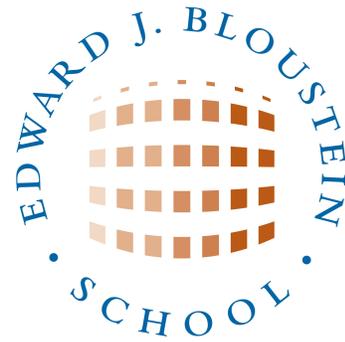


Preparing New Jersey for the Next Economic Downturn: Insights from the Great Recession



Prepared for:
New Jersey Policy Perspective

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Executive Summary

Nearly a decade after the Great Recession, New Jersey (NJ) continues to feel the effects of a slow recovery. The Great Recession created significant pressures on state economies, and each state

employed a unique approach to addressing these challenges, resulting in considerable variation in recovery trajectories. As economists predict another financial crisis in the near future, it is important that NJ reflect on its history and learn from other states' experiences so that it may more effectively weather future recessionary periods. Accordingly, New Jersey Policy Perspective asked graduate students at the Edward J. Bloustein School of Planning to study the matter. Six graduate students in the public policy program prepared this report that examined the actions of NJ and five other states through the pre-recession, Great Recession, and post-recessionary periods.

In order to examine states' preparation for and recovery from the Great Recession, the research team first identified a set of performance indicators to select comparison states to track through their recovery. These indicators included 1) GDP per capita, 2) Supplemental Poverty Measure, 3) Fiscal Balance (percentage of expenses covered by revenue), and 4) Pension Funded Ratio. Based on these indicators as well as geographic and economic characteristics, a set of five states that would yield meaningful comparisons to NJ was identified: Connecticut, Illinois, Maryland, Massachusetts, and North Carolina. Following the selection of comparison states, case studies that described each state's tax, budget, and policy decisions were prepared based on information collected through document analysis and interviews with budget and policy experts. Expert interviews consisted of specialists with diverse ideological backgrounds and professions from each of the states.

The case studies in this report demonstrate that each state's recovery from the recession was shaped by a variety of interconnected factors. As each state had a unique trajectory before and during the recession, not all recovery outcomes could be traced to specific policy decisions. However, several themes and trends emerged among the states observed:

- States with policies in place to rationalize debt usage before and during the recession were less likely to borrow for operational expenses and pension funding
- Reliance on non-recurring revenues and borrowing during and before the recession often exacerbated budgeting challenges in future years
- States with a well-funded Rainy Day Fund were able to get through the recession with less borrowing, fund transfers, and spending cuts
- States with already low bond ratings were more likely to use debt financing during the Great Recession
- Pension/OPEB liabilities and structural deficits greatly limited states' flexibility and posed challenges to maintaining services and investments
- States that raised taxes during the recession and sunsetted them before their economies fully recovered generally had to deal with budgetary shortfalls in future years

Introduction

The Great Recession had a particularly severe impact on New Jersey (NJ) relative to other states. An established pattern of consistent budget shortfalls and structural deficits weakened the state's fiscal position leading up to the recession, and a combination of short-term policy responses led the state into further difficulties upon the recession's conclusion. Given that the current economic expansion is already one of the longest on record, an economic downturn could be imminent.¹

With the Great Recession mostly in the rearview mirror, this report looks to compare outcomes in NJ with those of other states to identify practices that may help equip the state to deal with the next recession.

New Jersey Policy Perspective (NJPP), a Trenton-based policy think tank, requested that six graduate students provide a research-based analysis of the experiences in New Jersey and several additional states before, during, and after the Great Recession. More specifically, NJPP asked the students to build a profile of state tax and budget decisions in the time periods surrounding and including the Great Recession. The final report was prepared as a practicum project by those students under the supervision of Dr. Cliff Zukin at the Edward J. Bloustein School of Planning and Public Policy at Rutgers University-New Brunswick.

The report begins with a methods section that details how the practicum approached the research question, explains the research techniques used, and describes the selection process for the five comparison states. The subsequent section is an in-depth examination of decisions and outcomes in New Jersey, which sets up the baseline across several recession-related indicators against which the case studies are compared. These five case study states, which are each discussed in separate sections, are Connecticut (CT), Illinois (IL), Maryland (MD), Massachusetts (MA), and North Carolina (NC). The final sections summarize the research thematically and provide associated conclusions. Supplemental figures and charts for all sections of the report can be found in the appendix.

The findings of this report are timely. New Jersey cannot afford to undergo the same negative economic impacts of the last recession, particularly as it is still in recovery for select measures more than ten years later.² Moreover, economics and policy experts worry the country may be on the verge of another recession. To better prepare New Jersey to emerge from an impending downturn in a stronger position, decision makers may benefit from this examination of how other states weathered the Great Recession to understand which practices to imitate and which practices to avoid.

Methodology

Our approach in examining how New Jersey can better prepare for the next recession has been to first describe how the state weathered the Great Recession that started in 2008 and to carefully select a set of five case-study states for comparison and contrast. The following paragraphs outline the process of i) establishing baseline performance for NJ, ii) designing a framework to identify comparison states, iii) determining a final list of case study states, and iv) identifying key factors that shaped the trajectory of individual states' responses to the Great Recession.

Given the task of reviewing NJ's performance during and after the Great Recession relative to other states, the first steps in the research process included gathering data, conducting literature reviews, and interviewing experts to examine NJ's economic and policy outcomes during the selected time period. This exercise allowed for identification of fiscal management and policy areas, based on NJ's actions, which would be examined in the case studies for all other states. This process also enabled the research team to establish chronological categories to classify state actions, which included i) Pre-recession (2007 and earlier), ii) Recession (2008 and 2009), and iii) Post-Recession recovery (2010 onwards). These timeline cut-offs were adjusted, as necessary, to reflect lags in the measurement of certain indicators.

After this preliminary research, the team began a search to identify states that collectively served as both controls and comparisons to NJ. To that end, data were assembled on several economic and fiscal indicators related to the economic downturn. The process of choosing the final set of indicators was based on the team's observations of existing data, recommendations from NJPP, and input from budget and economic policy experts at the Edward J. Bloustein School of Planning and Public Policy.

The first group of indicators that the team investigated consisted of gross domestic product (GDP) per capita in chained 2012 dollars, the official poverty measure, labor force participation rate, and median household income. Upon examining the data for each of these indicators from 2006 to 2015 and receiving further guidance from New Jersey experts, these indicators were either revised or dropped to develop a final set of criteria. Both the median household income and labor force participation rate indicators were removed because of their limited utility; median household income did not demonstrate enough variability over time to yield strong comparison narratives, and labor force participation rate did not accurately reflect changes in behavior caused by a recession — people may join the workforce to buttress household income or there may be additional part-time workers during recessions. In addition, the official poverty measure was replaced with the Supplemental Poverty Measure (for adults post-tax and post-benefit) to account for differences in region and benefits transfer; this indicator would also serve as a stronger measure of equity in each state.

Two fiscal measures were added to the adjusted set of indicators to create a more holistic set of measures: the pension liability funding ratio and the percentage of annual expenses covered by revenue. As the unfunded pension liability and the structural deficit are two significant budgetary concerns in NJ that will impact the state's policy options in the next economic downturn, it

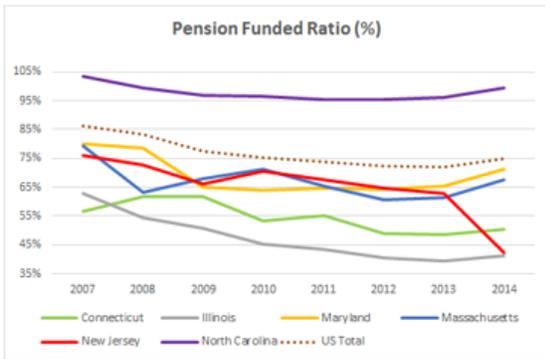
became evident that examining how these concerns were addressed in other states would be an important part of the story. The percentage of expenses covered by revenue was evaluated based on both absolute values and the change over time, and the pension liability funding ratio was observed in terms of liability size and the extent of the underfunding relative to NJ.

Through this approach, the team arrived at a final set of four indicators — gross domestic product per capita³, percentage of annual expenses covered by revenue⁴, poverty rate⁵, and pension liability funding ratio⁶ — to present a means to observe trends across the three distinct timelines. NJ's performance on each indicator was used as the baseline against which other states were compared, allowing for a broad overview of statewide economic, fiscal, and social conditions. States were further ranked according to their performance on these indicators, both relative to NJ and to national trends.

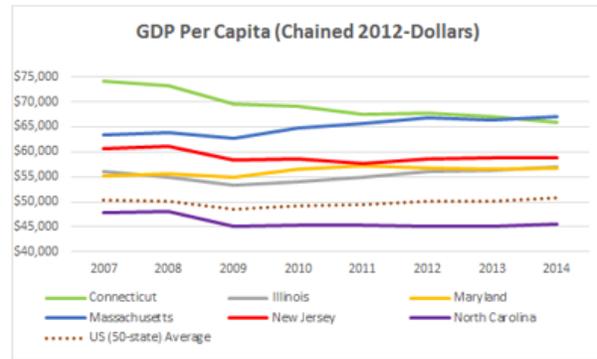
After reviewing state experiences based on these indicators and considering further input from experts and NJPP staff, the practicum team selected five states that showed potential to yield meaningful comparisons to NJ's response to the Great Recession: Connecticut, Illinois, Maryland, Massachusetts, and North Carolina.

This set of states was reached by a process of eliminating states that were highly dissimilar from NJ with regard to tax structure, economic drivers, or demographics. Geographic proximity to NJ was also a major consideration in choosing the case study states; all selected states except for Illinois are on the East coast. Appendix A-1 displays each of our selected state's performance on the four comparative variables, relative to NJ. Further information on the criteria for the selection of each comparison state are provided in the introductions of the case studies in this report.

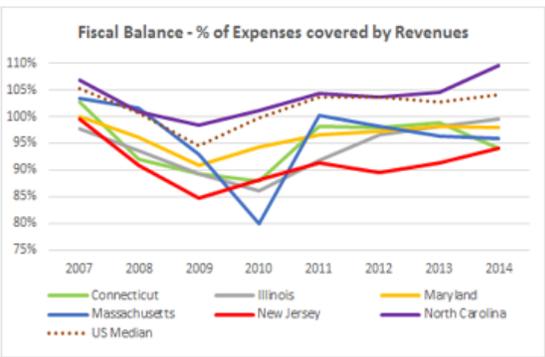
The graphs below show year-to-year changes in the four variables that were measured from 2007 to 2014 for NJ, the five comparison states, and the U.S. as a whole. Pension funded ratio is given in total percentage of funded liabilities, GDP Per Capita is given in real dollars adjusted for inflation over time, fiscal balance is given as percent of expenses covered by revenue, and Supplemental Poverty Rate is given by percent of adults under the supplemental poverty line after taxes and non-cash transfers (housing assistance, tax credits, food assistance, etc.). Using these graphs, the reader may track the position of each state in the cohort, relative to one another and the U.S. 50-state aggregate measure. In the fiscal balance chart, for example, IL (grey line) and NJ (red line), entered the Great Recession with a similar percentage of expenses covered by revenue. While both states' fiscal balance declined considerably during the Great Recession, IL's fiscal balance recovered more quickly and was well above NJ's by 2014.



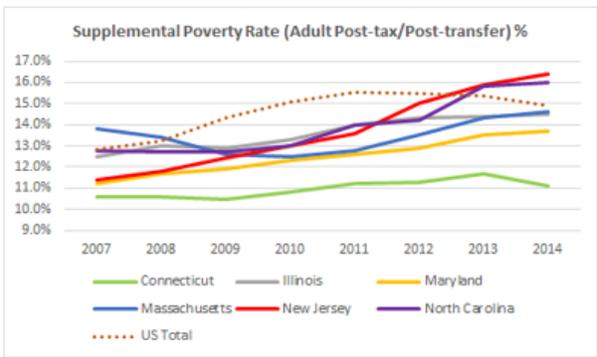
Source: Pew Charitable Trust- Fiscal 50 Data



Source: Bureau of Economic Analysis



Source: Pew Charitable Trust- Fiscal 50 Data



Source: Center on Poverty and Social Policy at Columbia University-Historical SPM Data

In order to identify the key factors that affected the outcomes of each of the states during and after the Great Recession, the research team examined each state’s budget, tax, and economic conditions. This process involved assembling reports, collecting datasets, reviewing government documents, and conducting interviews with budget and policy experts in each of the case study states (a list of the interviewees is available in (Appendix A-2). The team’s findings on NJ and the comparison states were then summarized in separate case studies, which can be found in the following sections of this report.

New Jersey

Overview

New Jersey can be characterized by several economic advantages. NJ according to data from 2017, is one of the wealthiest states in the nation with a median household income above \$80,000, compared to an average median income of just over \$60,000 nationally.⁷ Its workforce is highly educated and its economy has appreciated in service-based industries, particularly the technology, biopharmaceutical and technology sectors.⁸ Geographically, the state is well-positioned in its proximity to metropolitan employment centers including New York City and Philadelphia.

These favorable conditions, however, have been offset by decades-long patterns of negative fiscal balance, increasing debt, and a lack of investment in critical infrastructure and services that began in the 1990s.⁹ Such structural deficits are the background to other pressures, such as high state and local tax burdens and changing demographics. Specifically, the decreasing percentage of the working age population and the growing number of seniors behave as stressors for the state budget by decreasing revenues and raising the costs of services; this constraint is evident through the rising old-age dependency ratio in NJ and climbing pension costs. The trend in declining capital investments, notably in public transit, is another handicap to the state's ability to maintain existing infrastructure and develop new projects. Linked to this ongoing situation is the steady progression of downgraded bond ratings by credit agencies over the past decade and a half.¹⁰ Given these vulnerabilities, NJ is not well-equipped to weather the next economic downturn.

Tracking Entry into and Recovery from the Great Recession

This section provides a description of the fiscal and economic conditions in NJ for the years prior, during, and following the Great Recession. Specifying the state's performance across various indicators, and tracing its budgetary and tax decisions, will establish a base against which the experiences of the case study states will be compared in the subsequent sections of the report.

Pre-Recession

In the years prior to the recession, NJ was already struggling with structural deficits even as the economy was in an expansionary phase. Between FY2000 and FY2005, expenses grew at a faster rate than revenues despite strong growth in per capita tax revenues relative to its neighboring states (Appendix B-1). The outcome of this budgetary predicament, in which the percentage of annual expenses covered by revenue was consistently below 100% for the years leading up to the recession, was the accumulation of deficits (Appendix B-2). Even though NJ did demonstrate improvements in FY2005 through FY2007—it climbed from 93.3% to 99.6% of annual expenses covered by revenue during that time frame—the condition of negative fiscal balance remained unchanged. Another long-term structural deficit in NJ has been the state's unfunded pension liability. Between FY2003 and FY2007, the funding ratio of the state's pension liability decreased steadily from 93.5% to 76.0%.¹¹

A number of budgetary actions contributed to this set of circumstances which made the state particularly vulnerable to the impacts of the recession. For one, NJ had repeatedly employed non-recurring revenues to fund recurring expenses; these one-time sources included bond issuance and bond refinancing, tobacco settlement funds, and diversions from dedicated funds, particularly pension contribution deferrals (Appendix B-3). NJ used pension contribution deferrals, or pension holidays between 2001 and 2004 to avoid contributing to the pension system at all (Appendix B-4).¹² The use of debt for recurring expenses had built another structural deficit, as debt service obligations had increased in the years approaching the recession (Appendix B-5). Another indication of this trend is the portion of the budget appropriated for debt service, which grew from 10.5% in FY2003 to 14% in FY2007. These budgetary interactions help to explain the sparse contributions to the state's Rainy Day Fund (RDF), which were low and uneven across successive administrations (Appendix B-6). In 2007, NJ withdrew \$75 million from its reserves, at a time when expansionary economic conditions did not warrant such a decision.¹³

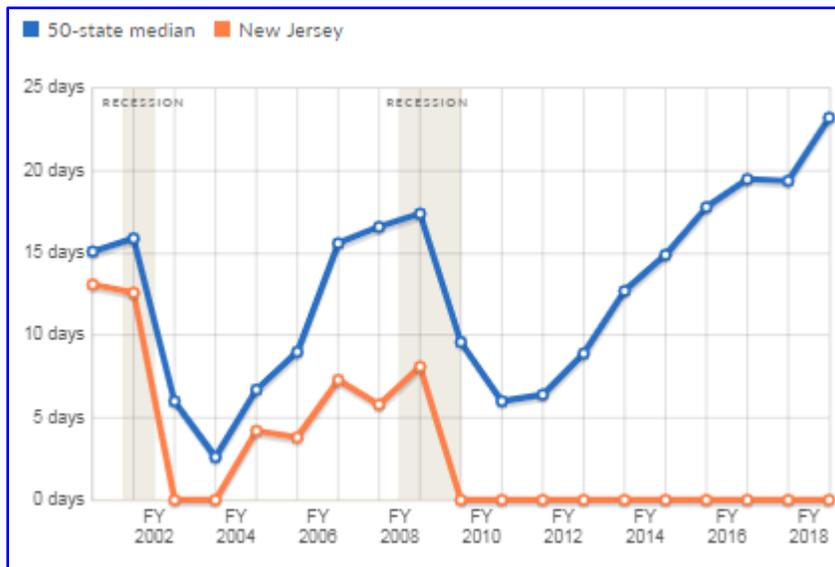
On several state-level measures of economic well-being, NJ was in a more favorable situation in the years preceding the recession. Looking at the Supplemental Poverty Measure post-tax and post-transfer, the state entered the recession with poverty rates approaching 14%; this level, while still a few percentage points below the national average, was situated on a trend of gradually increasing poverty in the state.¹⁴ Median household income had been less of a concern in aggregate, particularly as NJ was consistently one of the wealthiest states nationally. In 2007, real median household income in NJ was over \$71,000 in 2017-adjusted dollars relative to the United States median of \$59,534.¹⁵ The state was also experiencing growth in GDP per capita: NJ's Real GDP per capita was just over \$60,000 in 2006 and 2007, which was around \$8,000 greater than the national average.¹⁶

Great Recession

For NJ, the recession had the effect of intensifying the structural issues that the state had already been facing for some time. In 2008, NJ contributed around \$1 billion to its pension; for the following three years, contributions fell to effectively zero (Appendix B-4). The state's decision to defer payments runs parallel to the condition of its RDF. In FY2008, NJ's government would have been able to run for 8.1 days on its \$735 million in RDF reserves; since the withdrawal of the fund's entire balance in 2009, the fund has stood empty ever since (see Figure B-6). The pattern of negative fiscal balance also worsened in NJ during the recession. The sharpest drop in NJ's budget shortfalls occurred between FY2007 and FY2009, in which the percentage of the state's annual expenses covered by revenue fell from 99.6% to 84.7% (Appendix B-1).

Figure B-6: Percentage of Annual Expenses Covered by Revenue

Source: [Pew Fiscal 50: State Trends and Analysis \(Reserves and Balances\)](#)



During the recession years, poverty rates continued to increase; between 2009 and 2011, NJ's SPM rose from 13.19% to 14.6%. Unemployment levels rose more quickly, with a 4.9% unemployment rate in January of 2008 increasing rapidly to a high point of 9.8% by January 2010.¹⁷ Median household income followed a similar pattern, dipping from over \$74,000 (in 2017-adjusted dollars) in 2008 to just over \$68,000 by 2011.¹⁸

Between 2008 and 2010, private-sector job losses in NJ were prominent in a few key industries: the manufacturing sector (37% loss), telecommunications (34% loss), trade and transportation (9% loss), and finance and insurance (6.2%).¹⁹

The effects of the Great Recession were particularly pronounced in NJ because of the state's exposure to the foreclosure crisis. From an average of 25,000 foreclosures in the years preceding the recession, the state's foreclosures peaked at more than 65,000 in 2009.²⁰ A closer look into these impacts reveals that the foreclosure crisis dented homeownership growth and that shifting market economics have had a detrimental effect on housing affordability. In 2007, 48.5% of the state's renting population was cost-burdened—paying in excess of 30% of monthly income on housing—across all income brackets; by 2012, 51.4% of the state's renting population was cost-burdened²¹. Temporary reductions in property tax relief certainly did not help these conditions.²²

During this period of severe fiscal and economic pressure, NJ made a series of decisions in its endeavor to mitigate the impacts of the recession. These decisions were mixed in their results, and in some cases were pro-cyclical in nature. In FY2009, NJ increased taxes for earners over \$400,000 and created a new top bracket for earners over \$1 million; this measure was temporary, however, and expired on schedule on January 1, 2010.²³ It is important to note that while the Democratic-controlled legislature passed measures to extend these tax increases twice during the 2010 session, Governor Chris Christie (R) vetoed these extensions both times.²⁴ Another effort to increase tax revenue was the introduction of a tax on lottery winnings over \$100,000 beginning in 2009.²⁵ Additional tax changes targeted toward improving revenues were excise tax increases, specifically on cigarettes and alcohol, that were instated with a forecast of generating \$50 million in FY2010.²⁶

Other responses included the provision of considerable tax expenditures to corporations. In a time when tax revenues were at their low point, Governor Christie rapidly increased the number of corporate subsidies. This commitment, which was meant to keep businesses from leaving the state, further lowered revenues.

Post-Recession

NJ experienced a slow recovery from the recession, demonstrated by multiple metrics. While remaining in a budgetary position of negative fiscal balance, NJ did narrow the gap between revenue and annual bills: from its low point of 84.7% in 2010, the state increased its percentage of annual expenses covered by revenue to 94% by 2014. The state's fiscal situation remained tenuous, however, and was not aided by tax and budget decisions that followed the onset of the Great Recession.

Regarding measures that affected revenue, there were several significant events post-recession that have limited recovery in NJ. In 2011, Governor Christie eliminated a 2010 tax increase on personal income above \$500,000; he also sunsetted corporate business tax surcharges that were in place before the recession. Other more regressive policies later in his administration included the 23-cent raise on the gas tax, the repeal of the estate tax, and a cut in sales taxes²⁷

NJ's recovery from the recession was also stalled by the effects of Superstorm Sandy. It is estimated that the storm damaged more than 346,000 homes²⁸, caused approximately \$11.7 billion in state GDP economic losses, and cost approximately \$25.1 billion in recovery and reconstruction expenses.²⁹

On state-level economic indicators, NJ has not demonstrated significant improvements in the years following the recession. For one, poverty rates did not decrease; in fact, they continued to rise to a rate of 16.7% in 2014. Net job growth in NJ has also noticeably lagged behind the national rate, hitting pre-recession levels just in 2016.³⁰ Recovery in the manufacturing sector continued to be delayed, and reflected a larger shift in employment from manufacturing to services, especially healthcare and social assistance.³¹

Looking Forward

The perpetuation of structural deficits and the pursuit of old strategies suggest that NJ is not likely to be resilient enough to weather the next recession unscathed. While the new federal cap on state and local tax deductions is certainly an obstacle, other developments within the state are creating impediments to flexibility in budgetary decisions.

Beginning in 2014, NJ has been experiencing larger budget deficits with each fiscal year with a steady decline in percentage of annual expenses covered by revenue from 94% in 2014 to 84% in 2017 (Appendix B-2). These figures demonstrate that NJ has not yet returned to its pre-recession levels of fiscal balance—the deficit in 2017 marked a greater deficit for the state than at the height of the Great Recession in 2009—and the gap between revenue and annual bills is continuing to increase.

The heavy use of economic development incentives has continued in NJ, which carry with them the opportunity cost of directing funds away from more certain high-return investment areas. In 2013, the New Jersey Economic Opportunity Act consolidated the state's economic development incentives into two programs that increased their funding; since that time, the NJ Economic Development Authority has funneled over \$5 billion in grants and tax credits toward businesses.³² For many of these awards, the commitments are between one and two decades. Such a long-term obligation, in an incentives program that has been assessed to have mixed results, could cause a decline in the corporate business and insurance premium taxes in the coming years.³³

Other long-term deficits have remained unresolved. The RDF has been empty for the past ten years, even as the 50-state median has grown to equal 6.5% of spending over the same time period (Appendix B-6). Debt service costs continue to rise in a state that has one of the highest debt burdens in the nation, and the heavy use of debt financing is reflected in the most recent credit rating downgrade to A- by credit agencies in 2017.³⁴ In light of these structural deficits and NJ's less than stellar economic recovery by several indicators, the state may need to consider changes to its patterns of tax and budget decisions in order to better prepare for the next recession.

Case Studies

Connecticut

Introduction

Connecticut (CT) is a state of interest for several reasons. Firstly, CT entered the recession with its expenditures covered by revenue at a lower percentage than the national average, but at a higher percentage than NJ. Similarly to NJ, CT had and still has a steep pension funding gap that influences many of its policy decisions. CT had comparable Supplemental Poverty Measure (SPM) rates to NJ entering the recession but its SPM increased relatively slowly compared to NJ's. Finally, prior to the recession, CT's Gross Domestic Product (GDP) per capita started out much higher than NJ's, but its recovery in this measure fared worse than for the Garden State.

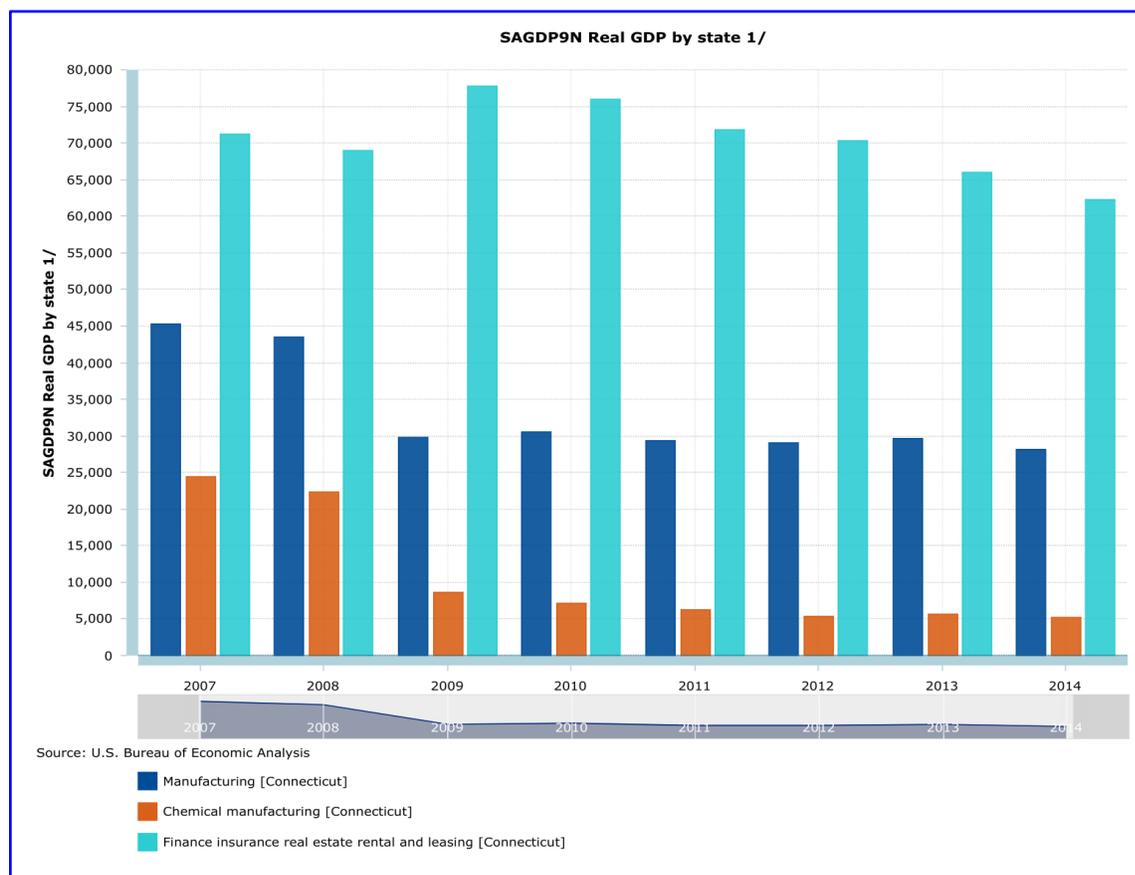
Given these patterns, in addition to similarities to NJ with regards to region, wealth, progressiveness, taxes (see Figure C-1), and education levels, CT was chosen as a case study state.³⁵ The following analysis will look at which policies were implemented that hurt and/or helped CT prepare and recover from the Great Recession.

Pre-Recession

Entering into the Great Recession, CT was already at an economic and fiscal disadvantage because of several factors. First, even before the Great Recession hit, CT's economy was on its decline due to several of its main industries leaving the state. In 2007, Real GDP in CT reached \$261 billion, largely on the backs of the manufacturing, finance, insurance, real estate, rental, and leasing sectors.³⁶ In 2007, manufacturing contributed \$45 billion (17% of GDP) and the financial sector contributed \$71 billion (27%) to CT's economy (almost half of the state's economy).

CT's financial sector bottomed out at \$62 billion (26% of GDP) in 2014—a sizable difference when considering the state's overall reliance on this area.³⁷ While the Great Recession's impact on the financial sector is well documented, what is most interesting in this regard is CT's chemical manufacturing (a subset of manufacturing). In 2007, chemical manufacturing consisted of \$24 billion (53% of manufacturing, 9.4% of total GDP) of manufacturing's \$45 billion economic output. By 2009, chemical manufacturing GDP dwindled to \$8.7 billion (29% of manufacturing, 3.5% of total GDP) (see Figure C-2).³⁸ For one reason or another, the downsizing or departure of major firms such as Pfizer, Bayer, and Bristol Myers Squibb left a major dent in CT's economy.³⁹

Figure C-2: Manufacturing, Chemical Manufacturing, and Finance in CT as Real GDP (2007-2014)



Source: [Bureau of Economic Analysis](#)

The aforementioned loss of industry, combined with years of underfunding its other post-employment benefit (OPEB), pension, and debt obligations put CT in an even more challenging position entering into the Great Recession. By 2010, CT owed \$27 billion in OPEB (0% funded ratio), \$21 billion in pensions (53% funded ratio), and \$2 billion in debt service costs (11% of FY2010 budget)—see Figure C-3.^{40 41 42} For comparison, NJ owed \$71 billion in OPEB (0% funded ratio), \$36 billion in pensions (71% funded ratio), and \$2.6 billion in debt service costs (9% of FY2010 budget).^{43 44 45}

Great Recession

With the economy sinking and a \$926 million deficit entering into the closing weeks of FY2009, Governor Mary Jodi Rell borrowed \$950 million in Economic Recovery Notes to meet CT's balanced budget requirement.^{46 47} While this was a move to avoid dipping into its rainy day fund, sitting at \$1.4 billion with the ability to keep the state's lights on for 30 days, the following Fiscal Year still required Governor Rell to empty that pot despite an influx of \$1.8 billion in federal stimulus dollars.^{48 49}

Another strategy CT used to bolster declining revenues following the recession—only 87.9% of

expenses (see Figure C-4) were covered by revenue in FY2010—CT made two major tax changes.⁵⁰ The first change, in FY2010, added an additional top income tax bracket (6.5% up from the previous 5%) and a 10% corporate income tax surcharge for businesses with \$100 million or more in adjusted gross income (AGI). These tax code changes added \$1 billion in estimated annual revenue.⁵¹ Similarly in FY2012, CT again expanded the top income tax bracket to 6.7%, increased the sales & use tax and broadened its base, and added a 20% corporate surcharge which all together added an additional \$1.8 billion in estimated annual revenue.^{52 53}

CT also made efforts to stave off future liabilities by restructuring elements of its OPEB and pension programs. Until 2009 when employees started to pay 3% of their paycheck toward retiree healthcare, CT's retiree healthcare system was on a PAYGO scheme without any money set aside into a fund.^{54 55} In 2011, CT made major changes to shave roughly \$13.3 billion off its \$31.2 billion unfunded state employee and retiree health care liabilities. The savings came from a \$6.2 billion reduction via the establishment of a trust fund, \$4.9 billion to changes in plan design and funding policy that included new eligibility requirements and adoption of an employer group waiver plan (an adoption NJ made the following year), and a \$2.1 billion reduction of negotiated increases in employee and state contributions.^{56 57}

Post-Recession

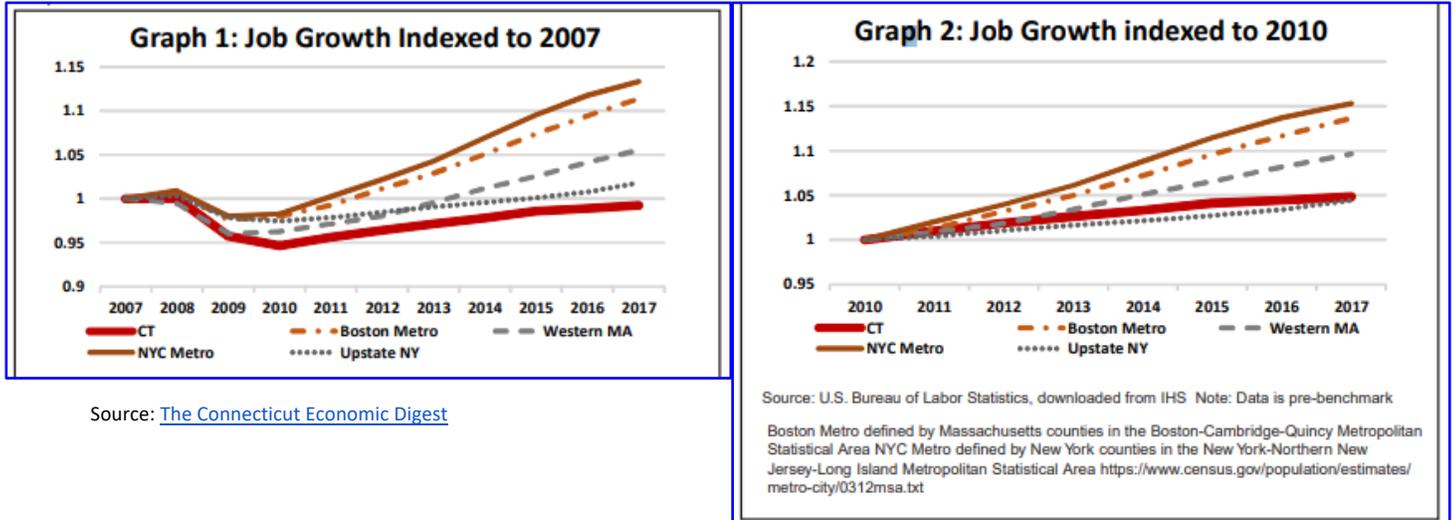
As illustrated earlier, CT's GDP recovery has been slow. CT's Real GDP actually decreased by 1.8% from 2011 to 2014, while the U.S. average GDP rose by 6.7% during that time.⁵⁸ The pension funded ratio dipped to 42% in 2014.⁵⁹ Despite CT's struggles, SPM for adults post-tax and post-benefit in 2014 was 3.9% lower than the national average—11.1% vs. 15%.^{60 61} With regards to employment, CT was one of the few states (see state comparisons in Appendix C-5) yet to recover to pre-recession job levels as of July 2018.⁶² While CT made strides to generate revenue and decelerate expenses, other forces at play inhibited the state's recovery.

While CT's population growth is not necessarily correlated with economic growth, the specific individuals leaving impacted the state's ability to generate revenue. Since 2007, there has been an increase of income tax filers out-migrating from CT across all income levels, "most noticeably those earning between \$50,000-\$100,000 and those earning \$5,000,000 and above" (see Figure C-6).⁶³ While there has also been an increase in in-migration rates for those earning between \$50,000-\$100,000, it has been a slower rate than out-migration (+5% vs. -8% in 2015), as seen in Appendix C-7 and C-8. There has also been a decline in in-migration rates in those earning \$5,000,000 and above. These trends were evident before the two aforementioned tax hikes in FY2010 and FY2012 and are ongoing.

Another hindrance to CT's economic recovery was and continues to be its "city problem".⁶⁴ Similarly to Western MA and Upstate NY, CT faced slow population growth, decades-long loss of manufacturing jobs, and the exit of larger employers prior to the Great Recession. However, job growth in the Boston Metro and NYC Metro areas (see Figure C-9) bolstered those states' economies.⁶⁵ Big cities as a whole recovered faster from the recession, in private employment, real personal income, and labor force participation, than their smaller counterparts (see Figure

C-10).⁶⁶ CT does not have a single city bigger than 150,000 residents and did not reap the aforementioned perks, losing out on people, jobs, and growth to its regional rivals.

Figure C-9: Job Growth Indexed to 2007 and 2010



Source: [The Connecticut Economic Digest](#)

Key Takeaways

- *CT's homogenous economy was particularly susceptible to a recession*
- *Outstanding pension, OPED, and debt commitments worsened during the recession and exacerbated budget difficulties*
 - *Restructuring benefits were (generally) a one-time cost cutting move*
- *CT's budget reliance on income taxes emphasized the need to build up substantial rainy day funds prior to a downturn*
- *Tax increases in CT did not certifiably cause the state to lose high income tax filers*
- *States without major cities are disadvantaged when recovering from recessions unless adequate preparations for an economic downturn are taken*

Illinois

Introduction

Illinois (IL) was chosen as a comparison state for several reasons. Firstly, IL and NJ were the only two states from FY2008 to FY2015 to run a deficit in terms of expenditures covered by revenue every year.⁶⁷ Additionally, IL, like NJ, faces a deep structural pension funding deficit for which state policy makers have failed to find a solution. IL had comparable Supplemental Poverty Measure (SPM) rates to NJ entering into the Great Recession, but its SPM rates did not increase as much as NJ's. Finally, IL and NJ have similar GDP per capita, but NJ's GDP per capita decreased throughout and after the recession while IL's GDP per capita increased modestly.

Given these characteristics, as well as similarities with regards to rainy day fund (RDF) budgeting, size of state economy, mix of industries, education levels, tax burden, and number of school districts, IL was chosen as a case study state (See Appendix D).

Figure D-4: Percentage of Annual Real Domestic Product for top 4 Sectors by State 2007-2014

	Illinois	New Jersey	Illinois	New Jersey
	% of GDP in 2007		% of GDP in 2014	
Manufacturing	13.66	11.17	13.46	8.58
Real Estate and Rental and Leasing	11.83	16	12.43	16.9
Professional and Business Services	12.72	13.7	13.74	16.06
Government and Government Enterprises	10.58	11.56	10.01	10.8

Source: U.S. Bureau of Economic Analysis
 *Wholesaling surpassed Manufacturing for NJ by 2014

That being said, IL has the Chicago metropolis and a median income that is about \$15,000 less than NJ's.⁶⁸ The following analysis tracks IL throughout the recession and evaluates policy decisions that hurt or helped IL prepare for and/or recover from the Great Recession.

Pre-Recession

Entering into the Great Recession, in 2007 IL's Real GDP was \$712.7 billion, making it the fifth largest economy of any state.⁶⁹ Despite IL's history as a rust belt state, its economy was robust prior to the Great Recession, with an unemployment rate of just 4.5% in January of 2007. In January of 2010, the state's unemployment rate reached a high of 11.3% and as of January 2014, at 8.3% IL's unemployment rate had yet to recover to pre-recession levels. IL's manufacturing industry felt the most adverse effects, with job losses totaling more than 127,000 over this period (from 681,700 in January 2007 down to 554,600 in January 2010, 18.6% loss). Furthermore, as of

January 2014, IL's manufacturing sector still had 15%, or 24,700 (total 579,300 employed) less jobs than pre-recession levels. Not all industries suffered during the Great Recession, however, over the same time period (2007 to 2010) employment in the education and health services sectors steadily increased.⁷⁰ Further, the agriculture industry in IL had been growing and exporting soy, pork, and corn and continued to grow throughout the recession.⁷¹ Growth in agriculture helped stabilize IL's economy because it supported production by other state industries such as food processing, farm machinery manufacturing, and chemical and fertilizer manufacturing.⁷²

Despite the seemingly resilient economy, legislative mandates and long term structural deficits were the main drivers of tax and budget policy decisions throughout the Great Recession. Entering into the recession, in 2007, IL had \$42 billion in unfunded pension liabilities (62.6% funded ratio) and about \$40 billion in unfunded OPEB benefits (0% funded ratio).^{73 74} By FY2007, IL's RDF was \$276 million (1.1% of total spending), enough to maintain state spending for less than four days.⁷⁵

Great Recession

During the Great Recession, IL relied on one time fixes and manipulation of accounts in order to pay its bills. Decreases in state tax revenue and increases in spending on services hit the state particularly hard because these effects were compounded by increasing pension demands.⁷⁶ In IL, the pension system ramps up liabilities over time. Those retiring at age 50 receive a generous benefit package with 3% compounding guaranteed that is not indexed for inflation. This formula doubles the recipient's pension over the course of 25 years, if the recipient retires at age 50 or 55.⁷⁷ In order to fund pension obligations in 2009 and 2010, IL issued two operating bonds backed by the \$9.1 billion Tobacco Master Settlement Agreement.⁷⁸ In 2010, under Democratic governor Pat Quinn (D), the state passed a pension reform that created a second tier for new hires, in order to reduce long term pension obligations.⁷⁹ Additionally, to deal with the state's structural deficit, Governor Quinn pushed through a partisan tax reform that took effect in FY2011 and sunset in January 2015. This reform increased the personal income tax (PIT) from 3% to 5% and the corporate income tax (CIT) from 4.8% to 7%.^{80 81 82} This tax increase generated an additional \$5 billion in yearly revenues that stabilized the state's budget from 2011 to 2014. In January of 2015, the aforementioned tax increases were allowed to sunset, leaving a \$5 billion dollar hole in the budget.⁸³

In 2013, Governor Quinn and the Democratic-controlled House tried to enact a bipartisan pension reform which would have saved the state about \$1.4 billion per year. In 2015, the Supreme Court struck down this reform as unconstitutional, as pensions are contractual relationships which cannot be detracted from. Therefore, the growth rate of the pension is frozen and IL has few options to manage finances, as pensions are the fastest growing part of its budget.⁸⁴

IL is one of three states that gives full tax exemptions for public pensions, private pensions, and Social Security (SS).⁸⁵ In 2007, retirement and SS deductions ranked 3rd out of total expenditures (\$0.983 B), while food drugs and medical appliances were the top tax expenditure (\$1.46 B).⁸⁶ By

2014, retirement and SS individual income tax deductions (\$2.3 B) had far outpaced sales tax expenditures from food, drugs, and medical appliances (\$1.7 B).⁸⁷

Post-Recession

IL is consistently cited as a state with one of the highest tax burdens. Similarly to NJ, this is largely because of high property taxes, which are a result of school districts' increased reliance on local taxes. While IL should be contributing 50% of the cost of schools, according to its constitution, instead IL contributes about 25% and the shortfall must be made up through local property taxes.⁸⁸ According to Adam Schuster of the Illinois Policy Institute, IL has 852 school districts and over 9,000 administrative workers making six figure salaries.⁸⁹ Finally, wealthy districts generally outspend poor districts by a factor of 3 or 4 because the funding formula is dominated by local property taxes.⁹⁰

IL's sales tax has a very narrow base, covering only 17 goods and services. This tax is becoming increasingly less effective as IL (like the rest of the US) moves towards a more service-based economy (IL taxes only 5 of 168 service industry categories).^{91 92} Introducing further uncertainty into the efficacy of the state's tax revenue instruments, IL had the worst personal income (PI) growth over the Great Recession era: between Q4 of 2007 and Q4 of 2016, PI growth in the state totaled only 0.8%, while the average US growth rate was 1.7%.⁹³ According to data from the IRS, in tax year 2014, IL had net out-migration across all categories, but lost the largest number of residents (net loss of exemptions) from age groups 26-34 (12,644) and 35-44 (11,365).⁹⁴

IL has not fully recovered from the previous recession and between FY2005 and FY2018 only saved an average of 0.8% of its general budget for its RDF per year (it is recommended states save 5-10% of their general budget).^{95 96} By 2013, IL owed more than \$56 billion in OPEB debt, which increased more than \$16 billion since 2007.⁹⁷ Additionally, by 2014, IL's unfunded pension liabilities had grown to \$111.5 billion (41.3% funded ratio).⁹⁸ Finally, IL claims the lowest bond credit rating of any state with ratings of Baa2 from Moody's, BBB from S&P Global, and BBB+ from Fitch.⁹⁹

Key Takeaways

- *Temporary tax increases created holes in future budgets*
- *Diversity in IL's industries improved economic stability during the Great Recession*
- *Out of control structural deficits have greatly reduced budgeting flexibility for IL*
- *IL's school funding formula, which is largely sourced from property taxes, has exacerbated inequalities between rich and poor districts*

Maryland

Introduction

Maryland's (MD) similarities to New Jersey (NJ) moving into the recession paired with its somewhat stronger overall economic recovery make it strong candidate for a comparison state. At the onset of the Great Recession, MD's GDP per capita (\$55,204) was just slightly below NJ's (\$60,708) (Appendix E-1).¹⁰⁰ Additionally, the two states performed similarly on the Supplemental Poverty Measure (SPM) (11.2% in NJ, 11.4% in MD).¹⁰¹ Like NJ, MD was also burdened by pension funding shortfalls at the start of Great Recession (80.1% funded ratio in MD, and 76.0% funded ratio in NJ).¹⁰² The two states also had a similar fiscal balance at the start of the Great Recession; in MD, 99.9% of expenses were covered by revenues, and in NJ, 99.6% were covered (Appendix E-2).¹⁰³ Further, MD and NJ share several geographic, political, and demographic characteristics. Both states are located in the Mid-Atlantic region, are relatively progressive, and are home to a highly educated workforce.

Despite several similarities in circumstances at the start of the recession, MD recovered from the recession in a stronger overall economic position than NJ. For example, MD experienced a 3.3% increase in GDP per capita between 2009 and 2014, whereas NJ experienced a 0.6% increase¹⁰⁴ (Appendix E-1). Similarly, MD's SPM did not rise as much as NJ's during and after the recession.¹⁰⁵ In addition, whereas NJ's pension funded ratio continued to decline following the recession (decreased from 70.5% in 2010 to 42.5% in 2014), MD's pension funded ratio rose during its recovery (increased from 63.9% in 2010 to 71.3% in 2014).¹⁰⁶ Further, MD's fiscal balance recovered more quickly than NJ's following the recession, reaching 98.0% in 2014, while NJ's remained at 94%. The following sections provide an overview of key factors and events that shaped MD's path to recovery from the Great Recession.

Pre-Recession

While MD is a relatively wealthy state and had significant reserves, several strong industries, and a strong credit rating before the onset of the Great Recession, it also faced significant fiscal and economic challenges. In 2002, MD passed legislation to significantly enhance spending on K-12 education, and in the following year, began making payments toward a \$1.3 billion increase in school funding to be phased in between 2003 and 2008.¹⁰⁷ The legislature did not, however, designate a revenue source for this funding formula.¹⁰⁸ Further exacerbating this budget challenge were MD's political circumstances prior to the recession. While MD has historically maintained a unified Democratic government, the state had a divided government from 2003 to 2006. As a result, it struggled to reach agreement on budget management and revenue raising decisions in the years prior to the Great Recession, and relied heavily on transfers, cuts, and reserves to balance the budget each year.¹⁰⁹

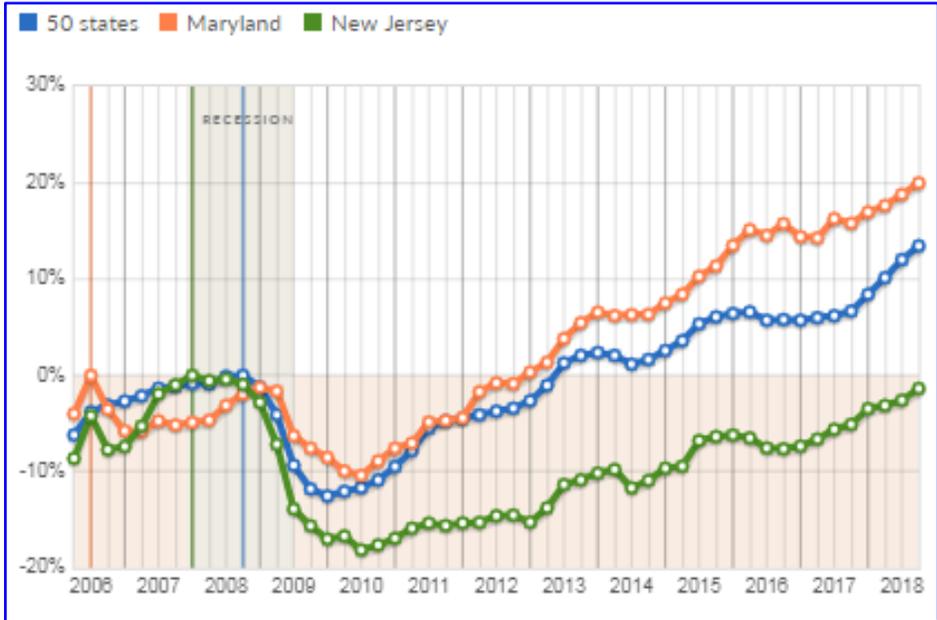
When MD's new governor (O'Malley - D) took office in 2007, he faced structural deficit of \$1 billion in FY2008, much of which can be attributed to the \$1.3 billion carve out in state aid for education. The FY2008 budget was balanced using a one-time deferral of \$967 million from MD's Rainy Day Fund.¹¹⁰ A Special Session of the General Assembly in 2007, which addressed the

structural problems in MD’s budgets, resulted in actions to increase revenues, including modest increases in the sales, tobacco, and corporate income taxes. MD also enacted a temporary new tax bracket for earnings above \$1 million, taxed at the rate of 6.25%, beginning in 2008 and ending in 2010 (without the surcharge, the highest rate was 5.75% on earnings above \$200,000.¹¹¹ As a result of these changes, MD’s budget was finally structurally balanced just before the start of the Great Recession.¹¹²

Great Recession

MD’s efforts to mitigate its structural deficit problem prior to the Great Recession allowed the state to enter the Great Recession in a stronger fiscal position than NJ. Nevertheless, while the prospect of an economic downturn was considered in revenue forecasting for 2009 and 2010, the scale of the downturn was more extreme than anticipated (see Figure E-3). Following national trends, MD saw a decline on most economic indicators during the Great Recession (Appendix E-4).¹¹³ General fund revenues slowed, resulting in significant gaps between anticipated and actual revenue.¹¹⁴ Between 2007 and 2009, the annual percentage of expenses covered by revenue fell from 99.9% to 91.0%.¹¹⁵ Declining personal income, and the corresponding loss of tax revenue, was a key driver of this gap. MD’s pension funded ratio also declined during the Great Recession, dropping from 80.1% in 2007 to 64.9% in 2009.¹¹⁶

Figure E-4: Change in Tax Revenue From Each State’s Peak Quarter, Adjusted for Inflation



Source: [Pew Fiscal 50: State Trends and Analysis \(Tax Revenue\)](#)

Moving into the recession, Governor O’Malley explicitly prioritized funding education, safety net programs, unemployment insurance, and workforce development. Nevertheless, the state’s ability to address the revenue challenges of the economic downturn through tax increases was limited because of previous tax increases in 2007 to close the forecasted deficit in FY2008. To address shortfalls during the Great Recession, MD employed a variety of tools, including drawing

from their Rainy Day Fund, transferring dedicated funds into the general fund, cutting spending, and obtaining federal funding (see Figure E-5).¹¹⁷ As a result, budget cuts in MD were less severe than in NJ.

MD was relatively conservative in the use of its RDF. In large part due to concerns about harm to their AAA bond rating, RDF balances below 5% were not used during the Great Recession. Instead of dropping below 5% RDF reserves in this time of crisis, special fund balances were raided and some fees were increased to support the general fund.¹¹⁸ With regard to budget cuts, MD's governor strove for a balanced approach, evenly distributing allocation reductions across three major spending areas: state agencies, state aid to local governments, and safety net programs.¹¹⁹ In addition, furloughs, vacancies, and elimination of positions resulted in reduced spending on state workforce.¹²⁰

MD's proximity to federal government institutions also affected its recovery from the recession. Approximately one third of MD's economy is tied to federal activity either directly (e.g. direct payments, contracts) or indirectly (a high concentration of federal workers live and/or spend money in MD).¹²¹ Accordingly, when the federal government increased spending through stimulus funding during the Great Recession, MD benefitted more than most other states. In addition, the American Recovery and Reinvestment Act of 2009 (ARRA) funding supported MD's ability to maintain cash-balanced budgets throughout the recession, as the state received approximately \$1 billion over three years.¹²²

Housing also played an important role in MD's experience of the recession. Discriminatory lending practices and aggressive marketing of subprime mortgages in MD resulted in some of the high foreclosure rates, creating financial challenges that disproportionately affected communities of color and low income families during the Great Recession. In Prince George's County, for example, one quarter of the mortgages opened were subprime. Accordingly, localities faced tremendous losses in property taxes. Baltimore alone faced 18,000 foreclosures between 2007 and 2010, which resulted in significant losses in property taxes and depreciation of property values.¹²³

Post-Recession

Following the Great Recession, MD's overall GDP recovery was stronger than NJ's.¹²⁴ In addition, MD's fiscal balance improved slowly and steadily, reaching 98% by 2014.¹²⁵ While statewide indicators suggest a somewhat stronger recovery than NJ, the Great Recession exacerbated inequalities in MD, and many communities continue to experience the consequences of the recession.

Several decisions and contextual factors influenced MD's experience in the years following the Great Recession. MD's decision to use dedicated funds to support the general fund, rather than drawing from the RDF, limited its budgeting flexibility as the funds that were transferred from special funds to the general fund needed replacement.¹²⁶ In addition, sunseting the millionaire's tax affected MD's revenues, and accordingly, limited its budgeting options following the recession.¹²⁷ In FY2011, MD's temporary personal income tax increase expired, ending the 6.25% surcharge on earnings over \$1 million. While this change directly affected less than 1% of

Maryland residents (fewer than 5,000 individuals), the Department of Legislative Services estimated that it could have raised \$70 million by FY2020 if it had been reinstated.¹²⁸ Despite concerns over millionaires leaving MD as a result of the millionaire's tax, calculations conducted by ITEP using data from the Maryland Office of the Comptroller suggest that declines in tax filings from millionaires was primarily driven by declines in income rather than migration (see Figure E-6)¹²⁹. As a result of these changes, the state had to make difficult decisions, including reducing spending on education and other investments, in order to balance its budget.¹³⁰

Key Takeaways

- *Lack of collaboration among state leaders and political will hindered long-term planning and proactive decision making*
- *Lack of designated revenue sources for spending priorities contributed to structural deficits*
- *Distributing budget cuts across spending areas prevented excessive harm to employment, programs, services*
- *Raiding dedicated funds limited future budget responsiveness*
- *The Great Recession exacerbated inequalities in MD that existed prior to the recession*
- *Building up reserves helped MD weather the recession; however, concerns about the impact of dropping below 5% balance limited their utility during the downturn*

Massachusetts

Introduction

Massachusetts (MA) is a compelling case to compare with New Jersey (NJ) because the states share similar fiscal weaknesses; however, MA had a stronger economic recovery from the Great Recession than NJ. MA recovered tax revenues to pre-recession levels by FY2013, similar to the national average, even as NJ struggled to do as late as FY2017.¹³¹ Similarly, MA's economic recovery was speedier than the national average—from FY2009 to the first period of economic expansion in FY2010, the state's Real GDP per capita recovered by 3.3%, compared to 0.5% for NJ, and 1.1% for the nation.¹³²

Despite its economic strength, MA, along with seven other states (including NJ), experienced 10 or more years where budgeted expenses exceeded revenues from FY2003 to FY2017.¹³³ Similarly to NJ, the recession also took a toll on MA's pension funding, causing its funded liability ratio to plummet from FY2007 to FY2014 (see Figure F-1).

MA and NJ also share demographic similarities that will shape their economic and fiscal decision making in the future; particularly in terms of highly educated workforces (See Figure F-2) and aging populations.

In the face of these challenges, MA, like NJ, was charged with both attempting to retain competitive advantages in workforce quality and modern infrastructure, while dealing with the difficult economic environment of the Great Recession. The following sections outline MA's fiscal and economic position prior to the Great Recession, the state's response to the Great Recession, and the nature of its recovery after the Recession.

Pre-Recession

MA's fiscal position entering into the Great Recession was heavily shaped by its recovery from the previous recession in 2001. In particular, financial resources available for MA to respond to the Great Recession were compromised by personal income tax cuts enacted in the period preceding the dot-com bust. From 1998 to 2002, the state introduced a series of changes in the tax code¹³⁴, these policy changes contributed to structural budget deficits for the state, even in expansionary years (see Figure F-3). The Massachusetts Taxpayers Foundation noted cautionary signs in revenue growth projections for the state in the years preceding the Great Recession, warning that the state was increasingly reliant on volatile revenue sources such as capital gains, rather than gains from a recovering job base.¹³⁵

In the expansionary years after the FY2001 recession, MA made significant deposits to its rainy day/stabilization fund.¹³⁶ The state had \$2.34 billion (approx. 8% of budgeted revenues) in its RDF in FY2007, compared to \$1.71 billion (approx. 7.5% of budgeted revenues) in FY2001 (which was the previous business cycle peak).¹³⁷ In FY2007, the state had enough reserves to cover nearly 30 days of operations, compared to around 6 days for NJ and approximately 16 days for the national median (see Figure F-4).

As of FY2007, MA had 79.2% of its pension liabilities funded by existing assets, compared to 76% for NJ.¹³⁸ Unlike NJ, MA avoided pension holidays across previous expansions or downturns and made considerable changes to its pension policy, including decreasing state contributions to pensions for newer employees. In FY2007, state pension appropriations amounted to 4.3% of the total budget.¹³⁹ While the state's contributions towards pension costs were among the highest in the nation, the ratio of unfunded pension liabilities remained a concern throughout the Great Recession.¹⁴⁰

Compared to the national average, MA witnessed steeper job losses following the recession of 2002 and by June 2008 had still not recovered to its previous peak employment levels.¹⁴¹ During this period, there was also significant change in the composition of employment in the state. Similar to the national trend, MA continued to lose manufacturing jobs, despite targeted tax reforms aimed at creating a competitive environment for manufacturing.¹⁴² The state economy compensated for these losses with considerable employment gains in sectors such as education and health services, buoyed by one of the most educated workforces in the nation.

Great Recession

While the Great Recession took a significant toll on MA's economy, the state's recovery was comparatively better than the national average. From its peak in FY2008 to the first major year of contraction in FY2009, the state's GDP per capita shrank by 1.8%, compared to a 4.9% contraction for NJ, and a 2.9% average decrease for the nation.^{143 144} According to Andrew Bagley, Vice President for Policy and Research at the Massachusetts Taxpayers Foundation, MA's job losses during the Great Recession were less severe than the 2002 recession and the downturn was less severe than some of the other states (largely sand states) that experienced housing bubbles.¹⁴⁵

MA's employment grew by 0.6% during the first year of expansion from June 2009 to June 2010, compared to a 0.2% decline for the nation; MA's unemployment rate in June 2010 was 8.3%, compared to 9.4% for NJ and the nation.¹⁴⁶ The strength of the state's recovery was also evident in its poverty measures, which showed improvements as early as 2011, even while the national poverty rate continued to climb over that same period.¹⁴⁷

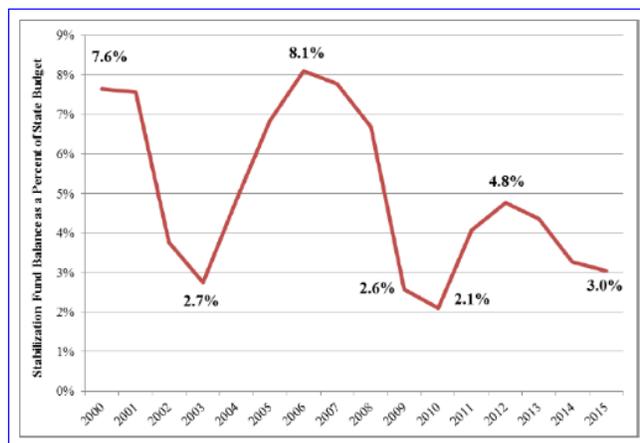
While MA's economic recovery was relatively strong, its fiscal position was significantly weakened by the Great Recession. In FY2009, the state ran a budgetary loss of \$1.4 billion, on the back of a 13.8% decline in budgeted revenues.¹⁴⁸

MA's fiscal policy response to the Great Recession was based on a combination of tax increases, utilization of the stabilization fund, spending cuts, and federal funding. One of the first actions that MA took was to increase its sales tax rate from 5% to 6.25%, along with an expansion in its sales tax base.¹⁴⁹ According to the state's comptroller's office, this tax change was responsible for a 2.3% increase in tax revenues for the State in FY2010 (additional revenue of \$836 million), even as income tax revenues continued to decrease due to the recession.

MA did not make changes to the personal income tax rates as an immediate response to the recession. The state did, however, introduce changes to its corporate income tax rate in 2008,

which phased-in to decrease the tax rate from 9.5% in 2010 to 8% in 2012.¹⁵⁰ This rate decrease was accompanied by reforms in the tax code aimed at reducing tax avoidance. Therefore the revenue loss from the tax cuts was projected to be offset by incremental revenues from the accompanying changes in rules.¹⁵¹

As noted earlier, MA had one of the strongest RDFs across all states before the recession and drew upon this fund heavily to balance the FY2009 and FY2010 budgets. The state's RDF balance decreased from \$2.3 billion at the end of FY2007 to \$668 million at the end of FY2010 (see Figure F-5).¹⁵² These funds helped the state cover gaping budget holes and minimized the amount of debt the state would issue to fund operations.



Source: Massachusetts Taxpayers Foundation, "Stabilization Fund Dip During Recovery Puts State At Risk", Nov 2015

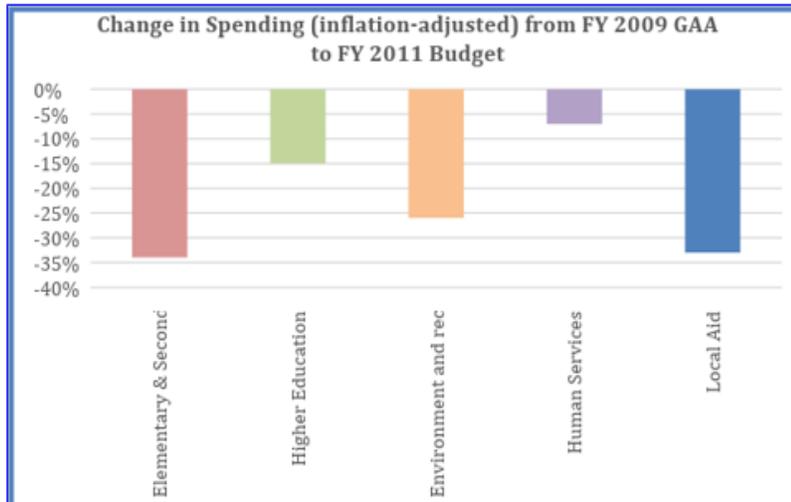
Federal emergency funding, primarily from ARRA, helped MA cover revenue gaps during the Great Recession. This funding amounted to \$1.4 billion in FY2009, \$2.7 billion in FY2010, \$2.4 billion in FY2011, and \$486 million in FY2012.¹⁵³

One of MA's strategies for addressing budget shortfalls during and after the Great Recession was deep spending cuts, which would have been more extreme without ARRA funding.¹⁵⁴ Budgeted expenditures for the state decreased by \$202 million in FY2009 despite accounting for a \$134 million increase in program costs, mostly related to Medicaid. FY2010 saw a \$183 million decrease in budgeted expenditures compared to FY2009, despite accounting for a \$279 million increase in program costs, which were also mostly attributable to Medicaid costs.

The Massachusetts Budget and Policy Center, an independent think tank, notes that the state implemented approximately \$2 billion in spending cuts in FY2010 and close to \$1 billion in FY2011.¹⁵⁵ Because of upward pressure on non-discretionary spending areas such as Medicaid and pension obligations, discretionary spending in areas such as public safety, health and social services, and non-Chapter 70 (local) school funding saw sharp declines as a response to fiscal pressures during the Recession (see Figure F-6).

During the same period, MA continued to support various business tax breaks, which despite seeing an initial drop in FY2008 as an immediate response to the recession, continued their upward trend thereafter (see Figure F-7). In the period between FY2007-08 and FY2008-09, economic development tax expenditures grew at a rate of 5.2%, when all other budget appropriations increased by 0.1%. This trend continued as economic development expenditures grew by 4.2% in the subsequent period between FY2008-09 and FY2009-10, even as all budget appropriations decreased by 2.8%.¹⁵⁶ In FY2010, economic development tax expenditures amounted to approximately \$1.7 billion, which equated to 5.5% of budgeted revenues for the

year.¹⁵⁷ In FY 2008, MA implemented a \$1 billion initiative to support the state's life sciences industry, which would invest in education, R&D, and workforce training over ten-years, via bond authorizations and tax credits.¹⁵⁸ In FY2017, MA accounted for over half of all US-based biotech IPOs, and the state witnessed over 35% employment growth in this sector from



Source: Massachusetts Budget and Policy Center, "The Great Recession, Policy Choices, & State Budget Cuts", July 2010

2008 to 2017¹⁵⁹. While the tax credit cannot be directly attributed for this growth, it reflected strategic support to an industry that has become a vital pillar of the state economy.

In 2011, MA instituted a Tax Expenditure Commission, tasked with reviewing the state's tax expenditure programs. The Committee's 2012 report highlighted the need for assessing effectiveness of various programs compared to slated policy goals, the need for periodic review of expenditures, and a framework to evaluate new proposals for tax expenditures.¹⁶⁰

Prior to the Recession, Governor Deval Patrick's administration instituted a 5-year capital plan (2009-2013), coupled with debt affordability studies to dictate the state's capital spending priorities; this strategy was meant to address pressing infrastructure needs, and simultaneously manage the state's rising debt obligations. Annual state appropriations towards debt service as a percentage of total spending remained stable from FY2009 to FY2012 in the 5%-6% range¹⁶¹, compared to 4.9% in FY2008. In addition to setting a bond cap for regular capital programs, the Patrick administration set an 8% limit on total debt service payments relative to annual budgeted revenues.¹⁶² According to a study by Pew Charitable Trust, MA is one of nine states with the strongest debt affordability practices in the nation, a feature that has been rewarded favorably by rating agencies.¹⁶³ Despite fiscal pressures from the Recession, MA's GO bond rating saw upgrades from Moody's and S&P in 2010 and 2011.¹⁶⁴

Turmoil in the financial markets during the Great Recession significantly affected MA's funded pension liabilities, as a slump in the stock markets reduced asset values in the state pension fund. The state's pension funded ratio decreased from 76.8% in FY2008 as it was entering the recession, to 62.7% in FY2009, pushing it into an area of concern, especially as health care costs mounted for retirees.¹⁶⁵ During the recession, the state continued to fund its pension obligations, with post-retirement benefit appropriations as a percentage of total appropriations ranging from 4% in FY2009 to 6% in FY2012.¹⁶⁶ MA did not, however, issue any bond debt to fund pension liabilities. In the decades prior to the recession, MA periodically introduced reforms which increased employee contributions over time, in addition to changing vesting and eligibility policies.¹⁶⁷

Post-Recession

MA's early recovery from the Great Recession was stronger than the national average, but its expansion slowed down in FY2013-14, in line with national trends. The state made faster job gains than the nation in 2010 and 2011, but slowed below the national average in 2013 and 2014.¹⁶⁸ The state's labor force participation also experienced a weak recovery. As of the final quarter of 2012, MA had not yet matched the number of payroll jobs recorded in the first quarter of 2001.¹⁶⁹

Similar to its economic recovery, MA's fiscal recovery slowed down in the late recession recovery period and the state experienced structural budget deficits as late as FY2014.¹⁷⁰ MA's budgetary struggles in the late recovery period are also reflected in its use of contingency funds during late recovery years, which was noted as a growing point of concern by credit rating agencies.¹⁷¹ In response to increasing revenue volatility and its contribution to structural budget deficits, MA introduced reforms for its use of capital gains tax revenues effective in FY2011, which capped the general fund allocation of these revenues to \$1 billion. Any revenues in excess of that threshold would be transferred to the RDF fund.¹⁷² The governor's proposal to introduce this reform to the House Budget Committee underscored the volatility inherent in capital gains revenues, noting that even as tax receipts increased by 153% from FY2004 to FY2008, they dipped by 75% from FY2008 to FY2009.¹⁷³ Even though MA introduced sounder practices with regards to funding rainy day reserves, it did not follow through in practice and continued to draw funds from the reserve even in expansionary years following the Recession.¹⁷⁴

Despite budgetary struggles, the state personal income tax code saw automatic reductions kick in during 2012 and 2013 due to a ballot provisions introduced in 2000. As a result of these provisions, automatic income tax reductions would kick in if the state reached a number of triggers, including four consecutive quarters of revenue growth and an inflation threshold, among other indicators.¹⁷⁵ From FY2012 to FY2014, the state's flat income tax rate decreased from 5.3% to 5.2%.

The state also experienced wide disparities in recovery from the recession across various regions in the state. Although the state's unemployment rate consistently remained below the national average, this was in part due to the robustness of recovery in the Boston metro area. The unemployment rate in most state counties, excluding Suffolk County, remained higher in 2015 than it was in the pre-recession period of 2007.¹⁷⁶

Key Takeaways

- *Tax cuts in expansionary years and use of non-recurring revenues during economic contractions contributed to structural budget deficits during the Recession*
- *Avoidance of pension holidays in contractionary years enabled MA to fund its pension liability, especially as economic conditions improved*
- *Prudent debt management and long term capital plans ensured that MA did not borrow beyond capacity*
- *Rainy day funds were critical in plugging budget holes, especially in deep contractions such as the Great Recession where recovery was stalled for a long period*

- *Dedicating an increasing portion of volatile or non-recurring revenues can help states fund these reserves and ensure sufficient replenishment of such funds in expansionary years*

North Carolina

Introduction

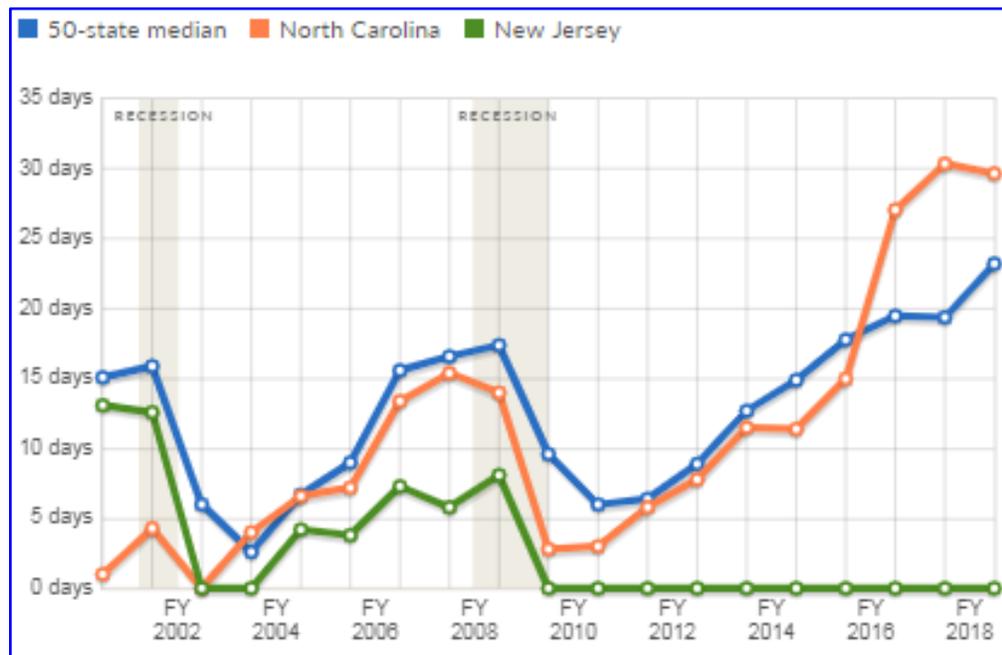
North Carolina (NC) provides meaningful comparisons with New Jersey (NJ) because it performed similarly to or better than NJ on all of the four indicators measured in the case state selection process. Regarding economic performance, NC entered the recession with a GDP per capita that was 26% lower than NJ's but experienced a similar rate of change (approximately 1%) between 2007 and 2014.¹⁷⁷ Fiscally, NC was in a stronger position than NJ, with an almost fully funded pension (96.3% in 2010 and 95.4% in 2012).¹⁷⁸ As for percentage of annual expenses covered by revenue, NC has consistently demonstrated a positive fiscal balance (save for FY2010, when the state covered 98.4% of its annual expenses). In fact, NC has performed above the 50-state median for this measure since before entering the Great Recession.¹⁷⁹ Due to its similar performance to NJ on GDP per capita and stronger performances on expenses covered by revenue and pension liability, NC is an ideal candidate for analyzing the factors that shaped these outcomes. Regional proximity and a comparable industry mix -- with an emphasis on pharmaceuticals and financial services -- were also considerations in selecting NC as a case study.

Pre-Recession

Leading up to the Great Recession, NC's GDP per capita exhibited less volatility relative to the U.S. In addition, between 2007 and 2009, NC's GDP decreased by just 2.6% while the U.S. decreased by 4.4%.¹⁸⁰ Over the same period, NC approached the recession with a positive fiscal balance: in FY2007, NC covered over 105% of its annual expenses, which was above the values for both the 50-state median (102.1%) and NJ (99.6%).¹⁸¹

Fiscally, NC was in a stronger position than NJ. The state was steadily funding its rainy day reserves: between 2006 and 2008, the state could conceivably run on its rainy day funds for 15 to 17 days.¹⁸² Pension funding in the state was also robust. The two major pension funds in NC, the Teachers' and State Employees' Retirement System (TSERS) and the Local Governmental Employees' Retirement System (LGERS), make up 93% of the entire pension fund's liability.¹⁸³ By 2007, its pension system was more than fully funded with a 103.4% funded ratio.¹⁸⁴ However, the Great Recession weakened NC's pension system, leading state and local governments to make the decision to raise the rate of contributions to the fund. In 2008, the rate of the TSERS's contribution was raised to 13% and the LGERS's contribution was raised to 20%.¹⁸⁵

Figure G-3: The Number of Days that NC Could Run on Rainy Day Funds



Source: Pew Charitable Trust- Fiscal 50: Reserves and Balances

Great Recession

In response to the Great Recession and shrinking revenues, NC made several tax policy changes. During FY2009 and FY2010, NC added a 3% temporary surcharge to individual filers with income over \$150,000 and a 2% surcharge on married filers with income over \$250,000.¹⁸⁶ In its first year, \$177 million in revenue was raised.¹⁸⁷ NC also sought additional revenue streams, increasing the excise taxes on tobacco and alcohol by 45 cents a pack. Through the tax increase, NC collected \$94 million in 2011.¹⁸⁸ The state also temporarily increased its sales tax by 1% and broadened the sales tax base to include digital downloads and other internet transactions. Through this sales tax increase, NC made an additional \$1.1 billion in revenue.¹⁸⁹ While NC imposed a surcharge on corporate taxpayers in both 2008 and 2009, it simultaneously expanded tax credits to businesses. The latter ultimately offset any gains from the former.

In addition to the aforementioned tax policy changes, NC's government also made an effort to insulate the state's pension fund. During the 2011 legislative session, the NC Department of State Treasurer received permission through legislation regarding investment flexibility in the pension portfolio for maximizing returns. Therefore, even though NC was recovering slowly from the economic downturn, the pension fund returned over 18% during FY2010 and FY2011.¹⁹⁰ Contrary to the recovery of NC's pension fund, NC's educational profile based on K-12 spending per pupil was worse than in NJ. During 2009 and 2010, based on the spending per pupil indicator, NC's investment was \$9,500 compared \$18,500 in NJ.¹⁹¹ When NC was hit by the Great Recession, NC made significant funding cuts in education. Since 2008, NC has cut funding in K-12 education by 8.6% when measured by per-student spending, a more severe cut compared to 31 other states.

For that same measure, NJ reduced funding by 2%.¹⁹²

NC's high unemployment rates were profound. The average number of weeks that unemployed workers had been without work from 2007 to 2009 was 16.3 weeks in 2007 and 26.3 weeks in 2009.¹⁹³ These high unemployment rates triggered long-term joblessness. According to the report by Action for Children North Carolina, a non-profit child research and advocacy organization, in 2009 57% of unemployed NC workers had been jobless for at least 6 months, up from 35% in 2007.¹⁹⁴ This high unemployment rate also contributed to late entry into the labor industry for many of the state's youth.¹⁹⁵ That same report highlighted that between FY2007 and FY2010 the state reduced subsidies to help these individuals find employment by 40%.¹⁹⁶

Post-Recession

One particular area of strength for NC is that its pension funding status had not weakened under the Great Recession. While pension liabilities in relation to assets did increase between 2009 and 2014, its pension status remained strong in comparison to NJ; NC's funded ratio in 2014 was 99.3% and NJ's was 42.5%.¹⁹⁷ NC's funding ranking consistently placed in the top five of states throughout the years of 2007 to 2014, and the funded ratio was nearly 100% throughout.¹⁹⁸

The reason for such stability in NC's pension throughout the recession is due to its pension systems not being wholly influenced by the state's budget plan. NC employees must invest 6% of their salaries into the pension system.¹⁹⁹ Compared to NC's state employer pension contributions of 13% in 2008,²⁰⁰ 20% in 2010,²⁰¹ and 27% in 2013,²⁰² NJ's contributions were just 4.47% in 2007 when the recession hit, and it was increased to 11.14% in 2010, and 11.92% in 2013.²⁰³ NC's broad funding strategy, unlike NJ, allowed the state to avoid any severe pension gaps before they could take form. From 2007 to 2014, NC's pension liabilities rose by just 28% while NJ's grew by 66%.²⁰⁴

After the Great Recession hit NC, the state's recovery has been slow and isolated in areas, particularly with regard to unemployment. Whereas job growth is visible in metro counties (centered around the cities of Raleigh and Charlotte), there have been net job losses in rural areas.²⁰⁵ Employment recovery has been characterized by increases in the extremes of the income spectrum. High-paying and low-paying jobs have seen gains, while growth in middle-income jobs has largely been absent.²⁰⁶

Key Takeaways

- When NC sought future revenue influxes, a delicate balance was maintained between surcharges on corporate income taxes and tax credits for businesses
- Broadening the sales tax base (digital downloads, internet transactions, etc.) increased tax revenues
- NC faced regional disparities in its recovery, rural areas of the state recovered slower than urban areas
- Raising pension contributions and the investment flexibility of the pension system were significant to providing grants to retired employees and to managing a healthy funding system

Discussion

On most economic and fiscal indicators of recovery from the Great Recession, Massachusetts, North Carolina, and Maryland attained more favorable positions than New Jersey, Connecticut, and Illinois in their relative recovery trajectories. The graphs in the Methods section of four central indicators — pension funded ratio, GDP per capita, percentage of annual expenses covered by revenue, and the supplemental poverty measure — have already suggested that the case studies would reveal this division of lower and higher performing states. Examining these states in greater detail has uncovered patterns in tax, budget, and economic decisions that either helped or weakened their ability to cope with the recession. This section summarizes these actions across common policy themes that featured prominently in the case studies, and compares them to New Jersey's responses to the recession.

Tax Revenues

With the onset of the recession, all five of the case study states saw significant reductions in revenue collection, a situation that led to major budget shortfalls. In addition to the use of federal stimulus funding, rainy day funds, and spending cuts, each of these states employed a combination of changes in their tax codes to raise revenues through sales and excise taxes, the personal income tax, and/or the corporate income tax.

Sales and Excise tax

CT, MA, and NC increased their sales tax rates and expanded their tax bases to raise additional revenues in response to the recession. The amount of revenue raised by this measure for each state depended on the scope of the sales tax. Narrow tax bases that excluded a majority of services or e-commerce transactions, for example, had the opposite effect of constraining growth within this revenue source. Like NJ, many of the case study states also increased excise taxes on alcohol and tobacco in order to raise revenues during the economic downturn. These sources of supplemental revenue were one measure that states used to address budget shortfalls, with varying effects.

Personal Income tax

As a response to the recession, CT, NC, and MD either introduced new tax brackets for high-income filers or increased the rate on existing higher-income brackets. IL increased the income tax rate across all income tiers; this action was a less progressive measure, compared to other states. NJ also initially expanded its tax brackets for high-income earners, but these tax increases sunsetted within one year. MA was one of the few states that actually decreased income tax rates after the recession. This change, however, was the product of a ballot measure as opposed to a policy response, and ended up decreasing tax revenues at a time when the state was already struggling with revenue shortfalls.

Corporate Income tax

Even though corporate income taxes are one of the most sensitive revenue sources vis-a-vis changes in the business cycle, some states introduced measures to raise revenues from businesses either through the corporate income tax or changes in the tax code. IL increased the

corporate income tax for a limited period, CT added corporate surcharges on two different occasions, and MA introduced an overhaul of the code in terms of reporting requirements, which despite a decrease in the tax rates, had a net positive impact on revenue. NJ, conversely, did not raise its corporate income tax; its policy response to the recession was to expand the number of subsidies offered to businesses.

Timing of tax changes

An important feature of changes in tax codes that impacts their efficacy is whether the changes are permanent or temporary. Tax increases that are scheduled to sunset equate to non-recurring revenue sources, which create imminent budget holes in later years.

For states that are struggling with structural budget deficits, this issue is particularly salient.

IL's income tax and corporate tax increases, NC's sales tax increase and temporary surcharge on high-income filers, and MD's high-income tax brackets, are examples of tax changes that were sunsetted during or after recovery. NJ's expansion of tax brackets for high-income filers was likewise temporary; the tax change was discontinued after FY2010. This temporary tax increase was estimated to raise approximately \$620 million in additional revenues in FY2010, leaving a significant revenue gap in FY2011 after it was discontinued.²⁰⁷

Non-recurring revenue sources

In addition to changes in the tax code, a number of the comparison states used non-recurring revenue sources to fund operating expenses during the recession. While the use of ARRA funding and rainy day funds were measures taken by all the case study states, some states used other sources of funding which added to structural budget deficits in the recovery years.

IL issued operating bonds against Master Tobacco Settlement Agreement funds to balance budgets during the recession, a measure also taken by NJ. Both states also issued bonds to fund operating shortfalls and pension obligations. CT issued recovery notes in the early recession period to balance its budget. MA had measures in place to limit and ration the amount of debt issued in any given year, which ensured that the state was prudent in its use of debt during recessionary years.

Rainy Day Funds

The availability of robust rainy day funds was critical for a number of states to balance budgets during the recession without raiding moneys from other dedicated funds or issuing debt. States experiencing structural budget deficits prior to the Great Recession struggled to allocate their contingency funds, which exposed them to deeper revenue shortfalls during the recession. The severity of the downturn led to the rapid depletion of these funds for some states, while others had restrictions in place that limited the extent to which these funds could be used. There was also great variety in how rainy day funds were replenished, along with requirements on maintaining reserves at certain levels.

MD, NC, and MA had robust rainy day funds entering into the recession, which were reflective of policies such as minimum fund requirements, dedicated funding sources, and restrictions on deferring contributions to the fund. Such policies also appear to be correlated with higher credit

ratings for these states. MD, for example, has held a triple-A rating from all three credit rating agencies for more than a decade. MA instituted changes in its rainy day funding program, diverting more volatile revenue sources such as capital gains and non-recurring revenues towards rainy day reserves. This ensured adequate funding during expansionary years and minimized exposure to revenue shortfalls during economic contractions. All these rainy day fund measures indicate a more prudent approach to saving reserves than in NJ, a state that has struggled to replenish its fund since it was emptied in 2009.

Spending Changes:

Almost all the comparison states cut spending in discretionary spending areas. These spending cuts were compounded during the recession because of steep growth in expenses such as health care costs. MD avoided such deep cuts by prioritizing spending on programs such as education and safety net programs, and distributing cuts evenly across major spending categories. MA, however, experienced deep cuts in areas such as health services, education, and public safety. Other common measures that states adopted during the recession to reduce spending included consolidating various agencies, laying off staff, and building process efficiencies.

Pension Funding:

The comparison states that funded their pensions programs throughout the recession were typically in better fiscal positions than those that neglected to consistently fund their liabilities. Generally speaking, higher liabilities contributed to greater fiscal pressures which decreased the likelihood that a state would contribute the proper amount towards its pension payments. CT experienced these pressures, as its pension liabilities increased steadily throughout and following the recession. IL had its own set of problems with compounding liabilities and currently does not have a formula or plan to meet its pension/OPEB obligations. NJ took a series of pension holidays during which no funding at all was directed towards the pension system. Conversely, MD entered the recession with a relatively well-funded pension and was able to maintain some contributions so that it ended up with only a slightly higher percentage of unfunded liabilities following the post-recession period. Similarly to MD, MA's funded pension liabilities decreased with the recession but the state kept pace with its contributions and currently has a plan to fully fund its pension by 2036. NC was similarly able to maintain stable pension funding, although this was due to a contribution formula separate from the rest of its budgeting portfolio.

Economic Factors

Even though all the comparison states were experiencing declines in manufacturing employment and productivity, MA, MD, and IL were able to recover jobs more quickly after the recession because they developed strong industrial clusters around education and healthcare services, government jobs, or agriculture. CT struggled more with economic recovery because of its heavy reliance on a less diverse range of industries. CT specifically experienced declines in chemical manufacturing, that moved jobs (and revenue) out of the state. NC also faced challenges in recovering jobs in some regions due to a heavy dependence on manufacturing. NJ experienced similar conditions, in which its manufacturing industries suffered declines during and after the recession.

In IL, MA, NC, and MD, the presence of major urban centers led to a two-sided recovery, whereby areas around large urban areas with growing industries recovered significantly faster than rural or less urban areas. This disparity was not only evident in economic measures, but was reflective in ailing social indicators such as poverty, foreclosures, and health indicators. CT's lack of a large city, and proximity to New York City and Boston, caused it to lose out on the benefits major urban areas provided.

Conclusion

In this report, New Jersey's relatively slow recovery from the Great Recession was compared to other states' experiences. As the state prepares for the next economic downturn, its empty rainy day fund, massive pension liabilities and debt, underfunded schools and infrastructure, and mounting inequality pose considerable challenges. However, there are several lessons to be learned from other states' preparation for, and recoveries, from the Great Recession.

The findings of this report demonstrate that each state's recovery was affected by a unique set of tax, budget, and policy decisions made before, during, and after the Great Recession. Whereas NJ prioritized cutting spending and taxes at the expense of long-term investments in its assets, states that took a more balanced approach to addressing revenue shortfalls generally emerged in a stronger position. Similarly, reliance on non-recurring revenue sources and excessive debt issuance hurt states in their recovery from the recession.

In order to avoid facing even more pressure in the next economic downturn, it is critical that NJ take steps to address structural budget deficits and build the reserves needed to weather economic changes without resorting to reducing investments in the areas that allow NJ residents to participate fully in the state's economy.

Appendices

Appendix A - Methodology

Figure A-1: Comparative Table

	% Change in GDP Growth			Fiscal Balance			SPM			Pension		
	Pre-Recession	Recession	Post-Recession	Pre-Recession	Recession	Post-Recession	Pre-Recession	Recession	Post-Recession	Pre-Recession	Recession	Post-Recession
Connecticut		-	-	=	=	=	+	+	+	-	-	-
Illinois		-	+	-	=	=	-	-	+	-	-	-
Maryland		+	+	=	+	+	=	+	+	=	=	=
Massachusetts		+	+	=	+	=	-	-	+	=	=	=
North Carolina		-	-	+	+	+	-	-	=	+	+	+

- Denotes worse performance than NJ
- = Denotes similar performance to NJ
- + Denotes better performance than NJ

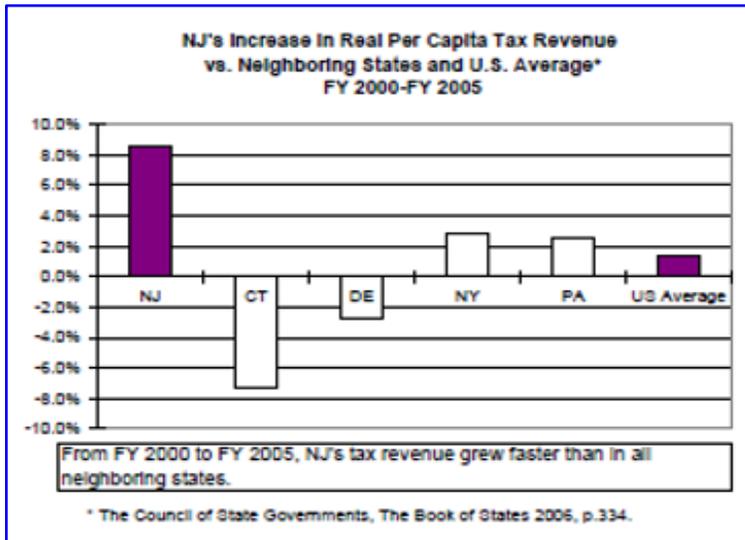
*In this table, the *pre-recession* period is based on 2007 data. The *recession* period is based on the average performance on these indicators in years 2008 and 2009. The *post-recession* period is based on the average performance from 2010 to 2014.

Figure A-2: Interviewee List

State	Interviewee Name	Affiliation
Connecticut	Manisha Srivastava	Office of Policy and Management - CT State Government
Illinois	Dr. John Jackson	Paul Simon Policy institute
Illinois	Adam Schuster	Illinois Policy Institute
New Jersey	Carl Davis	Institute on Taxation and Economic Policy
New Jersey	Jon Shure	Taft Communications
New Jersey	Henry Coleman	Edward J. Bloustein School of Planning and Policy
New Jersey	Richard Keevey	Edward J. Bloustein School of Planning and Policy
Massachusetts	Kurt Wise	Massachusetts Budget and Policy Center
Massachusetts	Andrew Bagley	Massachusetts Taxpayers Foundation
Maryland	Benjamin Orr	Maryland Center on Economic Policy
Maryland	David Juppe	Maryland Department of Legislative Services
Maryland	Warren Deschenaux	Maryland Department of Legislative Services
North Carolina	Brian Kennedy II	North Carolina Justice Center
North Carolina	John Quintero	South by North Strategies

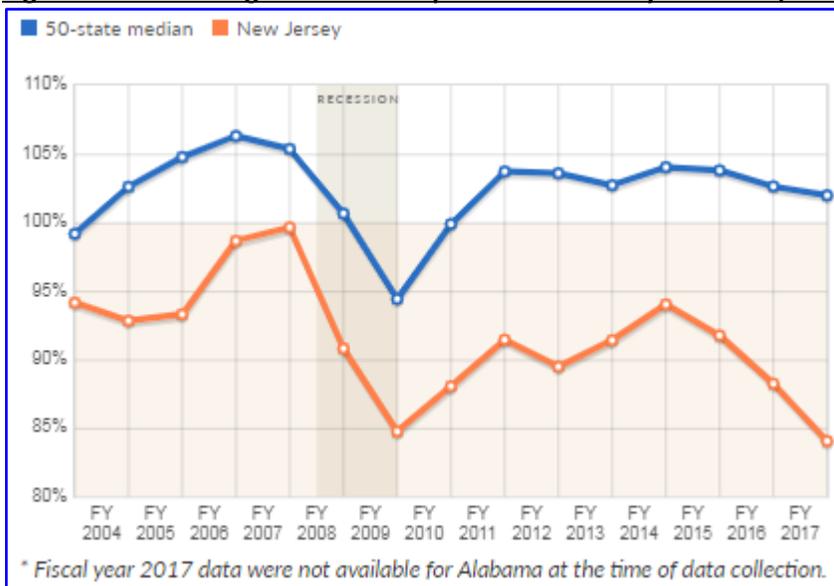
Appendix B - New Jersey

Figure B-1: Increase in Real Per Capita Tax Revenue (Council of State Governments, 2006)



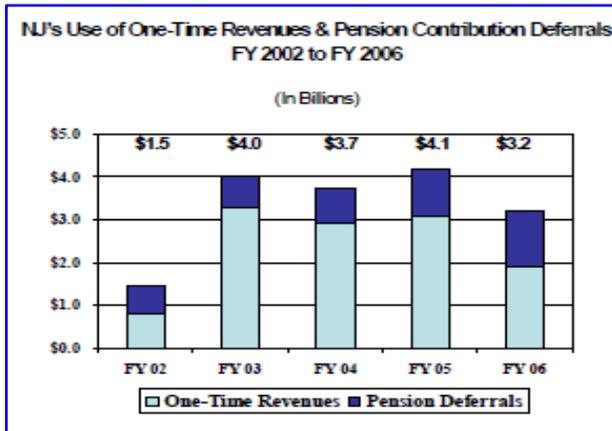
Source: <https://knowledgecenter.csg.org/kc/content/state-finances-solid-recovery-challenges-ahead>

Figure B-2: Percentage of Annual Expenses Covered by Revenue (Pew Charitable Trusts)



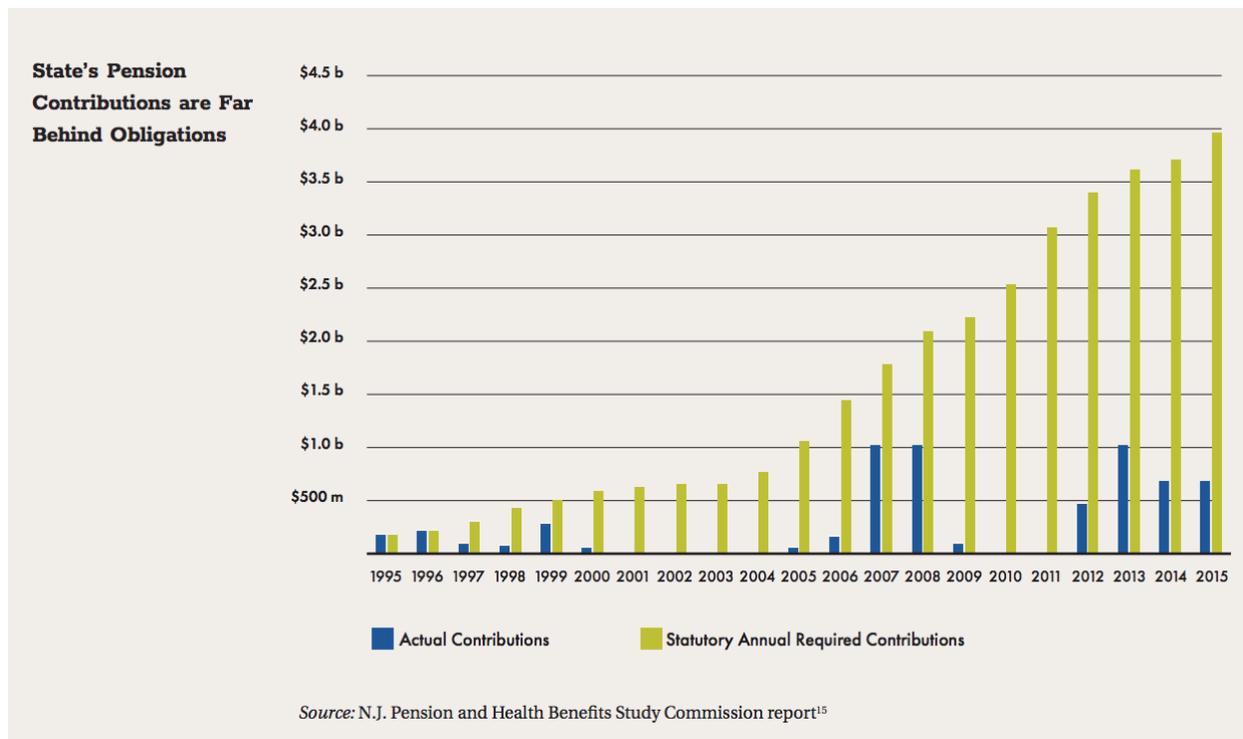
Source: [Pew Fiscal 50: State Trends and Analysis \(Expenses Covered by Revenue\)](#)

Figure B-3: Use of One-Time Revenues and Pension Contribution Deferrals (NJ FY2007 Budget-in-Brief)



Source: <https://www.nj.gov/treasury/omb/publications/07bib/pdf/bib.pdf>

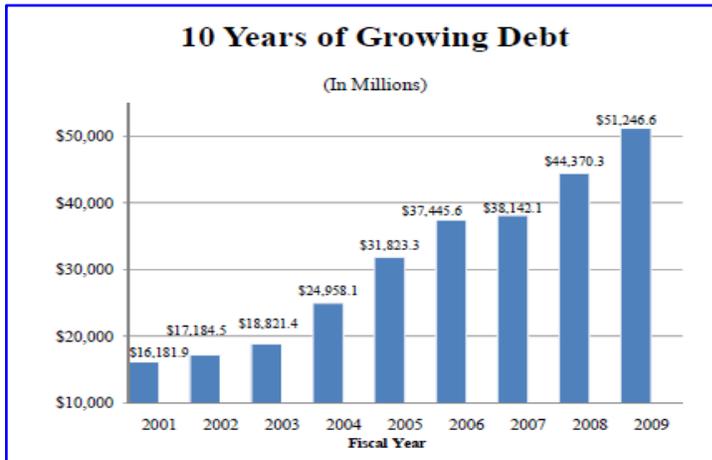
Figure B-4: Actual Pension Contributions versus Statutory Annual Required Contributions (NJ Treasury)



Source: N.J. Pension and Health Benefits Study Commission report¹⁵

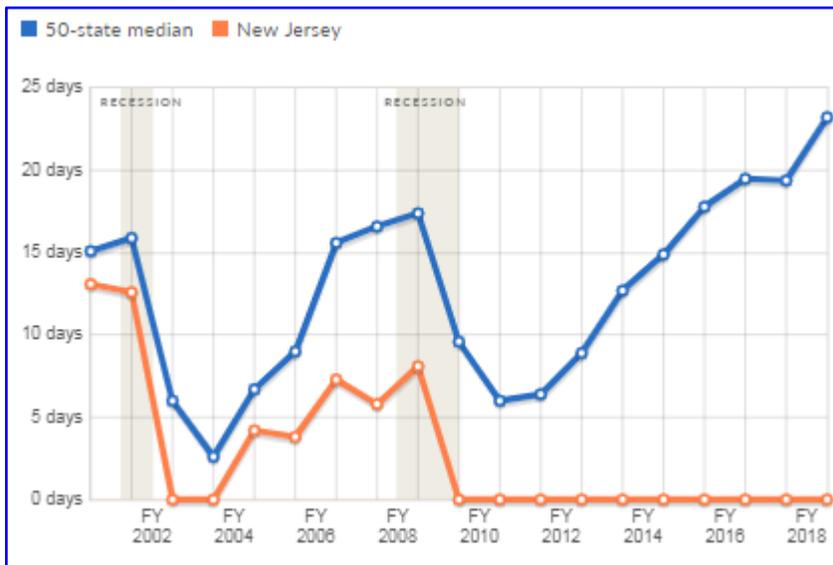
Source: <https://fundforni.org/sites/default/files/crossroadsnj/UPDATE%20FISCAL%20REPORT%20-%206-27-17.pdf>

Figure B-5: Debt Trends (FY2011 NJ Budget-in-Brief)



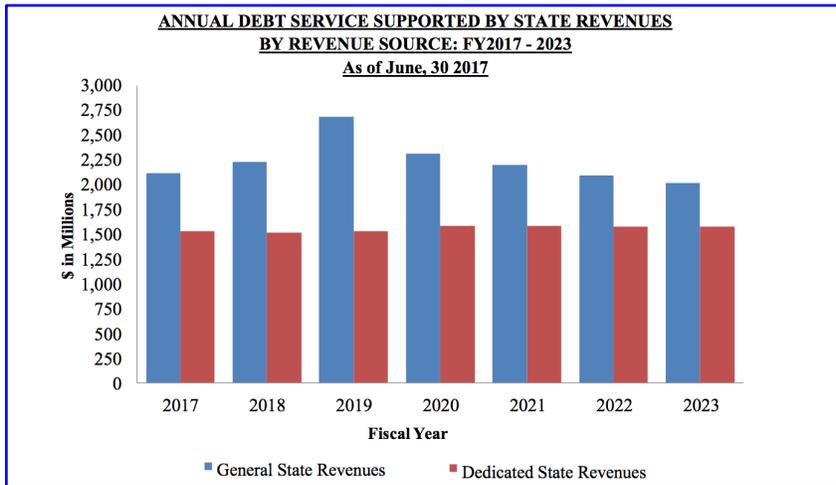
Source: <https://www.nj.gov/treasury/omb/publications/11bib/BIB.pdf>

Figure B-6: Days NJ Could Run on Only Rainy Day Funds, FY2000-18



Source: [Pew Fiscal 50: State Trends and Analysis \(Reserves and Balances\)](#)

Figure B-7: Annual Debt Service Supported by State Revenues (NJ Fiscal Year 2017 Debt Report)



Source: https://www.nj.gov/treasury/public_finance/pdf/DebtReportFY2017.pdf

Appendix C - Connecticut

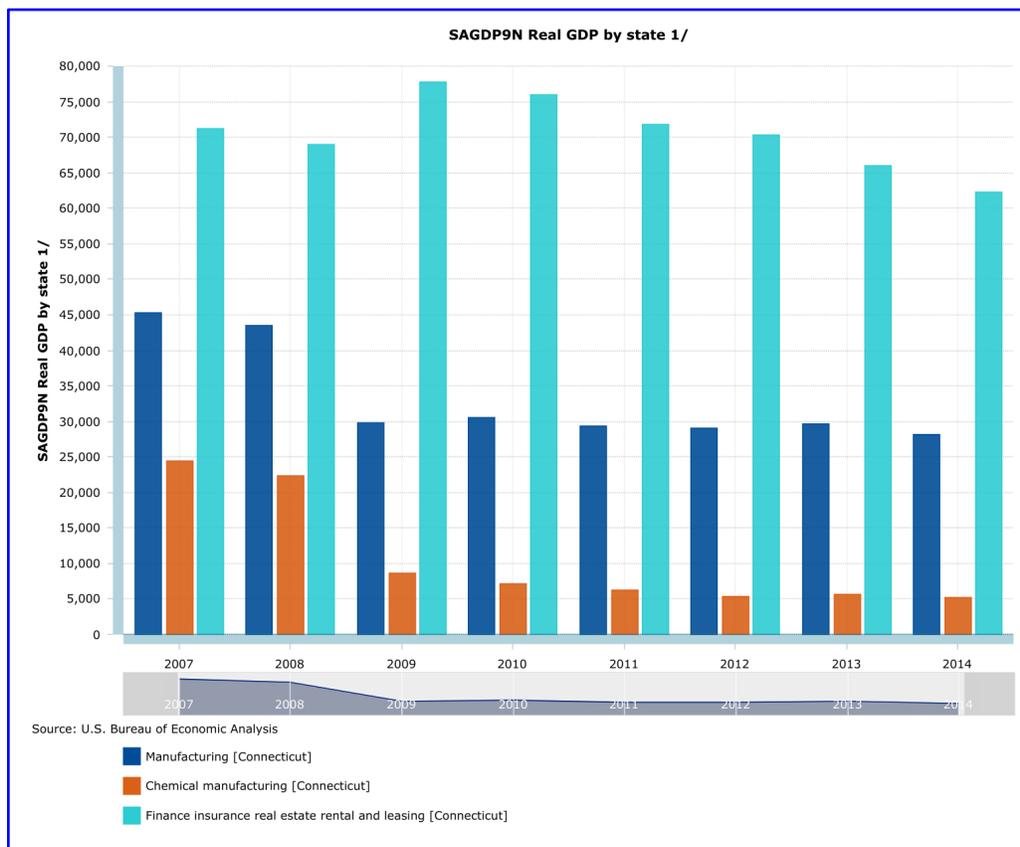
Figure C-1: FY2002, FY2014, and FY2016 Major State Tax Sources in CT and NJ (in millions \$)

	Connecticut						New Jersey					
	FY02		FY14		FY16		FY02		FY14		FY16	
	\$	% of State Budget										
Sales Tax	\$2,997.8	25.1%	\$4,100.6	23.3%	\$4,279.8	24.0%	\$5,996.8	29.1%	\$8,849.4	28.2%	\$9,267.7	28.2%
Corporate Income Tax	\$381.0	3.2%	\$782.2	4.4%	\$839.3	4.7%	\$1,171.5	5.7%	\$2,112.9	6.7%	\$2,299.0	7.0%
Personal Income Tax	\$4,265.9	35.7%	\$8,718.7	49.5%	\$9,452.5	53.0%	\$6,837.0	33.2%	\$12,311.7	39.3%	\$13,356.0	40.6%
Total	\$11,943.7	—	\$17,608.1	—	\$17,840.8	—	\$20,573.4	—	\$31,347.7	—	\$32,872.6	—

Source: For CT: "Report of the State Comptroller to the Governor for the Fiscal Year Ended June 30, 2002," Office of the State Comptroller, Dec. 31, 2002; "Report of the State Comptroller to the Governor for the Fiscal Year Ended June 30, 2014," Office of the State Comptroller, Dec. 31, 2014, p. 22; "Report of the State Comptroller to the Governor for the Fiscal Year Ended June 30, 2016," Office of the State Comptroller, Nov. 30, 2016, p. 24. For NJ: "New Jersey Comprehensive Annual Financial Report Fiscal Year Ended June 30, 2002," Department of the Treasury and Office of Management and Budget, Nov. 27, 2002, p. 288; "New Jersey Comprehensive Annual Financial Report Fiscal Year Ended June 30, 2014," Department of the Treasury and Office of Management and Budget, Apr. 2, 2015, p. 324; "The State of New Jersey 2016 Fiscal Year Comprehensive Annual Financial Report," Department of the Treasury and Office of Management and Budget, Mar. 15, 2017, p. 346

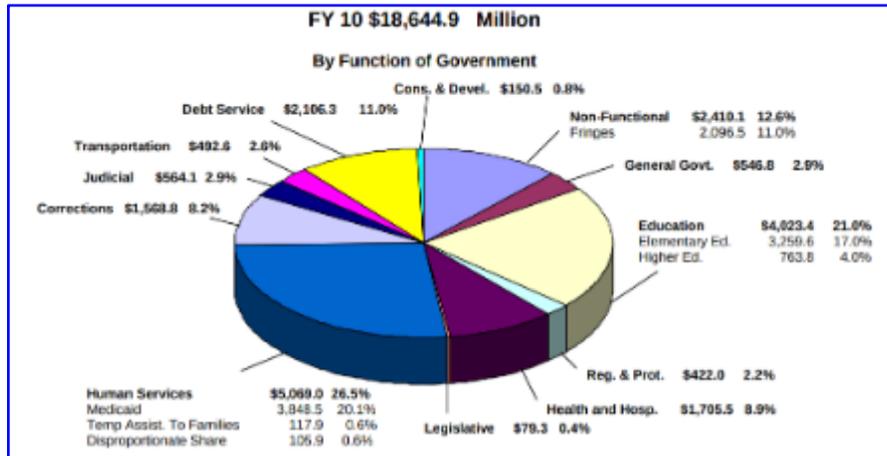
Source: [The Manhattan Institute](#)

Figure C-2: Manufacturing, Chemical Manufacturing, and Finance in CT as Real GDP (2007-2014)



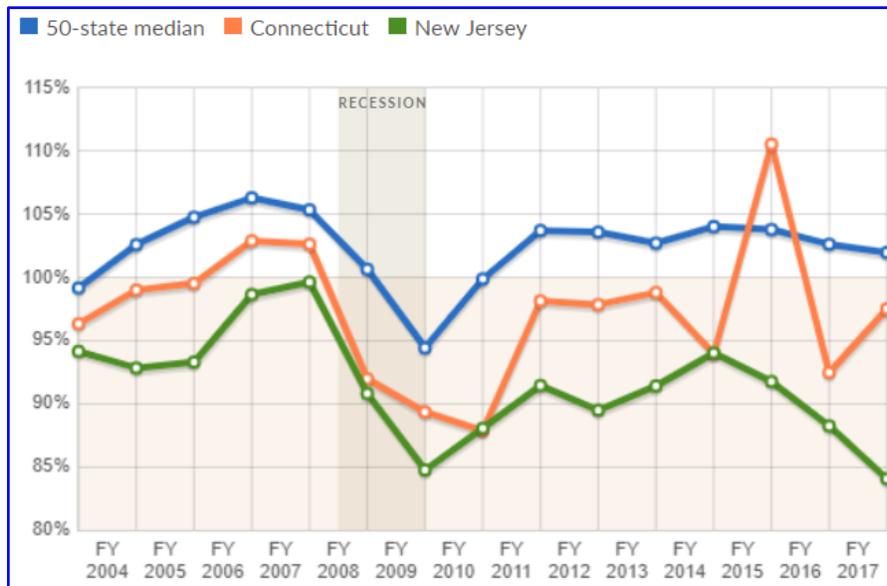
Source: [Bureau of Economic Analysis](#)

Figure C-3: FY2010 CT State Budget



Source: [Connecticut General Assembly](#)

Figure C-4: FY2004-FY2017 Percentage of Annual Expenses Covered by Revenue



Source: [Pew Fiscal 50: State Trends and Analysis \(Expenses Covered by Revenue\)](#)

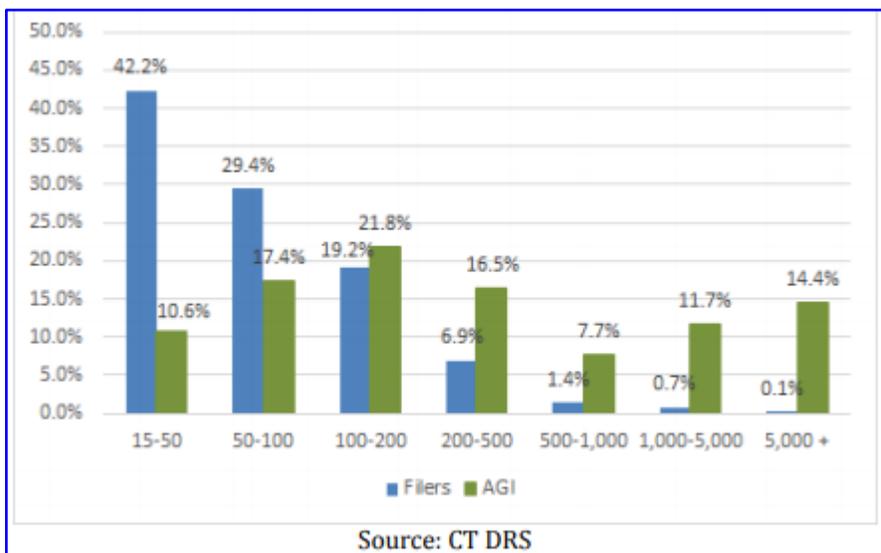
Figure C-5: Job and Real GSP Growth

	<u>Job Growth</u>		<u>Growth in real GSP</u>	
	2007 to	2010 to	2007 to	2010 to
	<u>2017</u>	<u>2017</u>	<u>2017</u>	<u>2017</u>
Connecticut	-1.0%	4.6%	-9.1%	-3.3%
Massachusetts	9.2%	12.0%	16.4%	14.3%
New York	9.2%	11.5%	12.7%	8.9%
New Jersey	1.3%	7.3%	1.8%	5.6%
Rhode Island	0.5%	8.0%	2.7%	4.9%
New Hampshire	4.3%	8.3%	10.5%	10.7%
Vermont	1.9%	5.4%	8.1%	5.9%
Maine	0.8%	5.0%	2.2%	3.7%
United States	6.3%	12.5%	13.0%	14.3%

Sources : U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics

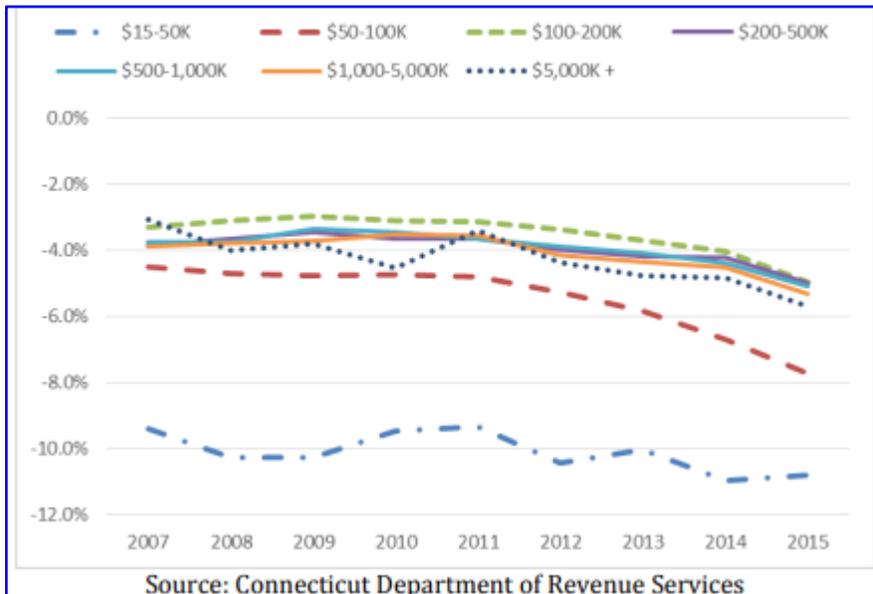
Source: [The Connecticut Economic Digest](#)

Figure C-6: Connecticut Filers and Adjusted Gross Income (AGI) as Percent of Total, by AGI Group, 2015



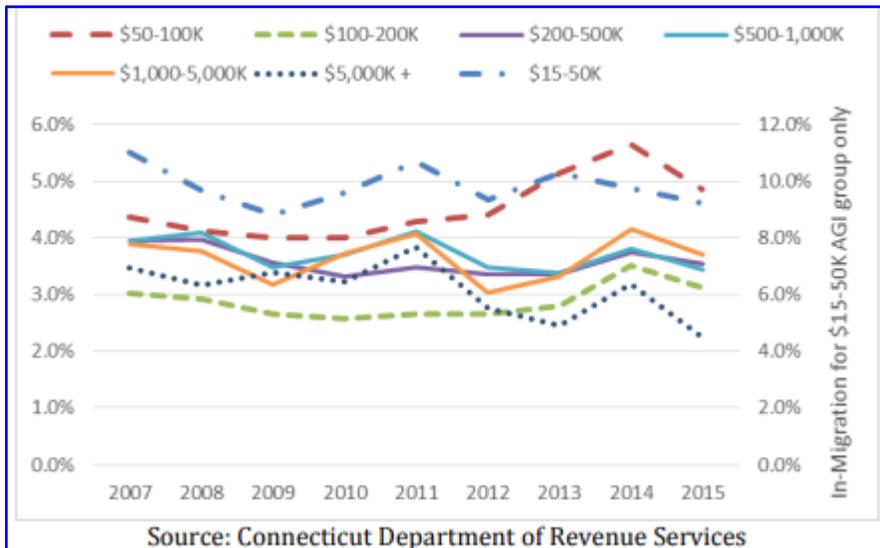
Source: [Connecticut Office of Policy & Management](#)

Figure C-7: 2007-2015 Connecticut Out-Migration by AGI Group



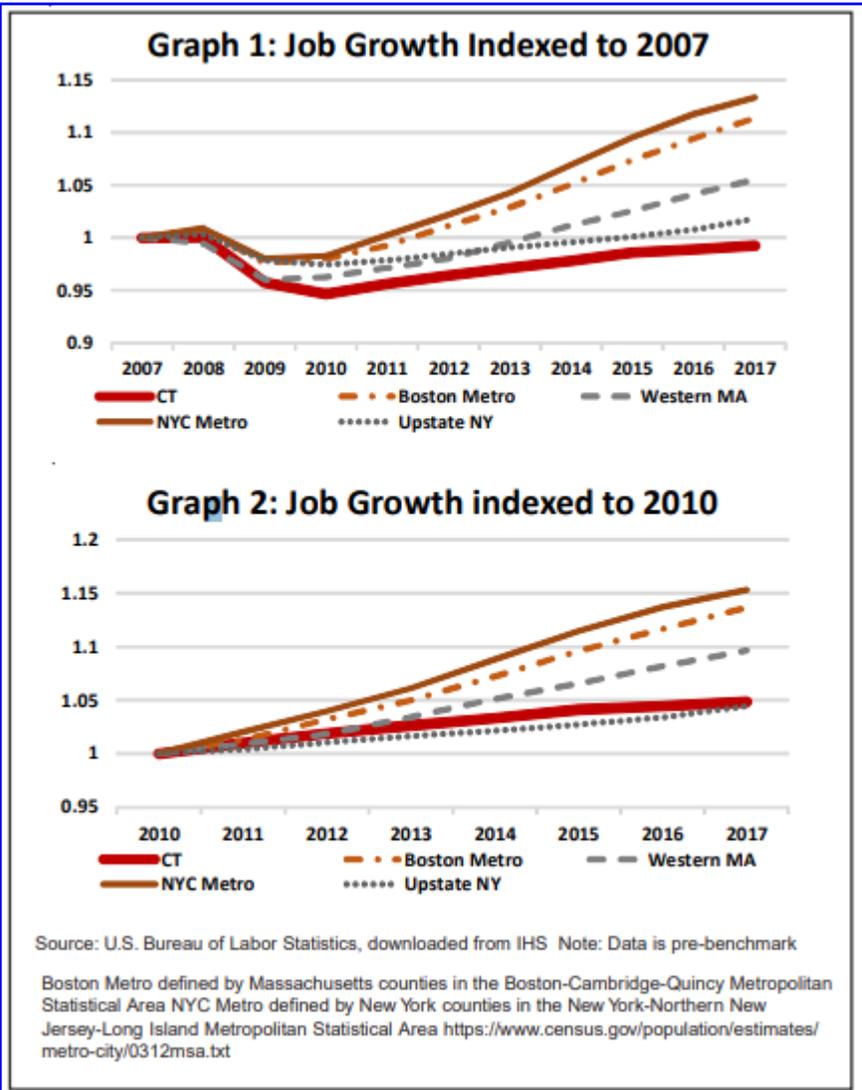
Source: [Connecticut Office of Policy & Management](#)

Figure C-8: 2007-2015 Connecticut In-Migration by AGI Group



Source: [Connecticut Office of Policy & Management](#)

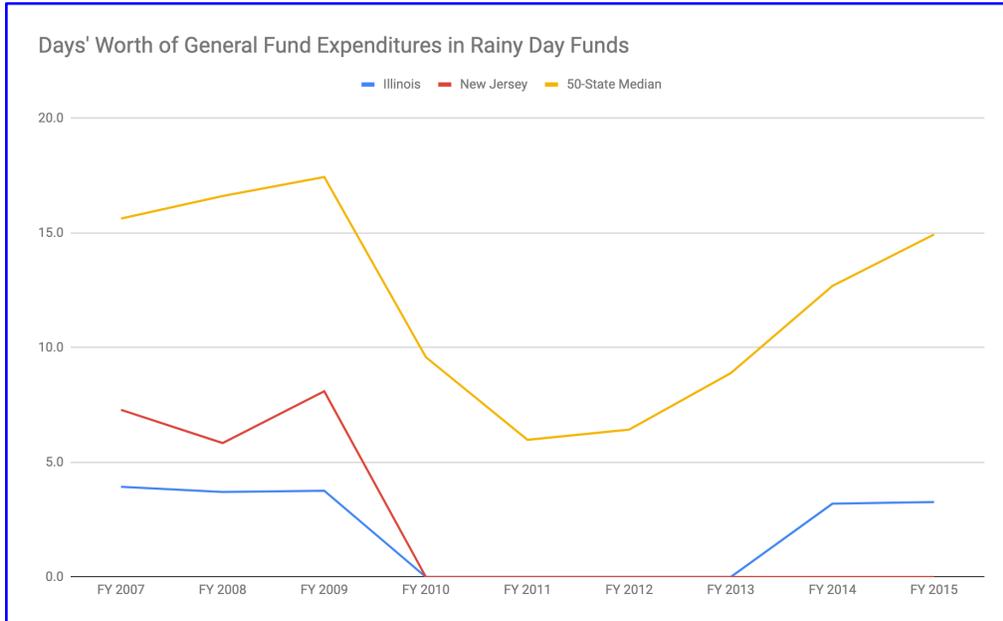
Figure C-9: Job Growth Indexed to 2007 and 2010



Source: [The Connecticut Economic Digest](#)

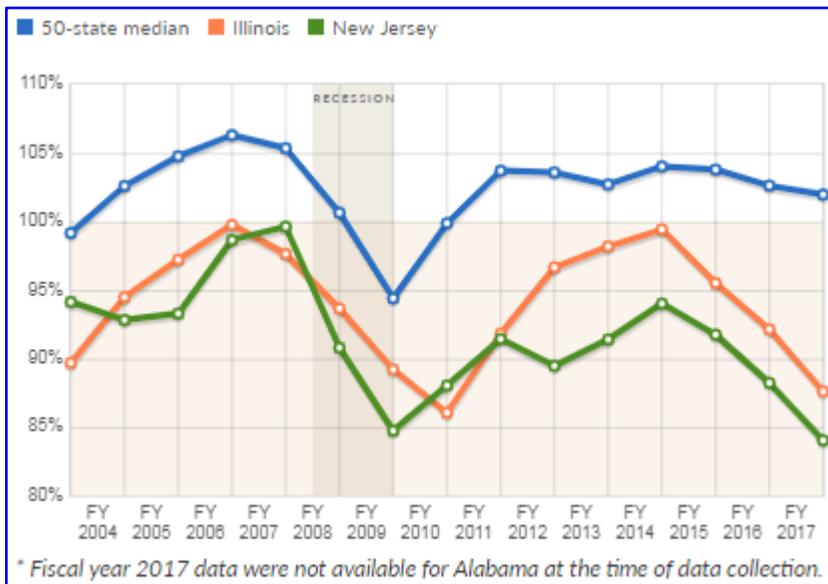
Appendix D - Illinois

Figure D-1: Days Worth of General Fund Expenditures in Rainy Day Funds



Source: [Pew Fiscal 50: State Trends and Analysis](#)

Figure D-2: Percentage of Annual Expenses Covered by Revenues FY 2004-2017



Source: [Pew Fiscal 50: State Trends and Analysis \(Expenses Covered by Revenue\)](#)

Figure D-3: Annual Real Gross Domestic Product by State: Total and top four sectors (in millions)

	Illinois	New Jersey	Illinois	New Jersey
	Real GDP 2007		Real GDP 2014	
Total (All Industry Total)	712,709.8	526,814.4	734,217.6	525,023.3
Manufacturing	97,346.4	58,840.3	98,933.7	45,062.1
Real Estate and Rental and Leasing	84,338.9	84,274.1	91,292.5	88,736.1
Professional and Business Services	90,635.6	72,163.9	100,879.6	84,306.5
Government and Government Enterprises	75,433.4	60,911.1	73,504.9	56,696.4

Source: [U.S. Bureau of Economic Analysis](#)

*Wholesaling surpassed Manufacturing for NJ by 2014

Illinois and New Jersey have the 5th and 8th highest GDP in the US, respectively

Figure D-4: Percentage of Annual Real Domestic Product for top 4 Sectors by State 2007-2014

	Illinois	New Jersey	Illinois	New Jersey
	% of GDP in 2007		% of GDP in 2014	
Manufacturing	13.66	11.17	13.46	8.58
Real Estate and Rental and Leasing	11.83	16	12.43	16.9
Professional and Business Services	12.72	13.7	13.74	16.06
Government and Government Enterprises	10.58	11.56	10.01	10.8

Source: U.S. Bureau of Economic Analysis

*Wholesaling surpassed Manufacturing for NJ by 2014

Figure D-5: School Districts in the 2013-2014 School Year

	Total Districts	Total Enrollment	Average District Enrollment	Total Schools
Illinois	865	2,025,371	2,388	3,927
New Jersey	602	1,335,382	2,291	2,410

Source: [Governing.com](http://www.governing.com), compiled from 2013-2014 Local Education Agency Universe Survey published by the National Center for Education Statistics

*Includes only local public school districts

Figure D-6: Illinois and New Jersey 2010-2014: Education Level Estimates

Subject	Illinois		New Jersey	
	Total		Total	
	Estimate	Margin of Error	Estimate	Margin of Error
Population 18 to 24 years	1,253,226	+/-867	785,669	+/-476
Less than high school graduate	14.1%	+/-0.2	12.6%	+/-0.3
High school graduate (includes equivalency)	27.8%	+/-0.3	29.0%	+/-0.4
Some college or associate's degree	45.7%	+/-0.4	44.9%	+/-0.5
Bachelor's degree or higher	12.5%	+/-0.2	13.5%	+/-0.3
Population 25 years and over	8,560,555	+/-1,047	6,052,621	+/-508
Less than 9th grade	5.5%	+/-0.1	5.4%	+/-0.1
9th to 12th grade, no diploma	6.9%	+/-0.1	6.2%	+/-0.1
High school graduate (includes equivalency)	27.0%	+/-0.1	28.8%	+/-0.2
Some college, no degree	21.2%	+/-0.1	17.0%	+/-0.1
Associate's degree	7.5%	+/-0.1	6.3%	+/-0.1
Bachelor's degree	19.7%	+/-0.1	22.5%	+/-0.1
Graduate or professional degree	12.2%	+/-0.1	13.8%	+/-0.1
Total Population				
Percent high school graduate or higher	87.6%	+/-0.1	88.4%	+/-0.1
Percent bachelor's degree or higher	31.9%	+/-0.1	36.4%	+/-0.2

Source: [U.S. Census Bureau](http://www.census.gov), 2010-2014 American Community Survey 5-Year Estimates

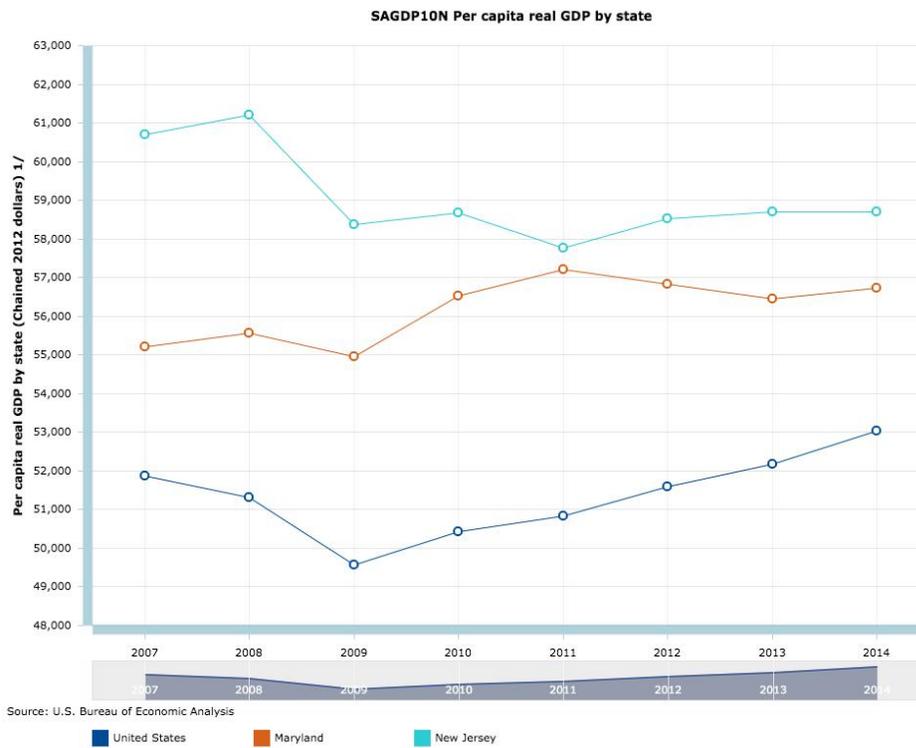
Figure D-7: State and Local Tax Burdens as a percent of State Income, Selected Study States and U.S. Average, FY2012

State	State-Local Tax Burden as a Percent of State Income	Rank
Connecticut	12.6%	2
Illinois	11.0%	5
Maryland	10.9%	7
Massachusetts	10.3%	12
New Jersey	12.2%	3
North Carolina	9.8%	20
U.S. Average	9.9%	

Source: [Tax Foundation](#), State-Local Tax Burden Rankings FY2012

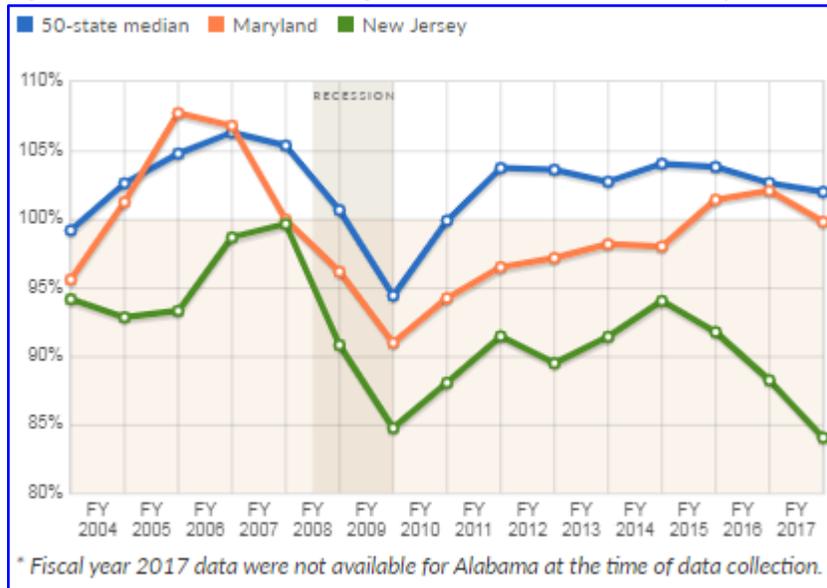
Appendix E - Maryland

Figure E-1: Real GDP Per Capita - MD, NJ, and US



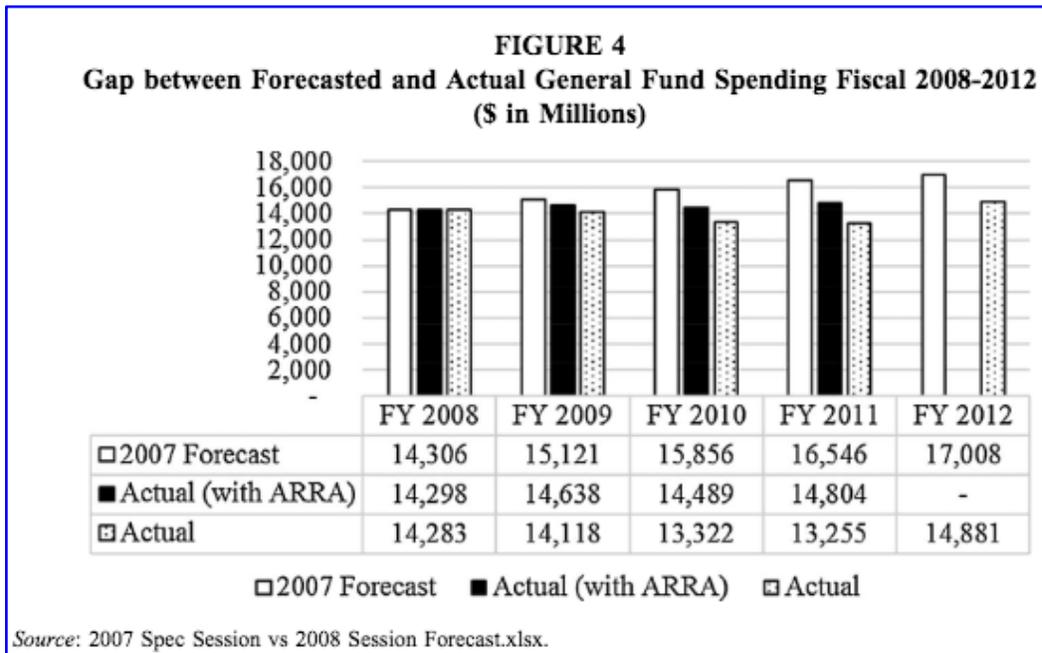
Source: [Bureau of Economic Analysis](#)

Figure E-2: Percentage of Annual Expenses Covered by Revenues



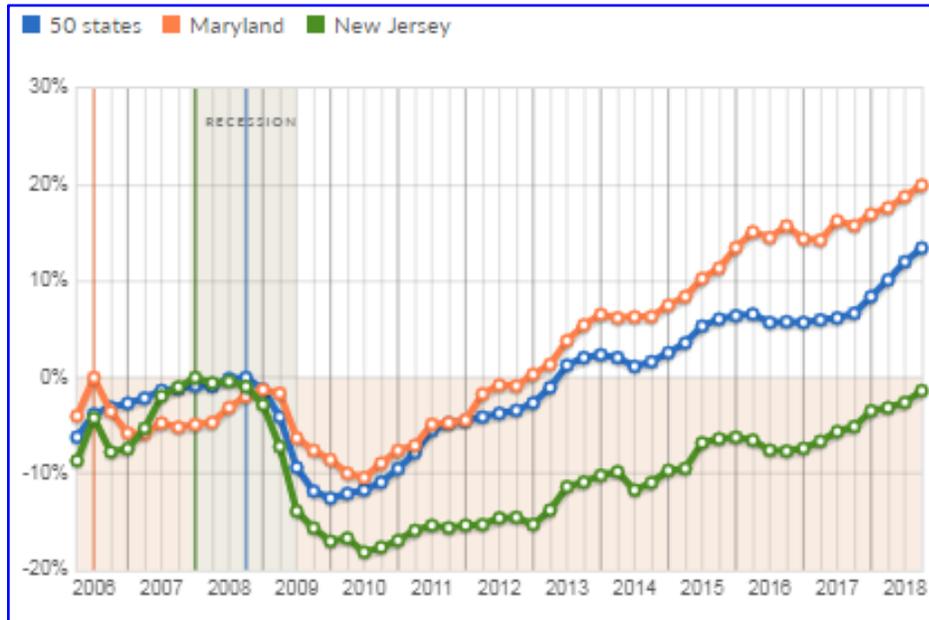
Source: [Pew Fiscal 50: State Trends and Analysis \(Expenses Covered by Revenue\)](#)

Figure E-3: Gap Between Forecasted and Actual General Fund Spending Fiscal 2008-2012



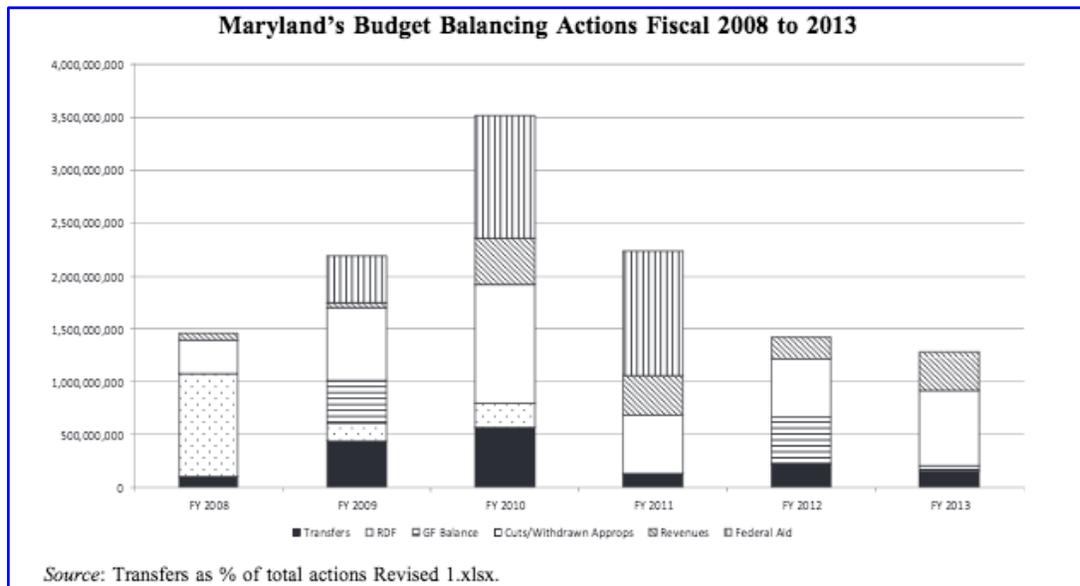
Source: Deschenaux, W. G. and Juppe, D. B. (2015), From the Field: It's Always Something: Maryland's Path through the "Great Recession". *Public Budgeting & Finance*, 35: 106-125.

Figure E-4: Change in Tax Revenue From Each State’s Peak Quarter, Adjusted for Inflation



Source: [Pew Fiscal 50: State Trends and Analysis \(Tax Revenue\)](#)

Figure E-5: Maryland’s Budget Balancing Actions Fiscal Year 2008-2013



Source: Transfers as % of total actions Revised 1.xlsx.

Source: Deschenaux, W. G. and Juppe, D. B. (2015), From the Field: It’s Always Something: Maryland’s Path through the “Great Recession”. *Public Budgeting & Finance*, 35: 106-125.

Figure E-6: Changes in Income, Filing Status Among Maryland's Millionaires, 2000 - 2009

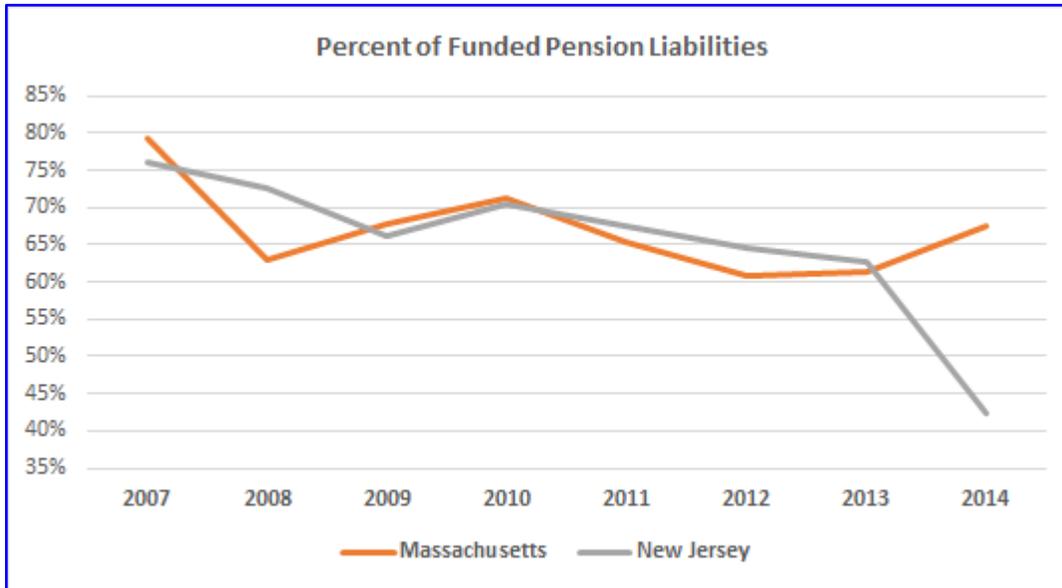
Changes in Incomes, Filing Status Among Maryland's Millionaires, 2000 - 2009					
Tax Year	Number of Returns with Net Taxable Income (NTI) over \$1 million	Change From Prior Tax Year in Number of Returns with NTI Over \$1 Million			
		Total	"Outflow"		"Inflow"
			Due to decline in income	Due to change in filing status (Resident to Part-Year/Non-Filer)	Due to increase in income or change in filing status (Part-Year/Non-Filer to Resident)
2000	3,817				
2001	3,071	-746	-1,856	-241	1,351
2002	2,918	-153	-1,268	-169	1,284
2003	3,359	441	-939	-185	1,565
2004	4,737	1,378	-981	-178	2,537
2005	5,591	854	-1,579	-246	2,679
2006	6,379	788	-1,835	-292	2,915
2007	7,192	813	-2,051	-343	3,207
2008	4,932	-2,260	-3,404	-448	1,592
2009	4,134	-798	-1,960	-364	1,526

Source: ITEP calculations based on data from the Maryland Office of the Comptroller

Source: Institute on Taxation and Economic Policy, 2009. [Where Have All of Maryland's Millionaires Gone? Nowhere – They're Probably Just Not Millionaires Anymore](#)

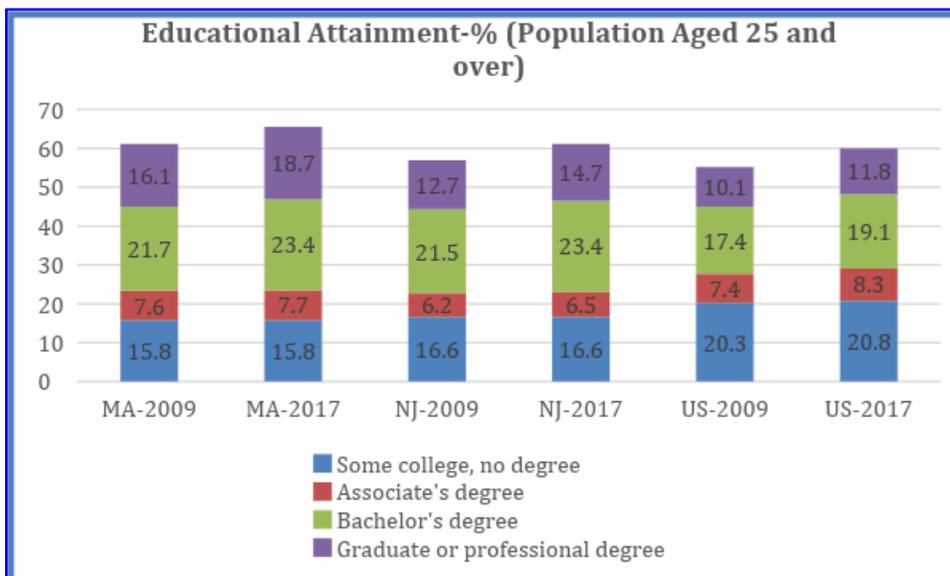
Appendix F - Massachusetts

Figure F-1: Percentage of Funded Pension Liabilities



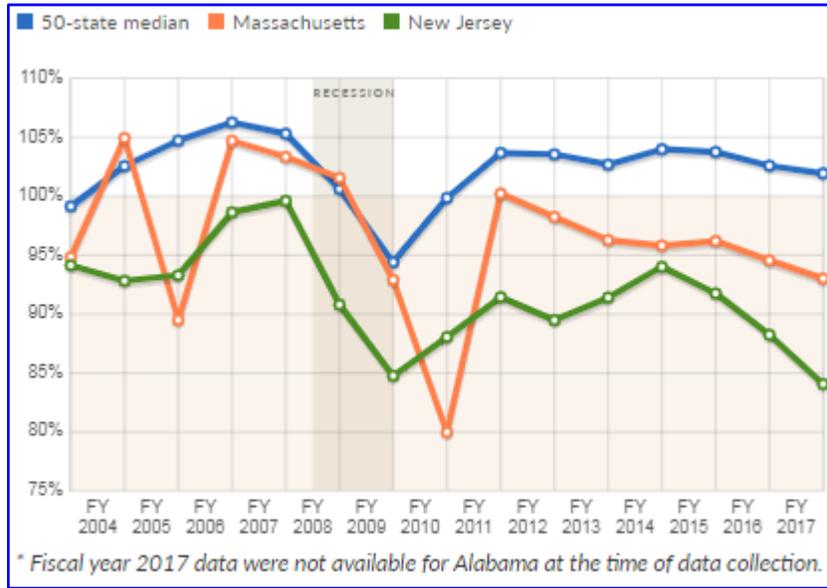
Source: Pew Charitable Trusts- [Public Sector Retirement Systems](#) (Funding and Payment Information)

Figure F-2: Education Attainment (Population Aged 25 and over)



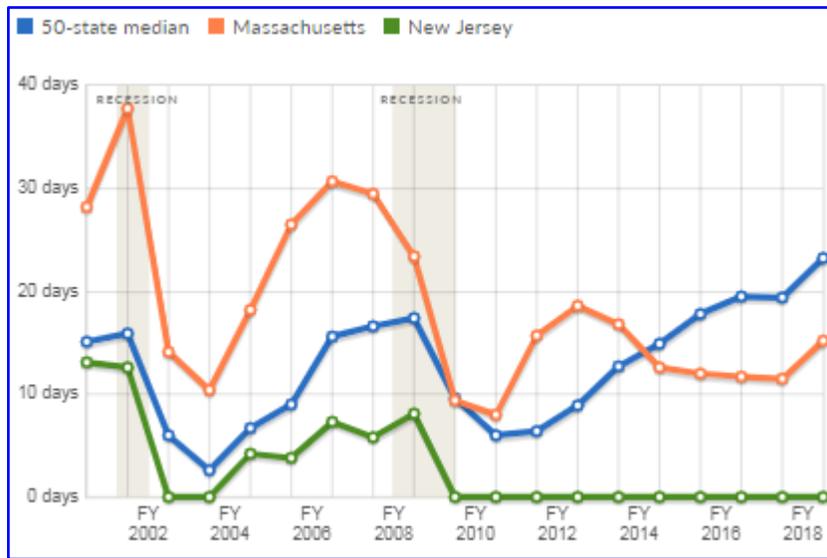
Source: [American Community Survey](#), Table S1501: Educational Attainment, 2009 and 2017 (5-Year Estimates)

Figure F-3: Percentage of Annual Expenses Covered by Revenue*



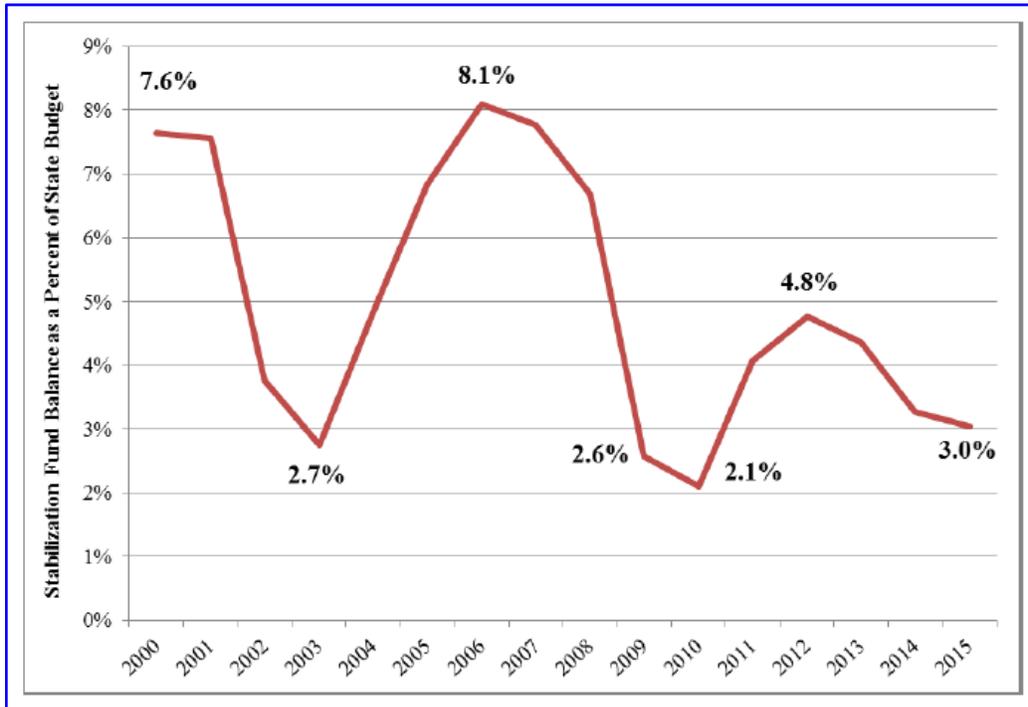
Source: [Pew Fiscal 50: State Trends and Analysis Fiscal Balance](#)

Figure F-4: Days Each State Could Run on Only Rainy Day Funds, FY2000-18



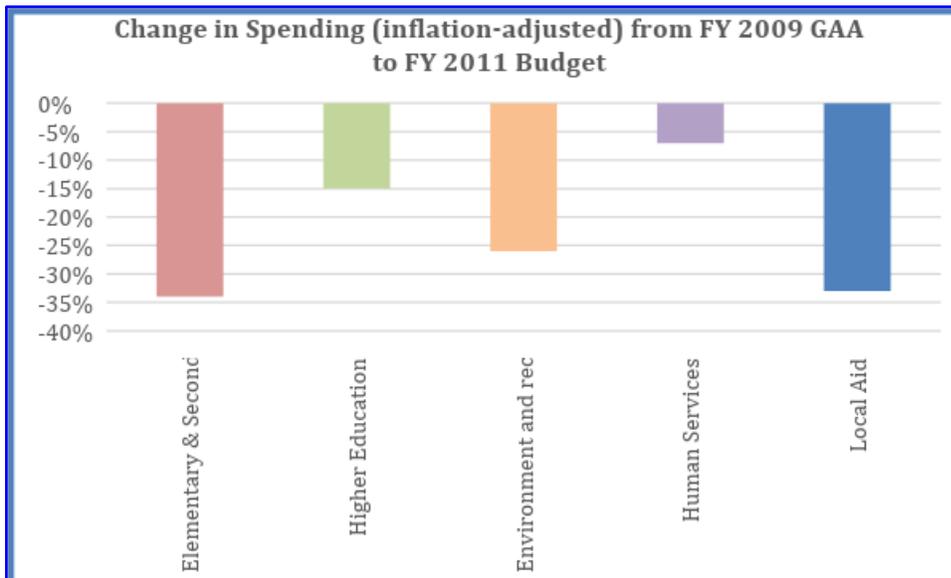
Source: [Pew Fiscal 50: State Trends and Analysis \(Reserves and Balances\)](#)

Figure F-5: State Stabilization Fund Balance as a Percent of State Spending, FY2000 – FY2015



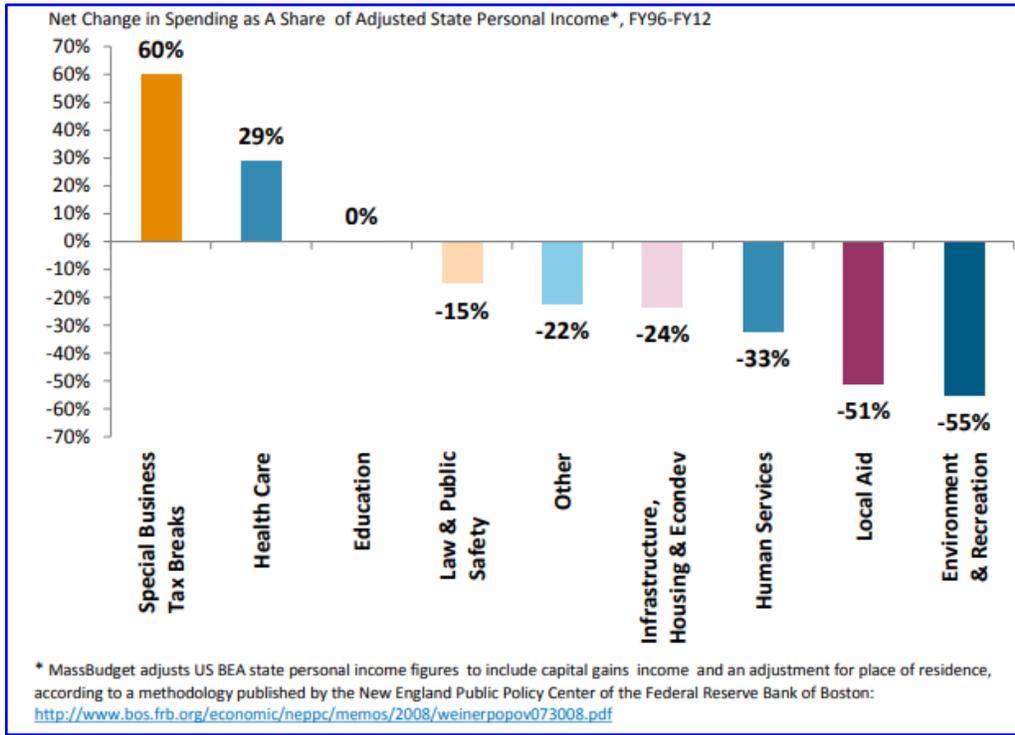
Source: [Massachusetts Taxpayers Foundation, "Stabilization Fund Dip During Recovery Puts State At Risk", Nov 2015](#)

Figure F-6: Change in Spending (inflation adjusted from FY2009 GAA to FY2011 Budget)



Source: [Massachusetts Budget and Policy Center, "The Great Recession, Policy Choices, & State Budget Cuts", July 2010](#)

Figure F-7: Growth of Special Business Tax Breaks as A Share of The State Economy, FY96-FY12



Source: MassBudget, "Business Tax Breaks in Massachusetts", Aug 2012

Appendix G - North Carolina

Figure G-1: GDP of New Jersey and North Carolina from 2006-2017

GDP Per Capita	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
New Jersey	60,503	60,708	61,193	58,380	58,679	57,767	58,516	58,711	58,708	59,546	59,909	60,684
North Carolina	48,511	47,865	48,007	45,199	45,268	45,440	45,060	45,215	45,631	46,597	46,574	47,142

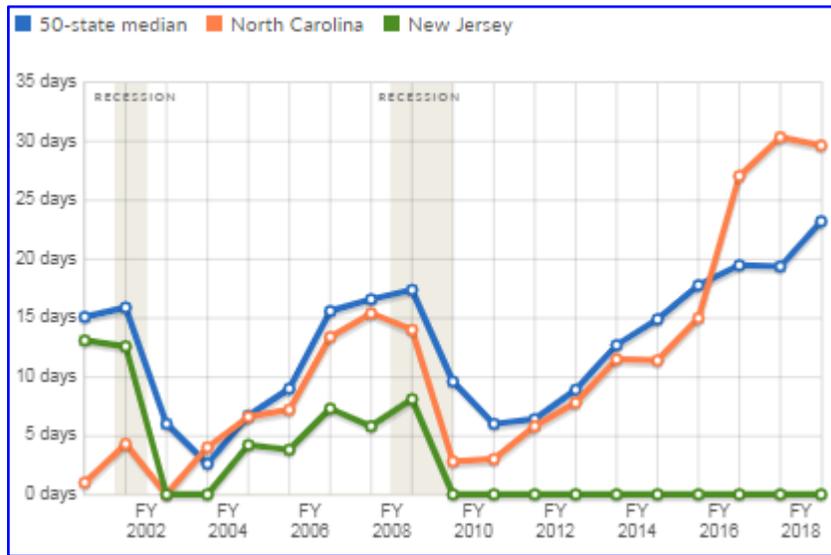
Source: [Bureau of Economic Analysis, U.S. Department of Commerce](#)

Figure G-2: Funding Status of North Carolina in 2010 and 2012

2010	2010	2010	2010	2010	2010	2010
Liability	Assets	Pension Debt	Funded Ratio	Funding Rank	Recommended Payment (ARC)	Actual Payment
\$79,558,260	\$76,599,104	\$2,959,156	96.3%	2	\$771,800	\$773,106
2012	2012	2012	2012	2012	2012	2012
Liability	Assets	Pension Debt	Funded Ratio	Funding Rank	Recommended Payment (ARC)	Actual Payment
\$85,079,557	\$81,198,252	\$3,881,305	95.4%	2	\$1,398,191	\$1,399,102

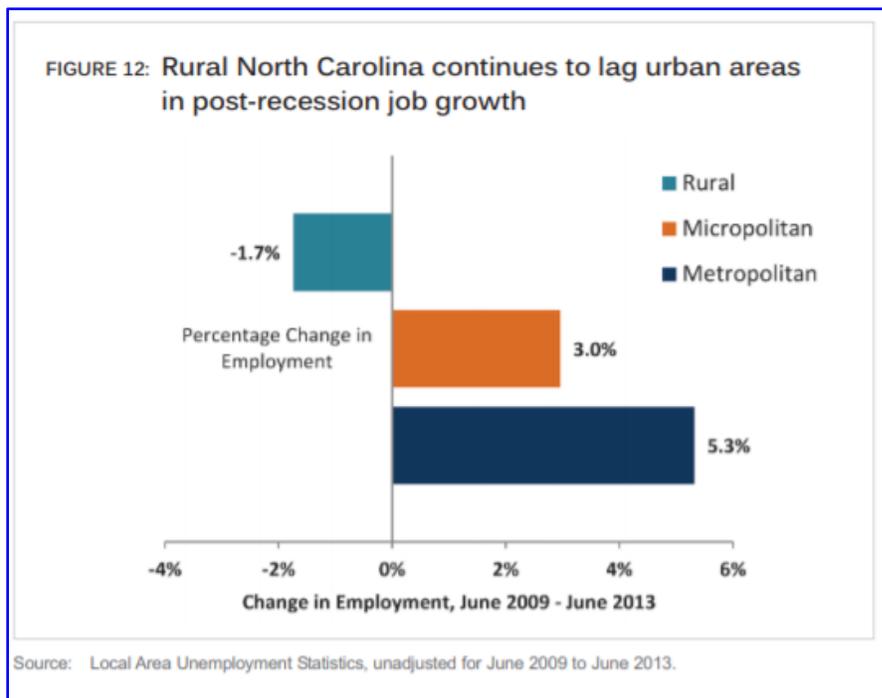
Source: [The Pew Charitable Trusts](#)

Figure G-3: The Number of Days that NC Could Run on Rainy Day Funds



Source: [Pew Charitable Trust- Fiscal 50: Reserves and Balances](#)

Figure G-4: The Gap of Job Growth between Urban and Rural Areas



Source: [North Carolina Justice Center](#)

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