16,971,058	\$3,156,617
North Dakota	\$450,517	\$1,126,293	\$269,184
Ohio	\$16,531,965	\$41,329,913	\$8,844,601
Oklahoma	\$2,643,575	\$6,608,938	\$1,103,693
Oregon	\$6,109,410	\$15,273,525	\$3,299,081
Pennsylvania	\$13,183,490	\$32,958,725	\$5,866,653
Rhode Island	\$1,312,354	\$3,280,885	\$626,649
South Carolina	\$4,391,477	\$10,978,693	\$2,316,504
South Dakota	\$605,484	\$1,513,710	\$227,057
Tennessee	\$3,547,256	\$8,868,140	\$1,507,584
Texas	\$18,852,829	\$47,132,073	\$7,682,528
Utah	\$1,612,865	\$4,032,163	\$782,240
Vermont	\$387,161	\$967,903	\$185,837
Virginia	\$6,265,164	\$15,662,910	\$2,490,403
Washington	\$5,169,816	\$12,924,540	\$2,352,266
West Virginia	\$1,397,040	\$3,492,600	\$761,387
Wisconsin	\$6,429,551	\$16,073,878	\$3,021,889
Wyoming	\$616,500	\$1,541,250	\$382,230
United States	\$335,252,843	\$836,967,383	\$162,612,744

Results in Table 3 show that in 2018, \$335.2 billion was paid to retirees in pension checks. Spending of these checks contributed \$836.9 billion to the economy and \$162.6 billion to state and local revenues. Table 3 also shows that the economy and revenues in states such as California, New York, Ohio, and Texas benefit greatly from retirees' spending of their pension checks.

Are Public Pensions Net Revenue Positive?

Opponents of public pensions often argue that taxpayers cannot afford them. Common sense will tell us, however, that investment of pension fund assets and spending of pension checks by retirees must have a positive impact on the economy and revenues. The results shown in Tables 2 and 3 support this commonsense contention. Next we examine whether public pensions are net revenue generators. By net revenue generators we mean that the tax revenues generated by public pensions are greater than taxpayer contributions to the pensions.

Column 4 (the sum of columns 2 and 3) in Table 4 shows the total state and local revenues generated by investment of pension assets and spending of pension checks, column 5 shows the taxpayer contribution, and column 6 shows the net revenues attributable to public pensions (column 6 = column 4 - column 5).

Table 4

State and local revenues attributable to spending of pension checks and investment of pension fund assets, compared with taxpayer contributions to pension funds, 2018 (all data are in \$1,000s)

State	State & Local Revenue from Investment of Pension Assets	State & Local Revenue from Spending of Pension Checks	Total State & Local Revenue from Public Pensions	Taxpayer Contribution to Public Pensions	Net State & Local Revenue Attributable to Public Pensions
Alabama	\$307,906	\$1,821,490	\$2,129,395	\$1,337,817	\$791,578
Alaska	\$32,275	\$836,649	\$868,923	\$546,796	\$322,127
Arizona	\$545,648	\$2,116,404	\$2,662,052	\$2,167,909	\$494,143
Arkansas	\$145,806	\$1,011,498	\$1,157,304	\$900,116	\$257,188
California	\$92,836,051	\$31,448,388	\$124,284,439	\$39,298,208	\$84,986,231
Colorado	\$647,325	\$2,471,954	\$3,119,278	\$1,799,050	\$1,320,228
Connecticut	\$355,710	\$1,948,839	\$2,304,549	\$3,438,172	-\$1,133,623
Delaware	\$21,784	\$394,116	\$415,900	\$297,415	\$118,485
Florida	\$6,988,374	\$5,485,767	\$12,474,141	\$4,667,231	\$7,806,910
Georgia	\$1,679,303	\$3,235,650	\$4,914,954	\$3,918,975	\$995,979
Hawaii	\$51,919	\$770,814	\$822,733	\$851,041	-\$28,308
Idaho	\$42,795	\$433,449	\$476,244	\$391,897	\$84,347
Illinois	\$4,720,815	\$9,712,435	\$14,433,250	\$12,672,553	\$1,760,697
Indiana	\$337,015	\$1,363,254	\$1,700,269	\$2,026,067	-\$325,798
lowa	\$226,343	\$1,264,131	\$1,490,474	\$818,194	\$672,280
Kansas	\$114,181	\$929,144	\$1,043,325	\$922,876	\$120,449
Kentucky	\$227,063	\$2,077,388	\$2,304,451	\$2,364,334	-\$59,883
Louisiana	\$401,654	\$2,296,148	\$2,697,802	\$2,810,937	-\$113,135
Maine	\$34,058	\$506,294	\$540,352	\$398,926	\$141,426
Maryland	\$861,961	\$2,348,655	\$3,210,616	\$2,973,058	\$237,558
Massachusetts	\$1,354,618	\$3,519,778	\$4,874,395	\$3,300,079	\$1,574,316
Michigan	\$1,622,406	\$4,474,422	\$6,096,829	\$4,763,021	\$1,333,808
Minnesota	\$816,187	\$2,438,951	\$3,255,138	\$1,445,130	\$1,810,008
Mississippi	\$136,416	\$1,613,724	\$1,750,140	\$1,052,134	\$698,006
Missouri	\$811,031	\$2,805,244	\$3,616,275	\$2,251,460	\$1,364,815
Montana	\$19,548	\$407,158	\$426,707	\$319,477	\$107,230
Nebraska	\$75,418	\$615,377	\$690,795	\$503,505	\$187,290
Nevada	\$211,778	\$1,134,804	\$1,346,582	\$1,718,876	-\$372,294
New Hampshire	\$20,868	\$299,624	\$320,492	\$442,398	-\$121,906
New Jersey	\$1,575,519	\$4,857,965	\$6,433,485	\$4,436,931	\$1,996,554
New Mexico	\$106,177	\$1,362,431	\$1,468,608	\$737,277	\$731,331

Table 4 (continued)

State and Local Revenues Attributable to Spending of Pension Checks and Investment of Pension Fund Assets Compared with Taxpayer Contributions to Pension Funds, 2016 (All Data Are in \$1,000)

State	State & Local Revenue from Investment of Pension Assets	State & Local Revenue from Spending of Pension Checks	Total State & Local Revenue from Public Pensions	Taxpayer Contribution to Public Pensions	Net State & Local Revenue Attributable to Public Pensions
New York	\$33,671,256	\$21,734,397	\$55,405,653	\$17,716,399	\$37,689,254
North Carolina	\$1,672,186	\$3,156,617	\$4,828,802	\$2,164,333	\$2,664,469
North Dakota	\$11,271	\$269,184	\$280,455	\$224,815	\$55,640
Ohio	\$4,457,251	\$8,844,601	\$13,301,853	\$4,291,670	\$9,010,183
Oklahoma	\$193,629	\$1,103,693	\$1,297,322	\$1,236,861	\$60,461
Oregon	\$706,646	\$3,299,081	\$4,005,727	\$1,591,841	\$2,413,886
Pennsylvania	\$2,709,634	\$5,866,653	\$8,576,287	\$7,098,641	\$1,477,646
Rhode Island	\$21,576	\$626,649	\$648,225	\$714,326	-\$66,101
South Carolina	\$288,055	\$2,316,504	\$2,604,559	\$1,547,849	\$1,056,710
South Dakota	\$16,984	\$227,057	\$244,040	\$145,423	\$98,617
Tennessee	\$639,249	\$1,507,584	\$2,146,832	\$1,942,666	\$204,166
Texas	\$12,654,633	\$7,682,528	\$20,337,160	\$8,290,155	\$12,047,005
Utah	\$175,579	\$782,240	\$957,818	\$1,136,539	-\$178,721
Vermont	\$5,787	\$185,837	\$191,625	\$204,760	-\$13,135
Virginia	\$1,436,153	\$2,490,403	\$3,926,556	\$3,245,282	\$681,274
Washington	\$1,554,098	\$2,352,266	\$3,906,365	\$2,770,519	\$1,135,846
West Virginia	\$49,987	\$761,387	\$811,373	\$737,049	\$74,324
Wisconsin	\$1,247,893	\$3,021,889	\$4,269,782	\$1,167,701	\$3,102,081
Wyoming	\$14,072	\$382,230	\$396,302	\$203,232	\$193,070
USA	\$178,853,891	\$162,612,744	\$341,466,636	\$162,001,921	\$179,464,715

The results in Table 4 show that in 2018, pension funds generated approximately \$341.4 billion in state and local revenues. Taxpayer contributions to state and local pension plans in the same year totaled \$162.0 billion. In other words, pension funds generated \$179.4 billion more in revenues than taxpayers contributed to them. The stateby-state results indicate that state and local pensions in 40 states were net revenue positive. In the remaining 10 states, pensions were almost revenue neutral or taxpayer contributions were significantly subsidized by state and local revenues generated by public pensions.

Overall, the data in Table 4 refute the argument that taxpayers cannot afford public pensions. The data show that if public pensions were dismantled, the burden on taxpayers would rise by about \$179.4 billion to sustain the current level of services. Obviously, if there were no defined-benefit plans, some money would move to defined-contribution plans. This is unlikely to affect the findings of our study. Even original proponents of 401(k)-type defined-contribution plans now agree that defined contribution is a failed experiment.²¹ Our own analysis shows that the shift to defined-contribution plans increases income inequality and slows the economy.²² Furthermore, the econometric model used in this study shows that a unit increase in income inequality will shave off \$392 billion from the economy. In the end, the economic and revenue impact of the shift of money from defined-benefit to defined-contribution plans will be a wash.

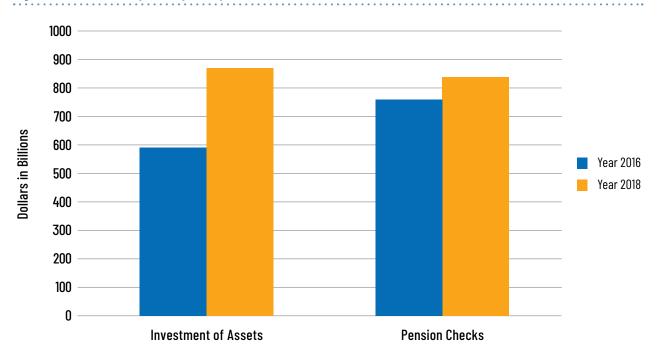
Trends in the Economic and Revenue Impacts of Public Pensions

Now that we have conducted the Unintended Consequences study twice using the latest data available each time – 2016 data in 2018 and 2018 data in 2020 – we are able to examine the trends.

As mentioned earlier, the impact of pension fund investment on the economy increased between 2016 and 2018. In 2016, the economy grew by \$1,088 for each \$1,000 investment of pension fund assets. In 2018, the same figure is \$1,362 – a 25 percent increase. This increase may reflect the size of pension fund assets and changes in the relative impact of other variables in the model.

Trend in economic impact: Figure 2 compares the economic impact of investment of pension fund assets and spending of pension checks in 2018 versus 2016. It shows that in 2018 the impact on the economy of both investment of assets and spending of pension checks was greater than it was in 2016. The growth in the impact of investment of assets was especially significant. In 2016 the impact of investment of assets on the economy was \$587.8 billion, and in 2018, the same figure was \$872.4 billion, a 48 percent increase. The impact of spending of pension checks on the economy was also greater in 2018 than in 2016 (\$837.0 billion versus \$757.8 billion).





21 https://www.wsj.com/articles/the-champions-of-the-401-k-lament-the-revolution-they-started-1483382348.

22 Income Inequality, www.ncpers.org/files/NCPERS%20Income%20Inequality%20Paper_Web(1).pdf.

Trend in revenue impact: Figure 3 compares the state and local tax revenue impact of investment of pension fund assets and spending of pension checks in 2016 versus 2018. In 2018 the impact of investment of assets as well as spending of pension checks on state and local revenues was greater than in 2016. The difference in the impact of investment of assets between the two years was especially significant. In 2016 the impact of investment of assets on state and local revenues was \$125.7 billion, and in 2018, the same figure was \$178.8 billion, a 42 percent increase. The impact of spending of pension checks on revenues was also greater in 2018 than in 2016 (\$162.6 billion versus \$151.9 billion).

Trend in states' net revenue positions: Figure 4 shows the number of states whose public pensions were net revenue positive in 2016 and 2018. By net revenue positive we mean that pensions in those states produced more in revenues than taxpayers contributed to the pensions. In 2016, 38 states were net revenue positive and 12 states net revenue negative. In 2018, the number of net-revenue-positive states increased to 40 and the number of net-revenue-negative states decreased to 10. Beyond the aggregate picture shown in the figure, our analysis shows that the majority of the 40 states that were net revenue positive in 2018 became more revenue positive during the 2016–2018 period.

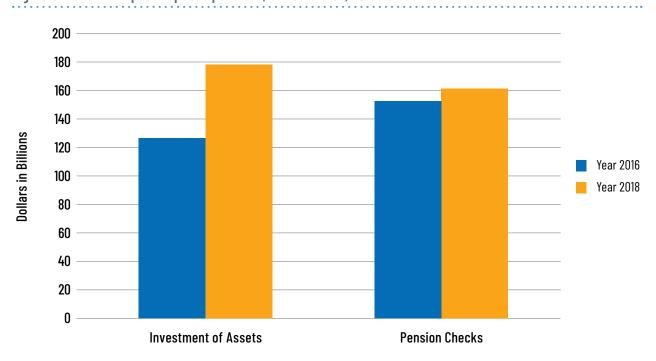
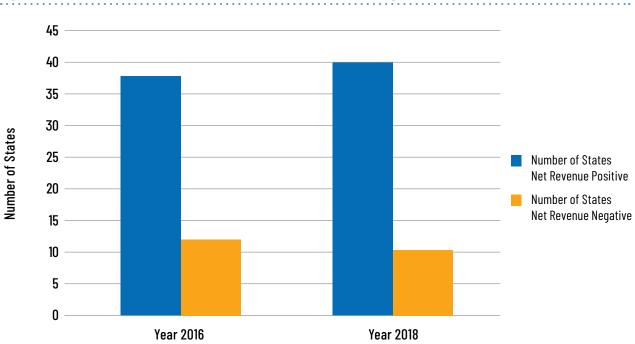


Figure 3. Revenue impact of public pensions, United States, 2018 versus 2016





The analysis also shows some changes in states' net revenue position between 2016 and 2018. Four states – Kansas, Maryland, Oklahoma, and West Virginia – that were net revenue negative in 2016 became net revenue positive in 2018. Two states – Kentucky and Vermont – that were net revenue positive in 2016 became net revenue negative in 2018. Eight states – Connecticut, Hawaii, Indiana, Louisiana, Nevada, New Hampshire, Rhode Island, and Utah – continued to be net revenue negative from 2016 to 2018, although in all but two cases, the gap between revenues generated by pensions and taxpayer contributions to those pensions has narrowed.

Section IV CONCLUSIONS

Most policy makers across the country have had to wrestle at one time or another with whether to scrap public pensions and move forward with retirement savings plans that shift the investment decisions to employees, as well as whether to cut benefits and increase employee contributions. But they have been pondering these choices in an information vacuum, because they have not reckoned with the ripple effects of discarding a timetested method of providing workers with a secure retirement. Our research demonstrates that public pensions have beneficial effects on state and local economies. Shutting them down would ultimately increase taxpayer burdens, and harm state and local economies and tax revenues.

Detrimental "reforms" have been justified on the basis of misguided and misleading information put forth by those who would like to see public pensions go away. Their weapons in this disinformation war include manipulated assumptions, distorted data about unfunded liabilities, and apples-to-oranges comparisons that grossly understate future funding sources. As just one example, they compare 30-year unfunded liabilities with one-year state and local revenues instead of fairly comparing them with 30-year state and local revenues.

Our analysis shows that in 2018, public pensions contributed \$1.7 trillion to the US economy and \$341.4 billion to state and local tax revenues. Of the \$1.7 trillion contribution to the economy, \$872.3 billion came from investment of pension assets and \$836.9 billion from spending of pension checks by retirees. Similarly, of the \$341.4 billion contributed to state and local revenues, \$178.8 billion came from investment of assets and \$162.6 billion from spending of pension checks.

The argument that taxpayers cannot afford public pensions does not ring true and is not supported by data. As mentioned above, pension funds generated \$341.4 billion in state and local revenues in 2018. During the same year, the taxpayer contribution to public pensions was \$162.0 billion. In other words, pension funds generated \$179.4 billion more in revenues than taxpayers contributed to the pension funds.

The fact is that dismantling public pensions carries a grave cost. Far from easing the perceived burdens on taxpayers, pursuing this path would actually increase the burden on taxpayers by \$179.4 billion. Taxpayers cannot afford continued dismantling of public pensions.

Policy makers need to preserve and enhance public pensions. To address short-term budget problems, they need to bring their revenue structures in sync with the economy. They also need to look at the tax subsidies and loopholes through which taxpayer money flows out of US states to overseas tax havens. In short, they should think, understand the research, and think again before taking actions that undermine public pensions.



The Voice for Public Pensions

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