

8-2017

# Impact of the New York State Tax Levy Cap on School Districts' Financing: A Retrospective and Prospective Analysis

Ann Vaccaro-Teich CPA  
St. John Fisher College, [ann.teich@gmail.com](mailto:ann.teich@gmail.com)

## [How has open access to Fisher Digital Publications benefited you?](#)

Follow this and additional works at: [https://fisherpub.sjfc.edu/education\\_etd](https://fisherpub.sjfc.edu/education_etd)

 Part of the [Education Commons](#)

---

### Recommended Citation

Vaccaro-Teich, Ann CPA, "Impact of the New York State Tax Levy Cap on School Districts' Financing: A Retrospective and Prospective Analysis" (2017). *Education Doctoral*. Paper 322.

Please note that the Recommended Citation provides general citation information and may not be appropriate for your discipline. To receive help in creating a citation based on your discipline, please visit <http://libguides.sjfc.edu/citations>.

This document is posted at [https://fisherpub.sjfc.edu/education\\_etd/322](https://fisherpub.sjfc.edu/education_etd/322) and is brought to you for free and open access by Fisher Digital Publications at St. John Fisher College. For more information, please contact [fisherpub@sjfc.edu](mailto:fisherpub@sjfc.edu).

---

# Impact of the New York State Tax Levy Cap on School Districts' Financing: A Retrospective and Prospective Analysis

## **Abstract**

The purpose of this quantitative archival case study, utilizing a retrospective analysis and prospective model, was to highlight the consequences of the enactment of the New York State Tax Cap Legislation, Chapter 97 of the Laws of 2011, on the children in New York State. The data were gained from the New York State Education Department for 669 public school districts (excluding the "Big Five" school districts), from the period of 2012-13 through 2016-17, to create a financial forecast model to project the gap in revenues from 2017-18 through 2021-22, based on districts Need/Resource Capacity index. The forecast showed a significant disparity in the per-capita funding gap between expenditures and tax levies for high-need rural districts at \$20,529, compared to low-need districts at \$7,617. The study shows how serious and tenuous the future of school districts is in the State of New York and how their ability to service the children in their communities is being compromised. This study calls for immediate action by its citizens to demand that the funding of school districts change and that the injustice of not providing the same level of education to all students comes to an end.

## **Degree Type**

Dissertation

## **Degree Name**

Doctor of Education (EdD)

## **Department**

Executive Leadership

## **First Supervisor**

Robert Siebert

## **Subject Categories**

Education

Impact of the New York State Tax Levy Cap on School Districts' Financing:  
A Retrospective and Prospective Analysis

By

Ann Vaccaro-Teich, CPA

Submitted in partial fulfillment  
of the requirements for the degree  
Ed.D. in Executive Leadership

Supervised by

Dr. Robert Siebert

Committee Member

Dr. Gilbert Louis

Ralph C. Wilson, Jr. School of Education

St. John Fisher College

August 2017

Copyright by  
Ann Vaccaro-Teich  
2017

## **Dedication**

For me, this was a journey that not only allowed me to grow as a leader but one that continued to push me further to understand myself and how my leadership can best be used to help others and advocate for the children in our society. I am indebted to St. John Fisher College for having the foresight to build a program in which its foundation is built on guiding one's own learning through the simultaneous integration of the course work and the writing of the dissertation. It provided me with the incredible advantage of being able to practice, receive feedback, be supported, be efficient, and be successful in completing the program in timely manner. This is what it means to "Trust the Process."

However, none of this would have been possible without the unconditional support and love of my husband, Lee Teich, and my extraordinary, talented, and wise Mother, Margaret Vaccaro. They supported me in ways that went above and beyond the call of duty, by my husband taking my mother to church, doctor appointments, helping me sort and organize my references, and helping my mother who proofread every course paper and my dissertation, all while being 95 years young and having limited eyesight. This journey would not have even been remotely possible if it were not for their support, along with that of my sister, Barbara, and her family, my friends, and Cohort 7. I am truly blessed and grateful to have such incredible cheerleaders in my corner.

I am also grateful for having had remarkable mentors throughout my career, Betsey Hardeman, Joseph Zambito, and Ken Mitchell. Each taught me the importance of education and the work necessary for all children to succeed and not to let political and

financial agendas get in the way of doing what is best for children. If it was not for their advocacy, I would not have ventured into taking on such a challenge.

I also want to express gratitude and appreciation to my committee, Dr. Robert Siebert, Committee Chair, and Dr. Gilbert Louis, Committee Member, who worked tirelessly to guide and support me as I navigated through this very challenging subject, none of which would have been possible without their vision and insights.

One final note of appreciation is to the memory of my Dad, Paul J. Vaccaro, the hardest working, caring man I have ever known. He instilled in me the ability to persevere, to be strong, to be independent, to use my common sense, while at the same time, he taught me to be selfless and care for others who are less fortunate. I am grateful for the love and support that he and my mom gave me in order for me to become the person I am today. They are both incredible, courageous individuals who persevered through life's heartaches and challenges with dignity and graciousness, and they imparted those qualities in each of their daughters, and for that, I am truly grateful. I love you both very much.

### **Biographical Sketch**

Ann Vaccaro-Teich, CPA, is currently the Assistant Superintendent for Business at White Plains City School District. Ms. Vaccaro-Teich attended Pace University from 1982 to 1984 and graduated with a Bachelor of Business Administration, Certified Public Accounting degree in 1984. She attended Pace University from 1998 to 1999 and graduated with a Master of Education, School Administration, and Supervision degree in 2000. She came to St. John Fisher College in the summer of 2015 and began doctoral studies in the Ed.D. Program in Executive Leadership. Ms. Vaccaro-Teich pursued her research on the impact of the New York State tax levy cap on school districts' financing under the direction of Dr. Robert Siebert and Dr. Gilbert Louis and received the Ed.D. degree in 2017.

## **Abstract**

The purpose of this quantitative archival case study, utilizing a retrospective analysis and prospective model, was to highlight the consequences of the enactment of the New York State Tax Cap Legislation, Chapter 97 of the Laws of 2011, on the children in New York State.

The data were gained from the New York State Education Department for 669 public school districts (excluding the “Big Five” school districts), from the period of 2012-13 through 2016-17, to create a financial forecast model to project the gap in revenues from 2017-18 through 2021-22, based on districts Need/Resource Capacity index. The forecast showed a significant disparity in the per-capita funding gap between expenditures and tax levies for high-need rural districts at \$20,529, compared to low-need districts at \$7,617.

The study shows how serious and tenuous the future of school districts is in the State of New York and how their ability to service the children in their communities is being compromised. This study calls for immediate action by its citizens to demand that the funding of school districts change and that the injustice of not providing the same level of education to all students comes to an end.



## Table of Contents

Dedication .....	iii
Biographical Sketch .....	v
Abstract .....	vi
Table of Contents .....	vii
List of Tables .....	x
List of Figures .....	xi
Chapter 1: Introduction .....	1
Funding Public Education: Historical Perspective .....	2
History of Tax and Expenditure Limitations .....	8
Problem Statement .....	17
Statement of Purpose .....	19
Potential Significance of the Study .....	19
Theoretical Rationale .....	20
Research Questions .....	22
Definitions of Terms .....	22
Chapter Summary .....	26
Chapter 2: Review of the Literature .....	28
Introduction and Purpose .....	28
Funding of Public Education – Historical Perspective .....	28
Court Decisions Regarding Equity and Adequacy .....	33

History of Tax and Expenditure Limitations .....	38
Impact of Tax and Expenditure Limitations .....	41
Funding of Public Schools in New York State .....	46
Chapter Summary .....	55
Chapter 3: Research Design Methodology .....	57
Introduction.....	57
Context and Participants .....	59
Methodology .....	61
Instruments Used in Data Collection .....	63
Data Analysis .....	65
Summary .....	67
Chapter 4: Results .....	68
Research Questions.....	68
Research Questions.....	68
Data Analysis and Findings .....	70
Summary of Results.....	81
Chapter 5: Discussion .....	83
Introduction.....	83
Implications of Findings .....	84
Limitations .....	90
Recommendations.....	90
Conclusion .....	96
References.....	100

Appendix A..... 108

## **List of Tables**

<b>Item</b>	<b>Title</b>	<b>Page</b>
Table 1.1	Allowable Tax Levy Growth Factor	15
Table 1.2	Impact of Low Tax Cap Growth on School District Types	15
Table 2.1	State TEL Index	44
Table 2.2	Ranking of Selected States by Highest and Lowest Property Tax Per Capita in FY 2010	50
Table 3.1	Need/Resource Capacity Categories	60
Table 3.2	Number of School Districts by Need/Resource Capacity Categories	61
Table 4.1	Need/Resource Capacity Categories	71
Table 4.2	Types of School Districts by Need/Resource Capacity Categories	72
Table 4.3	Base-Line Demographics of School Districts	73
Table 4.5	Tests of Between-Subjects Effects – Dependent Variable: FY2021	78
Table 4.6	Descriptive Statistics – Dependent Variable: FY2021	80
Table 4.7	Post Hoc Comparisons – Games-Howell	80

## **List of Figures**

<b>Item</b>	<b>Title</b>	<b>Page</b>
Figure 2.1	Gap between 100 Wealthiest and 100 Poorest School Districts	48
Figure 4.1	Comparison of Per-Capita Spending Increase by Need/Resource Capacity Index	74
Figure 4.2	Per-Capita Expenditures, Tax Levy, and Funding Gap by Need/Resource Capacity	76

## Chapter 1: Introduction

How is it possible in the 21st century, that children attending school in the United States, one of the richest countries in the world, do not have equal access to educational opportunity? At what point will society recognize, and actually do something, to fix an educational funding system that discriminates against its poorest citizens by allowing some school children to receive more funding for their education than others solely based on where they live. Lord Acton, a historian from the 19<sup>th</sup> century declared:

A child is not born to the station of its parents, but with an indefinite claim to all the prizes that can be won by thought and labor. It is in conformity with the theory of equality . . . to give as near as possible to every youth an equal state in life. (Kozol, 1991, p. 83)

A report by the Alliance for Quality Education (Marcou-O'Malley, 2016b), states that according to the Organization of Economic Cooperation and Development, the majority of member nations, other than the United States, Israel, and Turkey, contribute equally toward every student or provide additional funding to those more disadvantaged students in poorer communities. The report further states that, “within the United States, New York State is a leader in educational inequality . . . and according to The Education Trust, New York State ranks Number 2 in the nation in educational inequality” (p. 4).

It has been over 25 years since the publication of Jonathan Kozol's (1991) seminal book, *Savage Inequalities*, wherein he reveals the gross injustices that exist within our nation's poorest schools. He believed that these inequalities would be fixed

by its citizens; that educators, citizens, and legislators would become “passionate advocates of social justice for children, if our society is to thrive in the future” (Morse, 2007, p. 40).

However, according to a recent court ruling by Judge Thomas G. Moukawsher of the Hartford State Superior Court in the case of Connecticut Coalition for Justice in Education Funding v. Rell (2016), he declared that the state’s school financing system is unconstitutional and broken. He further stated:

After decades of lawsuits about equity and adequacy in education financing, after federal efforts like No Child Left Behind and Race to the Top, after fights over the Common Core standards and high-stakes testing and the tug of war between charter schools and community schools, the stubborn achievement gaps between rich and poor, minority and white students persist (Zernike, 2016).

### **Funding Public Education: Historical Perspective**

John Locke (1690), the 17<sup>th</sup> century English philosopher and political theorist (1632-1704), argued in his publication “Second Treatise on Government” that government was established to “protect natural right to life, liberty, and property” and it was up to educated people to judge if the government was fulfilling its purpose (Morse, 2007, p. 1). According to Morse (2007), Locke’s work provided the foundation for the Bill of Rights, which played an important role in developing education law.

Horace Mann, Secretary of the Massachusetts Board of Education in the 1830s spurred the Common School Movement, “proclaiming education is the great equalizer” (Morse, 2007, p. 3). He believed that common schools would be for all children, not just a few and, therefore, would eliminate any economic divide. He argued for public support

of schools through property taxation. He also stated, in his Tenth Annual Report to the Board of Education (1846), that public education is a benefit to all of us, and support for schools should not be on the basis of what citizens can afford to pay, rather it should be based on what is needed by children (Urban & Wagoner, 2014).

The Progressive Era (1890-1915) marked significant changes in American social, political, and economic life. At the same time, there was a large influx of enrollment in urban centers due to immigration from rural America and abroad. Much of the structure of schools today is a result of many of the reforms that were instituted during that period, such as centralization of schools, curriculum differentiation, seniority, teacher associations, and the addition of a school superintendent. However, despite these changes, public schools were still financed primarily through local property taxes (Urban & Wagoner, 2014).

During the mid-1800s, most states gave local authorities permission to finance public schools through the process of levying taxes on the value of property owned by its citizens. However, because property values vary significantly from municipality to municipality, the states also created unequal funding of local school districts (Urban & Wagoner, 2014).

In Ellwood Cubberley's (1905) seminal research on finance theory, "School Funds and Their Apportionment," he found that "what is a slight effort for one community is an average load for another and an excessive burden for the third" (p. 201). As a result, districts with greater property tax values were able to spend more per pupil than those districts with lower property values. His conclusion was that "direct state apportionments to poor counties" are needed to "equalize educational advantages" (p. 203).



In 2015, Jonathan Kozol stated, “we ought to finance the education of every child in America equitably with adjustments made only for the greater or lesser needs of certain children. And the funding should all come from the collective wealth of our society” (Brimley, Verstegen, & Garfield, 2016, p. 52). According to Brimley et al., (2016), equity does not mean equal. “Spending the same number of dollars on each student is evidence of equality, but [it] may not be equitable – some students, such as those with special needs, require greater expenditures for their education than do other students” (p. 52).

According to Odden and Picus (2014), most states started in the 1920s to implement a funding plan called Foundation Programs to address issues of inequities due to varying values of property between and among localities. These programs were designed to “equalize the differences in local fiscal capacity, i.e., the unequal ability to finance education because of the variation in the size of the local property tax base” (p. 13). However, these states’ funding plans did not address the issue of local districts’ ability to raise additional revenue in any given year, through property taxes in excess of the minimum foundational program. Per-pupil expenditures, therefore, continued to vary among school districts, thereby continuing the debate about fiscal inequities and adequacy.

*Brown v. Board of Education in Topeka* (1954) was an important landmark case in terms of declaring that *separate but equal* was unconstitutional, and it provided a basis for federal enforcement of equal educational opportunity through the integration of schools. However, it was not a decision that provided a federal constitutional basis for the equitable funding of local school districts. (Brimley et al., 2016; Eom & Lee, 2014;

Morse, 2007; Odden & Picus, 2014). As a result, equity in funding of public schools became an almost ubiquitous state legal action, which scholars have categorized into three waves:

- First Wave – Federal Equal Protection Litigation, 1960s to 1972. It primarily included plaintiffs claiming that the school finance systems violated the equal protection clause of the 14th Amendment of the United States Constitution, as well as including arguments based on the state constitutional provisions. This included such cases as *San Antonio Independent School District v. Rodriguez* (1968) in the U.S. Supreme Court and *Serrano v. Priest* (1971) in California’s Supreme Court.
- Second Wave – State Law Equity Cases, 1973 to 1989. During the second wave of litigation, plaintiffs made arguments similar to the first wave, but they now focused on their state’s constitution and education clauses, which guaranteed an equitable resource distribution. Included in this wave were cases such as *Robinson v. Cahill* (1976) in New Jersey, *Levittown v. Nyquist* (1978) in New York, and *Washakie County School District v. Herschler* (1980) in Wyoming.
- Third Wave – Adequacy, 1989 to the present. During this wave, the courts shifted their focus from “equity, i.e., per pupil spending, to adequacy, i.e., sufficient funding for students” (Eom & Lee, 2014, p. 8). The court ruling on *Rose v. Council for Better Education* (1989) represented a significant win for educational adequacy. It held that the entire educational system in Kentucky violated the mandates of the state’s constitution education clause. The court

cited that *efficiency* in the education clause requires the state to provide all students with equal access to adequate educational opportunities. As such, the recommendation was that the education finance system be restructured to provide all children with a fair opportunity to achieve educational outcomes. Other important cases during this wave included Edgewood v. Kirby (1984) in Texas; Helena Elementary School District No. 1 v. State of Montana (1989), Abbott v. Burke (1998) in New Jersey, DeRolph v. State of Ohio (1994), and Campaign for Fiscal Equity v. State of New York (1993) (Brimley et al., 2016; Eom & Lee, 2014; Morse, 2007; Odden & Picus, 2014).

The common theme throughout these cases has been that states are charged with providing all students with a “sound basic education” (Rebell, 2012, p. 1864), as required by their state constitutions. Since 1989, the highest courts in 27 states have issued decisions affirming or enforcing that right (Brimley et al., 2016).

Two of the most significant educational finance litigation cases took place in New York State. The first was the filing in 1978 by the Board of Education of the Levittown Union Free School District v. Ewald Nyquist, the presiding Commissioner of Education for State of New York. The case was filed by a group of *property-poor* Long-Island school districts and five urban New York schools. The filing followed a successful roadmap that was used for challenging school funding by California’s Serrano (1971) and New Jersey’s Robinson (1976) cases. They argued that under their states constitutions’ equality and equal protection provisions, state funding was not equitable because of the disparity in their ability to raise local property taxes. Taking a page from Cubberley’s 1905 seminal work on school financing, they contended that property-rich districts were

able to raise more tax revenue and, therefore, were able to provide enriched educational programs versus those districts with lower property values (McGlashan, 2006; Nickerson & Deenihan, 2002).

Despite the fact that the Levittown litigation was not successful, the New York Court of Appeals opened the door for further litigation when it indicated that future claims of “gross and glaring inadequacy” would be considered (Nickerson & Deenihan, 2002, p. 1342). Such claims of gross and glaring inadequacy that deprived students of a *sound basic education* formed the basis for the second-most significant landmark case in educational finance litigation, the Campaign for Fiscal Equity (CFE) v. New York filed in 1993. The case was brought by New York City parents claiming the state “grossly” underfunded the city’s public schools and thus denied its students their constitutional right to a “sound basic education” (Marcou-O’Malley, 2014, p. 2; Marcou-O’Malley, 2016a, 2016b, 2016c; McGlashan, 2006; Morse, 2006; Nickerson & Deenihan, 2002). According to Rebell (2012), the plaintiff’s plea was similar to that of the plaintiffs in *Brown v. Board of Education* (1954) in that the courts would have to decide what was “just and equitable” (p. 264).

In 2003, after 10 years of litigation, the New York State Court of Appeals, the state’s highest court, held that “the state constitution requires the state to provide all students within the State of New York the opportunity for a meaningful high school education, one which prepares them to function productively as civic participants” (Rebell, 2012, pp. 1896-1897). Four years later, in 2007, in response to the CFE ruling, the state legislature made reforms to the state’s educational finance system, calling for a funding increase in aid of approximately \$5.5 billion for New York City schools and \$4.4

billion for the rest of the state. “High need” (low wealth) districts would receive 72% of the increase the state was calling “Foundation Aid” (Marcou-O’Malley, 2016c, p. 6). This was to be a combination of the existing state aid formula and the new additional aid to be phased in over a 4-year period (Marcou-O’Malley, 2016c; Rebell, 2012).

All districts experienced a positive change in the funding formula for the first 2 years of the Foundation Aid. But then the bottom fell out of the state’s coffers as a result of the Great Recession, which began in late 2008 (Love & Mattern, 2011). In order to close the state’s multi-billion-dollar budget deficit, the state froze the phase-in of the Foundation Aid and, in addition, took back basic aid of \$2.7 billion in the form of a gap elimination adjustment (GEA). These actions put the funding of New York State schools significantly below what had been established by the legislature in 2007 “as a necessary level in order to provide a sound basic education” (Rebell, 2012, pp. 1898-1899). In 2015-16 there were still 189, or 28%, of school districts, receiving less state aid than they did in 2008 (Marcou-O’Malley, 2016c).

### **History of Tax and Expenditure Limitations**

Further complicating the ability to provide equitable and adequate funding to public schools, as determined by various courts throughout the country, is the fact that taxpayers generally do not see a correlation between rising cost of property taxes and student outcomes and achievement. As a result, many taxpayers become frustrated, and abide a negative perception of government and taxes (Sirmans & Sirmans, 2012).

According to Amiel, Deller, and Stallmann, 2012:

Distrust over government taxation and public expenditures has led to legislation constraining taxation as well as major shifts in the national political arena, such as

the formation of the Tea Party Movement. This line of thinking is embodied in the Leviathan-Niskanen-Buchanan model of government spending; government is inherently inefficient because elected officials and government bureaucrats cannot be trusted to keep taxes and spending under control due to the influence of special interest groups and the reluctance to terminate or significantly reduce existing programs. (p. 186)

In an effort to gain public support, politicians have capitalized on the issue that taxpayers need tax relief. They furthered the idea that placing limitations would force governments to be fiscally prudent, create alternative revenue streams, and become more efficient in providing services. This led many states to enact tax and expenditure limitations (TEs) (Mullins & Wallin, 2004; Sirmans & Sirmans, 2012).

The restriction on property taxes are the most common form of tax limitation, and it is generally based on limiting or capping the growth in the property tax rate, growth in property assessments, or both. Either way or combined, they put a limit on the growth in total property tax revenues that can be raised by a government entity. The amount of increase allowed under this type of legislation is linked either to the inflation rate or to an arbitrary annual rate (e.g., 2%). Because school districts are primarily funded through property taxes, the enactment severely limits the funding school districts can raise for mandatory obligations, as well as for curricular and co-curricular programs (Amiel et al, 2012).

One of the first and most significant TEs, which were placed on the ballot by voters and passed by a 65% popular vote, was California's Proposition 13, which was enacted in 1978. It represented the first significant tax revolt in America—similar to that

of the American Revolution and the Boston Tea Party when colonists protested that they should not be taxed without representation (Mullins & Wallin, 2004).

Lowery and Sigelman (1981) pointed out that the success of the voters in California ignited a tax revolt across the country, which was perhaps one of the “most important political-economic events of the 1970s” (p. 963). By 1980, there were over 38 states that moved to reduce or constrain tax increases.

A very significant TEL was Proposition 2 ½, a property tax limitation adopted in 1980 by the voters of Massachusetts. Oliff and Lav (2010) argued that Proposition 2 ½ was arbitrary, static, and insensitive to changing local needs, and that it did not reflect the true cost of services. They highlighted the negative impact of enacting a TEL that other states should consider:

- A tax cap will not make government services cost less. Expenditure increases related to rising health insurance, pensions, utilities, and special education costs were beyond the local control of government and each year generally increase at a higher rate than the allowable tax cap.
- Claims that caps will produce large savings through “efficiencies” are not realistic and generally result in reduced services.
- Tax caps can be particularly harmful if adopted during a weak economy. State aid cannot be relied upon to fill the gap due to weak tax revenue growth.
- Increases in enrollment can have a big impact because the tax cap formula does not include adjustments for changes.
- Without effectively targeted state aid, low-income communities will fall even further behind high income communities with greater resources.

- Wealthier communities will override a tax cap more frequently than poorer ones.
- Middle-income communities might end up bearing the brunt of a cap. In Massachusetts, budgets in middle-income communities grew more slowly than budgets in either low or high-income communities. They did not receive as much state aid as the former or override Proposition 2 ½ as often as the latter. (pp. 2-3)

They further stated that “Proposition 2 ½ is a structurally flawed policy that has significantly eroded local services in Massachusetts despite a number of factors that have mitigated its impact” (p. 15). As a result, TELs increased the disparity across school districts in per-pupil expenditures, which was due to differences in property values and the ability of local communities to step in and maintain services (Morse, 2007).

In a study conducted by Benjamin Zycher (2013), from the American Enterprise Institute, he stated “the empirical finding reported here is simple and powerful: TELs are not effective” (p. 1). His empirical analysis was conducted with data from 49 states, over a period of 40 years, based on a primary research question, “Have TELs shown to impose some degree of enhanced fiscal discipline – that is a reduction in outlays or growth of outlays? According to the null hypothesis, they do not make a difference” (p. 20). Researchers, such as Daniel Mitchell (2013), have referred to TELs as being a species of the theory of *starve-the-beast*, which is a political strategy that holds that by cutting taxes, governments will be forced to reduce spending and shrink in size (Bartlett, 2007; Mitchell, 2013).



Regardless of repeated warnings from scholars about the flaws of property tax limits, New Jersey in 2009 and New York State in 2011 were among the latest states to enact tax levy caps. Governor Andrew Cuomo wanted to make New York State affordable and competitive. According to a report by the Empire Center for New York State Policy (McMahon, 2011), “New Yorkers pay some of the highest real property taxes in the country, with homeowner taxes in most of the state ranging from 30 percent to 178 percent above the national average as a percentage of property values” (p. 1). During a 10-year period, 1999 to 2009, total property tax levies increased an average 5.4% per year and school districts’ average tax levy grew at 6.3% per year, compared to the average rate of inflation of 2.6% (McMahon, 2011).

The State of New York, on June 24, 2011, despite a decline in the economy and significant cuts in state aid to districts, enacted the property tax cap, Chapter 97 of the Laws of 2011 (tax and expenditure limit or TEL). The legislation limited overall growth in the property tax levy to the lesser of 2% or the rate of inflation. The tax cap applies to all independent school districts and all local governments outside the cities of New York, Buffalo, Rochester, Syracuse, and Yonkers. The law applies broadly to property taxes that support local governments, including special districts that are independently governed, as well as special districts that are established, governed, and administered by another municipality.

In order for school districts to override the tax cap, they must achieve a supermajority of 60% of the voters in the district to approve the increase over the cap (Chang & Wen, 2014; McMahon, 2011).

According to the Empire Center report (McMahon, 2011), the New York State tax cap was modeled after Proposition 2 ½, the property tax limitation that was adopted in 1980 by the voters of Massachusetts. The contention of the authors and supporters of Proposition 2 ½ was that the state and local tax burden in Massachusetts decreased without harming public services or their public schools, which continued to rank among the best in the country. Opponents of the cap argued that the impact would be devastating in the wake of state aid cuts and a decline in the economy, but they did not offer any alternative solutions to reduce the tax burden. Modeling its arguments on the Massachusetts decision, the Empire Center report (McMahon, 2011) indicated that the cap would bring reform and relief from unfunded mandates and other legally required expenses.

John Yinger (2012) pointed out that the New York State tax cap was *profoundly unfair* because the tax levy limit is a percentage, which continues to exacerbate the disparity between rich districts with higher tax levies and those poorer districts with lower tax levies. For example, if a rich district has a base tax levy of \$20,000, the tax cap of 2% would limit its increase to \$400 versus a poor district with a base tax levy of \$2,700, the tax cap of 2% would limit its increase to \$54. Therefore, the tax cap legislation exacerbates the funding gap among districts and is a direct contradiction of the goals and precepts of the court ruling in the Campaign for Fiscal Equity.

A report by the New York State Council of School Superintendents (2012) showed that schools were listening to their voters and had restrained spending through cost efficiencies and reduced programming prior to the implementation of the cap in 2012-13. In the 4 years prior to the cap, the average school district spending was 2.6% and the

tax levy increase was 3.1%. In the 4 years after, the spending increase was an average of 2.3% and the tax levy average was 2.2% (New York State Council of School Superintendents, 2016). However, the 2015 report from the Empire Center (McMahon & Girardin, 2015) declared that the tax cap was making a difference with a 2.2% average increase in the levy, the lowest in any 4-year period since 1982.

Because of the design of the TEL (the lesser of 2% or the rate of inflation) the allowable levy growth factor for 2016-17 (tax levy cap) was 0.12% or, effectively, a zero percent increase, and it was on track to be near zero again for 2017-18. This is significantly lower than the 2% tax cap that was publicized at the time the law was enacted, which is due to the fact that inflation has been so low and a contingency that was not anticipated. The rate of inflation for the 5 years that the tax cap has been in effect has averaged 1.44%, as shown in Table 1.1. The cumulative effect of these historically low rates has been a significant loss of revenues to school districts (New York State Association of School Business Officials [NYSASBO], 2016).

For 2016-17, school districts received an increase in the tax levy of only \$25 million because of the low inflation rate of 0.12%. If the tax cap was a flat 2%, districts would have received an increase of \$415 million, which is a difference of \$390 million.

Table 1.2 highlights the differences between the tax levy for 2016-17 of 0.12% and a flat tax levy of 2% based on a district's Need/Resource Capacity index (NYSASBO, 2016). The index represents a district's ability to meet the needs of its students with local resources, as assigned by the Department of Education, that is, low need, average need, high need rural, and high need urban/suburban (Appendix A).

Table 1.1

*Allowable Tax Levy Growth Factor*

Year	Allowable Levy Growth Factor (lesser of 2% or CPI)
2016-17	0.12%
2015-16	1.62%
2014-15	1.46%
2013-14	2.00%
2012-13	2.00%
Average	1.44% per year

Table 1.2

*Impact of Low Tax Cap Growth on School District Types*

Budget	Low Need \$50,000,00	Average Need \$50,000,000	High Need \$50,000,000
Local share of budget that is funded through property taxes:	80%	59%	20%
Local Property Tax Share/Tax Levy	\$40,000,000	\$29,500,000	\$50,000,000
Allowable Growth Rate 2016-17 is 0.12%	\$48,000	\$35,400	\$12,000
If the Tax Levy was a Flat 2%	\$800,000	\$590,000	\$200,000

According to various reports by the Alliance for Quality Education (Marcou-O'Malley, 2016b), the funding gap between the 100 poorest school districts and the 100 wealthiest has continued to grow by over \$9,700 per pupil, or 23%, since Governor Andrew Cuomo took office in 2011.

In January 2014, the New York State Association of School Business Officials updated their 2012 study on school district finances, “The Road Ahead,” regarding school district insolvency. The study reviewed that:

Unrestricted fund balances of school districts and found that high-need districts in rural, urban, and suburban communities were exhausting their fund balance at an alarming rate, representing the cumulative impact of the Great Recession and state efforts to contain school expenditures (TEL). (p. 4)

Fund balance is defined as funds that are left over at year-end because revenues were greater than expenditures. A fund balance is necessary for a school district to be able to deal with emergencies, budget gaps, and to avoid reducing services.

This NYSASBO (2014) study makes the point that since 2008, there has been a significant negative impact on school revenues as the result of the new state funding formula promised by the results of the CFE but that was never received, the reduction in state aid through the GAP Elimination Adjustment (consequences of the Great Recession), and cap legislation (TEL), which limited the growth rate of the tax levy. Taken together, the impact on many districts, particularly the poorer districts, over time, could be devastating, if there are no interventions or changes in state policy and law. In fact, some districts may become insolvent.

According to a study commissioned by the Board of Regents in 2003 (Ammar, Duncombe, Jump, & Wright, 2005), school district insolvency is defined as lacking good financial condition, which means the ability to “finance adequate student performance over the long run with reasonable tax burdens and without temporary disruptions of service. Adequate student performance implies students reaching the academic standards

set by the New York State Board of Regents” (NYSASBO, 2014, p. 4). The findings of the 2014 study by NYSASBO concluded that:

- 261 school districts showed signs of fiscal insolvency due to a reduction in fund balance; 544 school districts showed signs of educational insolvency as a result of reduced professional staff; and 206 school districts showed signs of both.
- School districts are balancing their budgets by reducing educational programs based on a reduction in staff. School districts have reduced staff ten percent over the past five years, while pupil enrollment has declined only three percent.
- Of the 40 percent of school districts that reduced fund balance, high-need urban/suburban districts and average need districts lost the most. On average, high-need districts have one-third the fund balance per pupil of low-need school districts. (p. 2)

Based on this and a later report by the NYSASBO (2015), the concern is that, if all things continue into the future as they are, it is probable that many more districts, especially those in low-wealth rural and urban communities, will be facing both educational and financial insolvency with serious implications for students.

### **Problem Statement**

The funding of public schools in our nation has been, and continues to be, a source of great debate in the 21<sup>st</sup> century (Brimley et al., 2016). New York State public schools are no different, and they appear to be at a critical crossroads due to the long-term devastating consequences of decisions made since 2007 by its political leaders.

School districts in New York State have responded to the economic and political pressures since 2007 by implementing strategies related to efficiencies, cost-saving measures, reductions in services, and the depletion of fund balance (savings account) to close funding gaps. But now what?

At the same time, school districts continue to be faced with new and significant unfunded mandates, such as increased accountability by the state and federal governments in terms of student outcomes, health and safety requirements for its facilities, etc. In addition, expenses for health insurance, utilities, mandated salary increases, and pensions are increasing at rates greater than the allowable annual increase in tax revenue and state aid.

According to the New York State Association of School Business Officials (2016), schools are running out of options and are at risk of becoming educationally and fiscally insolvent. If the economics since 2012 continue on the same trajectory, and the state or its citizens do not intervene, it is likely the gap between expenditures and tax levies will continue to grow, thereby creating the potential for schools to become insolvent as a result of their inability to provide children with a sound and basic education as required by courts in accordance with New York's Constitution, Article XI (1962).

“The struggle to reform school finance in New York is not a pretty story, but one of greed, self-interest, and corruption in Albany” (Morse, 2006, p. 41). New York State's TEL was passed for political purposes. It did not take into account the warnings from scholars about the effectiveness of TELs; plus, it ignored the court's ruling on CFE and its requirement for providing a sound basic education to students (Yinger, 2012). This

study examines, through a quantitative analysis, the trends set in motion by the New York State Tax Cap Legislation, Chapter 97 of the Laws of 2011.

### **Statement of Purpose**

The purpose of this quantitative archival case study, utilizing a retrospective analysis and prospective model, is to highlight the consequences of the enactment of the New York State Tax Cap Legislation, Chapter 97 of the Laws of 2011, on the children in New York State. Projections of the potential gap in revenues over from 2017 through the following 5 years suggest that school districts will be facing educational and financial insolvency and that their inability to provide a sound basic education, as required by the state constitution, will be compromised.

The retrospective component of the analysis included a stratification by district based on Need/Resource Capacity (Appendix A) for purposes of using statistical techniques to conduct a comparative analysis of data from the 2012/13 to the 2016/17 fiscal years. The prospective component involved the use of scenario development to forecast the trajectory of district expenditures for the fiscal years 2017-18 through 2021-22. The independent variable was the New York State Property Tax Levy for a 10-year period and the dependent variable is district expenditure.

### **Potential Significance of the Study**

Since the New York State Tax Cap was only enacted in 2011, few studies have been conducted (Bass, 2014; Galligan, 2015; Venettozzi, 2014). The importance of this quantitative study is to provide political leaders of New York State, school administrators, parents, and communities with an understanding of the financial trends in school districts and to forecast the potential severity of the funding gap that may exist



between school district expenditures and tax levies, due to the implementation of the New York State Property Tax Levy Cap Legislation in 2011. The implications for school districts, communities, and the state could be significant. The goal of the study is to provide analysis, data, and guidance for future decisions regarding equitable and adequate education funding in New York State, which is essential in order to have college- and career-ready graduates.

Jonathan Kozol's (1991) powerful book, *Savage Inequalities*, posits that inequalities would be solved by its citizens. However, 25 years later, little has changed. Kozel expressed that equitable and adequate education for all children is a social justice issue and one that will either ensure or jeopardize the country's continued prosperity (Kozol, 1991).

### **Theoretical Rationale**

According to the Government Finance Officers Association (GFOA) (2008), a financial forecast is an important theoretical framework that is used to "evaluate current and future fiscal conditions to guide policy and programmatic decisions" (p. 1). It is a management tool that estimates information based on past, present, and prospective financial conditions in order to identify financial trends that will influence future policies, goals, and services. The GFOA recommends that all governments, including school districts, engage in developing 5- and 10-year forecast models in order to create a common understanding of the goals of the forecast. There are several quantitative forecasting methods:

- Extrapolation, moving averages, and single-exponential smoothing use historical data to predict future trends.

- Regression/econometrics use statistical procedures based on the relationship between independent variables (tax levies) and dependent variable (expenditures).
- Hybrid forecasting uses both knowledge-based forecasting (of the forecaster) and quantitative methods of forecasting.

This researcher used the exponential smoothing method, along with developing various scenarios to predict possible outcomes. A retrospective analysis and a forecasting model would provide the data that legislators and citizens could use to make decisions regarding the funding of public schools and their efforts to provide a sound basic education for all children.

Another important underpinning of this study is the right of all students to an equitable and adequate education, which aligns with the theoretical framework of the theory of social justice by John Rawls (1971). The theory is based on two principles. The first principle is that as a citizen, one engages in a social contract that gives him or her the right to basic liberties such as, the right to vote, hold public office, free speech, due process, and the right to hold property. The second principle is about social and economic inequalities and the redistribution of social goods such as opportunity, power, income, and wealth (BenDavid-Hadar, 2016; Burroughs, 2016; Johnson, 2005; Pijanowski, 2015; Rawls, 1971). According to Pijanowski (2015), many of the school finance litigation cases relied on this theory in terms of equity and adequacy of funding education. In addition, according to BenDavid-Hadar (2016), the redistribution of social goods is similar to the idea of needs-based reallocation of resources based on a weighted

method. This is similar to apportionment programs often called foundation plans that are used to distribute state aid.

### **Research Questions**

The research questions used to guide the study are:

1. What has been the impact on school district expenditures for the years 2012-13 to 2015-16 as a result of the passage of the Tax Levy Cap Legislation in 2011?
2. What reductions in expenditures, that is, administration, instructional programs, operations and maintenance (O&M), fringe benefits, undistributed (other/capital expenses), pupil transportation, and debt service were made by districts to stay within the cap?
3. What would be the potential gap in revenue if current trends in the allowable tax levy increase (rate of inflation less than 2%) and expenditure increases continued?
4. Based on the study's forecast model, what is the relationship between a school district's expenditure changes and that district's classification based on Need/Resource Capacity, as defined by New York State (low need, average need, high-need rural, and high-need urban/suburban)?

### **Definitions of Terms**

*Assessed Property Valuation* – the total value of property subject to the property tax in a school district. Generally established by a local government officer, and it is only a percentage of the market value of the property (Odden & Picus, 2014).

*Big Five City School Districts* – In New York State, New York City, Buffalo, Rochester, Syracuse, and Yonkers that are fiscally dependent on their municipalities. The school systems do not levy taxes, but they are dependent upon city-wide taxes for support (The University of the State of New York, 2016).

*Budget/Funding Gap* – exists when projected expenditures exceed projected revenues (Odden & Picus, 2014).

*Campaign for Fiscal Equity (CFE)* – a lawsuit brought by the parents of students in 1993 against the State of New York. claiming that children were not being provided the opportunity to have an adequate education. In 2003, the NYS Court of Appeals ruled in CFE’s favor and found that New York State was violating students’ constitutional rights to a sound and basic education by leaving schools without the necessary funding (Marcou-O’Malley, 2014).

*Fiscal Equity and Adequacy in Education Funding* – each child in New York State should receive substantially identical schooling resources, plus additional resources for identifiable needs, such as special education and limited English proficiency. Adequacy requires that each district receive sufficient funding to enable it to provide each child with schooling that reaches a certain level of quality.

*Foundation (Apportionment) Program* – a state equalization aid initiative that typically guarantees a certain basic level of expenditure for each student, together with a minimum tax rate that each school district must levy for education purposes. The difference between what a local school district raises at the minimum tax rate and the foundation expenditure is made up in state aid (Odden & Picus, 2014).

*Fund Balance* – monies that are left over at year-end because revenues were greater than expenditures. A fund balance is necessary for a school district to deal with emergencies, to fund budget gaps that exist between revenues and expenditures, to reduce future tax levies, and, if necessary, to avoid reducing services (New York State School Business Officials, 2014).

*Gap Elimination Adjustment (GEA)* – in order to adjust for a shortfall in New York State operating funds in 2010 and 2011, Governors Patterson and Cuomo cut \$2.7 billion from state aid to schools with the commitment that the funds would be reinstated at a later date. These cuts were larger to poor districts than to wealthy ones.

*Great Recession of 2008* – a sharp decline in economic national and international activity, which began in late 2008 and is considered the largest downturn since the Great Depression.

*Need/Resource-Capacity (N/RC) Categories* – groups or classifications determined from a need/resource-capacity index that measures a district's ability to meet the essential requirement of its students with local resources, that is, a tax levy, and it is calculated by dividing a district's estimated poverty percentage by its combined wealth ratio (CWR) (Appendix A) (The University of the State of New York, 2017).

*Property Taxes* – a compulsory contribution on property that land owners are required to pay. The amount is levied by the governing authority of the jurisdiction in which the property is located; it may be paid to a national government, a federated state, a county or geographical region, or a municipality. Multiple jurisdictions may tax the same property.

*Rate of Inflation* – the degree or percentage at which the general level of prices for goods and services rises and, consequently, the purchasing power of the currency lowers.

*School District Insolvency* – a region of learning institutions’ inability to finance adequate student performance over the long run with reasonable tax burdens and without temporary disruptions of service. Adequate student performance implies students reaching the academic standards set by the New York Board of Regents.

*Tax and Expenditure Limitations (TEEs)* – a boundary of the rate of growth in property levy rate, growth in property assessments, or both that represent a maximum level on the growth in total property tax revenues that can be raised (tax levy cap). Increases are linked either to the inflation rate or to an arbitrary annual rate (e.g., 2% growth factor).

*Tax Levy* – total amount of compulsory contribution for property that a school district must collect to balance its budget, after accounting for all other revenue sources including state aid. Under statutory authority, generally without going to court, the state can seize property to satisfy a tax liability. The levy includes the power of seizure by any means.

*Tax Rate* – individual dollar amount of compulsory contribution to the state for the property of a landowner per \$1,000 of assessed value of a given property and that is used to calculate a yearly tax bill.

*Tax-Levy Limit* – a segment of the Chapter 97 of the Laws of 2011 legislation, passed in 2011, capping the amount of landowner’s compulsory contribution a municipality can collect without the municipality potentially receiving a penalty under

state law, to either the lower of 2% or the rate of inflation, with certain exclusions, relating to a district's tax base.

### **Chapter Summary**

The goal of this chapter was to provide an overview of the complex issues of funding public education in the United States. The roots of our nation were based on the premise that education would be provided to all. However, the mechanism of funding education through property taxes has created a disparity between communities because of the varying property values. In an attempt to equalize these inequities, many states adopted apportionment programs, called Foundation Programs. However, the issue of some communities still being able to raise more tax revenue than others has caused litigation cases throughout most of the states in the U.S. The argument is that the financing of education is not equitable and adequate.

Unfortunately, because taxpayers generally do not see a correlation between rising property taxes and student achievement, many have become frustrated and have a negative percept of government and taxes. As a result, many states across the country have imposed tax and expenditure limitations on the growth of the tax levy. In light of these competing issues, as well as the significant downturn in the economy in 2008, many school districts are facing an uncertain future in their ability to provide a sound and basic education in accordance with their state constitution.

In particular, this study is focused on the future of New York State schools and their ability to remain educationally and financially solvent over through 2022. The study is informed by the theoretical framework of developing a financial forecast that assists in guiding decision making. In addition, the theory of justice, by John Rawls

(1971), provided a framework regarding the theoretical idea of equal basic liberties and the redistribution of social goods as it relates to equitable and adequate funding of a sound basic education.

Chapter 2 provides a review of the literature in relation to the research problem and specifically addresses the historical perspective of funding public education, court decisions regarding equity and adequacy, history of tax and expenditure limits, impact of tax and expenditure limits, funding of public schools in New York State, and funding the gap—insolvency. Chapter 3 provides details related to the research design methodology. Chapter 4 presents a detailed analysis of the results and findings, and Chapter 5 discusses the findings, implications, and recommendations for future research and practice.



## **Chapter 2: Review of the Literature**

### **Introduction and Purpose**

The review of the literature provides the historical background and context for a study of New York State's tax levy cap. The review covers court decisions regarding equity and adequacy, the history of tax and expenditure limitations, the impact of TELs on schools and communities, and finally, the funding of public schools in New York State and their future constitutional mandate to provide a sound and basic education.

### **Funding of Public Education – Historical Perspective**

The first attempt to mandate the establishment of schools in North America came with the enactment of the Old Deluder Law of 1647 by the Massachusetts Bay Colony. This legislation stipulated that towns with more than 50 households were required to establish a school so children would learn how to read the Bible, in order to avoid being deluded by Satan.

It was with the Land Ordinance of 1785 and the Northwest Ordinance of 1787, which provided for the orderly settlement of territory stretching west to the Mississippi River, that the importance of education for all citizens was clearly articulated. "Religion, morality, and knowledge, being necessary to good government and the happiness of mankind, schools, and the means of education shall forever be encouraged" (United States Congress, 1787, Article 3).

The United States Constitution, Article 1, Section 8 (1789), declared that "Congress shall have power to lay and collect taxes, duties, imposts and excises, to pay

the Debts and provide for the common defense and the general welfare of the United States” (p. 4). Providing for the general welfare is as close as the Constitution gets to federal support for education. As a result, the federal government played no role in the financing of public schools until the second half of the 20<sup>th</sup> century.

In the 1830s, Secretary of the Massachusetts Board of Education, Horace Mann, who is known as the Father of the Common School Movement, believed that common schools would be for all children, not just the poor and, therefore, would eliminate any economic divide. He argued for public support of schools through property taxation. In Horace Mann’s “Fifth Report to the Board of Education, The Effect of Education upon the Worldly Fortunes of Men,” published in 1841, he argued that:

If it can be proved that the aggregate wealth of a town will be increased just in proportion to the increase of its appropriations for schools, the opponents of such a measure will be silenced. The tax for this purpose, which they now look upon as a burden, they will then regard as a profitable investment. (Mann, 1841, p. 1)

Mann (1841) based these comments on his survey of businessmen, in which he inquired about the differences in productivity of those workers who were educated versus those who were not. Based on his research, he declared that those educated rose in the kind of work they performed and in the rate of wages earned (Mann, 1841, p. 4). Mann (1846) further argued, in his Tenth Annual Report to the Board of Education, that public education benefits us all. He also stated that support for schools should not be on the basis of what citizens can afford to pay, but, rather, it should be based on what is needed by children (Urban & Wagoner, 2014).

According to Urban and Wagoner (2014), the structure of schools today in the United States dates back to many of the changes that occurred in the 19<sup>th</sup> century during the Progressive Era (1890-1915). The industrialization and urbanization that began in the 19<sup>th</sup> century, along with the influx of immigrants, caused significant economic, political, and social problems. As a result, numerous progressive education reforms were put into place, such as the centralization of schools, the defining the role and responsibility of the superintendent, the defining of seniority, the creation of teacher associations, and the differentiation in curriculum.

However, despite these significant changes in the structure of public schools at the state level, school funding and governance remained unchanged through the Great Depression of the 1930s. Although school districts were not immediately impacted by the stock market crash of 1929, large urban school districts did suffer program cuts, layoffs, and teacher salary cuts as the Depression wore on through the 1930s.

Throughout all of this history and throughout the country, funding through the local property tax for public education was the norm. According to Brimley et al. (2016), Ellwood Cubberley is credited with making seminal contributions to education finance theory and revealed in his book, *School Funds and Their Apportionment* (1905), the problems of local property taxation to fund public education. He found that “what is a slight effort for one community is an average load for another and an excessive burden for the third” (p. 201). His conclusion was that “direct state apportions to poor counties” were needed to “equalize educational advantages” (p. 203). His principle belief was that:

Theoretically all the children of the state are equally important and are entitled to have the same advantages; practically this can never be quite true. The duty of

the state is to secure for all as high a minimum of good instruction as is possible, but not to reduce all to this minimum; to equalize the advantages to as nearly as can be done with the resources at hand; to place premium on those local efforts which will enable communities to rise above the legal minimum as far as possible; and to encourage communities to extend their educational energies to new and desirable undertakings. (Cubberley 1905, p. 17)

Modern school finance has its roots in the work of George D. Strayer and Robert M. Haig who served on the Educational Finance Inquiry Commission for New York Schools in 1923. This commission studied the finance systems of many states across the country. The study noted flaws in early state financing models, many of which were based on Cubberley's philosophy. As a result of their work, a state funding plan entitled the Foundation Program, was developed and designed to "equalize educational opportunity for all students" (Verstegen & Knoeppel, 2012, p. 146).

Many aspects of the Foundation Program are still in place today, such as minimum funding to meet the basic education needs of each student, local districts contribute to this effort through a uniform tax, and the state provides more funding to those districts that are unable to raise funding through local property taxes, due to low property values (Verstegen & Knoeppel, 2012). Other theorists, such as Mort, Strayer, and Haig advocated for more state funding through a two-tiered finance program that would provide a foundation program as a base aid amount to all districts and add a state match of funds for any additional local taxes levied above the base amount. This amount would then be funded through a district power equalizing (DPE) approach, which means that a "poor school district has the power to obtain as much revenue per student as more

wealthy districts making the same local tax effort” (Brimley et al., 2016, p. 91). Mort advanced the argument that education costs differ depending upon the needs of students, elementary, secondary, special needs, etc., and recommended that the foundation funding be weighted to take into consideration these different need levels (Verstegen & Knoeppel, 2012).

Henry Morrison, in the 1900s, believed that funding of education was insufficient, and he proposed a full state funding plan that called for the elimination of local districts and making the state one large district in which the tax burden could be equalized and the funds could be distributed without a complicated formula. However, according to some scholars, his theory failed because he did not recognize that local control of instructional programs could still have been retained by the local school boards, regardless of the funding approach (Brimley et al., 2016; Verstegen & Knoeppel, 2012).

According to Verstegen and Knoeppel (2012), there has been very little scholarly work on state apportionment programs since Cubberley’s (1905) seminal research. As a result, in order to understand the current education finance apportionment policies and programs across the states, they developed a survey that was sent to every chief state school official across the country.

Based on the results of Verstegen and Knoeppel’s (2012) study, states fundamentally have not changed the way they fund public education for over a “100 years” (p. 148). Most states are using one of the traditional major plans or a combination of them. They are foundation programs, district power equalizing, flat grants, and full state funding. The study data provide information on emerging trends and raise serious questions, in particular:

(a) What constitutes best practice? (b) How does a state determine the cost of quality education for all? [and] (c) How will states provide equitable and adequate opportunities for all children to succeed in an increasingly complex and interdependent world? (p. 165).

### **Court Decisions Regarding Equity and Adequacy**

As discussed, public education in the United States is funded on the state level primarily through local property taxes. Due to differences in property values, there is a disparity across school districts in per-pupil expenditures and, therefore, issues arise relating to adequate and equitable funding. In fact, the struggle over adequacy and equity in education has been waged in the United States for over 60 years. The first major case involving equal educational opportunity was *Brown v. Board of Education of Topeka* (1954). In the majority opinion written by Chief Justice Earl Warren, the court stated:

Today, education is perhaps the most important function of state and local governments. Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society. It is required in the performance of our most basic public responsibilities, even service in the armed forces. It is the very foundation of good citizenship. Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide, is a right which must be made available on all equal terms. (Morse, 2007, p. 4)

In *Brown v. Board of Education*, the court struck down the doctrine of “separate but equal” facilities per the Supreme Court decision in *Plessy v. Ferguson* (1896), as being unconstitutional. However, the plaintiff’s argument and the legal reasoning in the decision was not based on whether or not the facilities in which White and Black children were being educated were equal. The argument was one based on Black children being segregated based on their race. The court found the argument compelling that separating Black children denied them any chance of achieving equal educational opportunity. This separation was blatantly discriminatory. As a result of *Brown*, Black children were at least considered a *suspect class* that required protection under the law (Constitution). As important as the case was, it did not address the matter of comparative adequacy of resources and facilities as causes of inequity. The court left that legal challenge for another day and another case (Morse, 2007; Odden & Picus, 2014).

As a result, litigation ensued on a state-by-state basis over the meaning of *adequate and equitable* funding of schools. The outcome of these cases was dependent upon whether the courts believed that a fundamental right under the Constitution was violated (Odden & Picus, 2014).

According to Eom and Lee (2014), the first wave of cases from the late 1960s to 1973, were cases primarily brought to federal courts, claiming that state school funding systems violated the equal protection clause of the United States Constitution. The most significant achievement came out of the California Supreme Court in the *Serrano v. Priest* case (1971), which held that the state’s funding scheme “insidiously discriminated against the poor because it made the quality of a child’s education a function of the wealth of his parents and neighbors” (p. 8).

This decision was the start of legal efforts to fundamentally change the educational financial system of the states, but the cause was stymied due to the decision of the U.S. Supreme Court in *San Antonio, Texas Independent School Districts v. Rodriguez* (1973). In that decision, the court declared that education was not a *fundamental right* under the United States Constitution and poor children were not a *suspect class* as Black children were considered to be in *Brown v. Board of Education of Topeka* case (1954). In other words, being poor did not give children standing before the court under the 14th Amendment to the Constitution, and the court declared that the “local property tax based school finance system in Texas did not violate the federal equal protection clause” (Eom & Lee, 2014, p. 8).

These decisions initiated the second wave of litigation from 1973 to 1989, which focused on bringing cases to the state courts, rather than the federal courts claiming that school finance systems violated a state constitution’s equal protection and/or education clauses. During this time period, state supreme courts decided 22 school finance reform cases, of which 15 upheld the state’s educational funding systems and seven ruled for the plaintiffs. *Robinson v. Cahill* (1976) in New Jersey, *Serrano v. Priest II* (1976) in California, and *Levittown v. Nyquist* (1982) in New York represented landmark cases in which the existing funding system violated the state’s constitution (Brimley et al., 2016).

The ruling in New Jersey stated that due to the reliance on local property taxes, the funding system discriminated against students in poor districts. In California, the state court ruled that under the state’s constitution, poor children were a suspect class and education was a fundamental right. As a result, the state funding system was declared



unconstitutional and the state legislature was ordered to create a more equitable funding system.

The second wave of cases achieved significant judicial results but very little practical economic results in terms of equalizing education financing between and among local school districts in state. Legislatures were unable or unwilling to take on the political and economic costs of *equal funding*, which would entail revamping or completely dismantling the local property tax as the primary means of funding local schools. Reformers were left to devise different and more modest goals and strategies.

As a result, the third wave of litigation ensued starting in 1989 with the state supreme courts in Kentucky, Texas, and Montana ruling that their educational finance systems violated their states constitutions' education clauses. In these seminal cases, the courts shifted their focus from "equity, i.e. per pupil spending, to adequacy, i.e. sufficient funding for students" (Eom & Lee, 2014, p. 8).

The court ruling in *Rose v. Council for Better Education* (1989), represented a significant win for educational adequacy and held that the entire educational system in Kentucky violated the mandate of the state constitution's education clause. The court cited that the word *efficiency* in the education clause required the state to provide all students with equal access to adequate educational opportunities and, as such, the court recommended that the education finance system be restructured to provide all children with a fair opportunity to achieve educational outcomes (Brimley et al., 2016; Eom & Lee, 2014; Morse, 2007).

Some of the other notable cases that led to a restructuring of a state's education finance system were cases such as the *Edgewood v. Kirby* (1993) decision in the Texas

Supreme Court, “dubbed the Robin Hood Bill” (Odden & Picus, 2014, p. 44), which required the redistribution of aid from wealthy districts to poorer districts as a condition for receiving state aid. In 1997, *Abbott v. Burke IV*, the New Jersey court stated the importance of sufficient funding and ordered parity amongst districts regarding equity and adequacy (Brimley et al., 2012; Eom & Lee, 2014).

One of the most significant cases in this era of educational finance litigation was the *Campaign for Fiscal Equity v. New York* (2003) brought by New York City parents claiming the state had underfunded the city’s public schools and therefore denied its students their constitutional right to a “sound basic education” (Marcou-O’Malley, 2014 p. 2). According to Michael Rebell (2012), co-counsel to the plaintiffs, the New York State of Appeals in 2003, after 10 years of litigation, declared that “the state constitution requires the state to provide all students within the State of New York the opportunity for a meaningful high school education, one which prepares them to function productively as civic participants” (p. 1896). Finally, in 2007, the state legislature, acting on the CFE decision, mandated that the state educational finance system be changed to ensure that all students in the state had the opportunity for a “sound basic education” (p. 1864). The legislature called for a funding increase of approximately \$5.4 billion for New York City and \$4 billion for the rest of the state to be phased in over a 4-year period. It also combined over 30 funding streams into a foundation allocation that would provide over 70% of all state aid to local school districts and create new accountability requirements known as the “Contract for Excellence” in order to ensure that the new funding was spent to equalize spending (Rebell, 2012, pp. 1896-1897).

The common theme throughout all these state court cases has been that states are charged with providing all students with a “sound basic education” (p. 1864), as stated in their constitutions. Since 1989, the highest courts in 27 states have issued decisions affirming or enforcing that right, and legislatures have continued to struggle with aid formulas and the sufficient revenue to achieve the court’s standard (Rebell, 2012).

### **History of Tax and Expenditure Limitations**

The collection of taxes based on property ownership dates back to ancient times. During the 14<sup>th</sup> and 15<sup>th</sup> centuries, British tax assessors used ownership of property to estimate a taxpayer’s ability to pay and, in America, tax on property was related to the economic and political condition of the new frontier (Fisher, 2002).

According to Sirmans and Sirmans (2012), individual property rights became a right of private ownership, as set forth in the 14<sup>th</sup> Amendment to the Constitution, that “no person will be deprived of life, liberty, or property without due process of law” (p. 2). Local governments finance over 50% of their school expenditures from real property tax revenue. Sirmans and Sirmans (2012) further pointed out that taxes raised to fund local government services often do not correlate to household income or to the value of the services received. As a result, property taxes have a negative connotation to many taxpayers. The idea of limiting the rate of property tax increase is seen as a mechanism to force local governments to be more efficient. According to Mullins and Wallin (2004), the majority of states have enacted some form of limits on taxes and expenditures in the “name of forcing fiscal discipline” (Sirmans & Sirmans, 2012, p. 14).

In 1978, California voters placed one of the most significant tax and expenditure limits, Proposition 13, on the ballot, which was successfully passed by popular vote. It

was deemed one of the first tax revolts in America since the American Revolution and the Boston Tea Party, when colonists protested that they should not be taxed without representation (Mullins & Wallin, 2004). Proposition 13 spurred more than 38 states across the country to constrain or reduce taxes. By 1980, local governments were being forced to provide services with less revenue, which raised concerns that voters could arbitrarily change a “stable democracy” (Lowery & Sigelman, 1981, p. 963). According to Paul Samuelson, “Proposition 13 is perhaps one of the most important political-economic events of the 1970s” (Lowery & Sigelman, 1981, p. 963).

In an effort to explain why TELs had been enacted, Lowery and Sigelman (1981) conducted a study to examine eight possible explanations for the spread of TELs across the country. All eight “assume that the tax revolt is a systematic national phenomenon that is a function of individual-level social, economic, and political factors” (p. 963), and the eight possible explanations are:

1. The Self-Interest Explanation: The individual’s demand for government taxes and expenditures is a function of self-interest;
2. The Tax Level Explanation: The actions are an attempt to trim what is perceived to be a bloated government;
3. The Tax Efficiency Explanation: TELs are a reaction to perceptions of rampant waste and inefficiency in the public sector;
4. The Tax Distribution Explanation: TELs are based on perceived inequities in the tax system and people’s feelings that they are bearing more than their fair share of the tax load;

5. The Economic Pinch Explanation: TELs are a function of anxiety over the condition of the economy in general and personal finances in particular. Research shows that pessimists are more likely than optimists to support cuts or limits on taxation and spending;
6. The Political Ideology Interpretation: Support for tax limits is more a matter of ideology than of demography or economics. The actions are a symbolic challenge to 50 years of New Deal Liberalism;
7. The Political Disaffection Explanation: TELs are a reflection of the declining confidence in and negative feelings toward government;
8. The Information Explanation: The actions reflect a lack of information about government and public finance. (Lowery & Sigelman, 1981, pp. 964-966).

In order to test these explanations, Lowery and Sigelman (1981) used empirical data from the University of Michigan Center for Political Studies, which was collected for the American National Election Study in 1978. The data set provided a large, representative, nationwide sample from which they were able to find at least one indicator appropriate for testing each explanation.

In reviewing some of the other earlier studies that tried to explain the reasons TELs were enacted, Ladd and Wilson (1982) conducted a survey regarding Massachusetts' Proposition 2 ½ where they concluded that TELs were about lowering taxes and making governments more efficient and not about reducing services. Another attempt to explain TELs came from a study by Stein, Hamm, and Freeman (1983), in which they hypothesize that those who support tax limits are those who are most affected

by rising taxes over a short-period of time (Sirmans & Sirmans, 2012, p. 3; St. Clair, 2012).

### **Impact of Tax and Expenditure Limitations**

One of the major difficulties of studying the impact of tax and expenditure limitations on fiscal policies, policy outcome, or economic performance, is the complexity of individual TELs and their variation across the states (Amiel et al., 2009, 2012; Deller, Stallmann, & Amiel, 2012). The structure of the TELs is not the same in any two states. Joyce and Mullins (1991, pp. 240-253) classified tax and expenditure limitations into seven general categories:

1. Overall property tax rate limits applying to all local governments;
2. Specific property tax rate limits applying to specific types of local government (municipalities, counties, school districts, and special districts) or specific functions;
3. Property tax levy (revenue) limits;
4. General revenue increase limits;
5. General expenditure increase limits;
6. Limits on assessment increases;
7. Full disclosure, truth and taxation

Deller et al. (2012) also indicated that time frame is another factor that complicates the ability to study TELs. In 1875, Missouri put a limit on property tax rates. In 1939, West Virginia also put a limit on the property tax rate, and Arkansas passed a supermajority requirement to raise taxes in 1934. Florida adopted limits on corporate income taxes in 1971. California's Proposition 13 was enacted in 1978, Massachusetts'

Proposition 2 ½ in 1980, and Colorado's Taxpayer Bill of Rights (TABOR) in 1992.

Plus, other states modified their TELs, which complicates the ability to develop a model that would show the relationship between tax and expenditure limitation and economic performance. As a result, much of the literature on TELs has been restricted to a case-study framework for individual states instead of a study of TELs across all states. Any study that did look across states generally used simple dummy variables to identify the presence of a TEL. The downside to this approach is that it did not address the differences across the states and over time.

In 2009, Amiel et al. constructed a tax and expenditures limitation index for all 50 states for the time frame of 1969 to 2005.

They modeled their work on Poulson (2005), with the intent of developing an index that would quantify the severity of TELs on individual states for both state and local governments. The index would also provide the ability to conduct systematic analyses across states; answer broad questions on economic growth, development, and performance; provide fiscal policy responses to TELs; and narrow questions on the impact of TELs on the credit worthiness of state governments. (p. 3)

Based on the Amiel et al. (2009) review of the literature, they developed an index assigning a numerical value to each state, reflecting the restrictiveness of each TEL, the type of TEL, if the TEL was statutory or constitutional, what the TELs' growth restrictions were; the method of TEL approval, the override provisions, and the exemptions.

For the TELs, the higher the point value, the more restrictive the limitation. If a state had both a revenue and expenditure limit, it would be assigned a numerical value of 6 points, and a state with only a tax revenue limit would be assigned a numerical value of 2 points, as shown in Table 2.1. “This does not mean that the former is three times more restrictive than the latter. Rather, it simply indicates that a TEL that restricts both revenue and expenditures is more severe than a TEL that limits only tax revenue” (Amiel et al., 2009, p. 5).

Local government TELs are generally based on a limit to the rate of growth in the property tax, growth in property assessments, or both, which represent a limit on the growth in total property tax revenues that can be raised. Increases are linked either to the inflation rate or to an arbitrary annual rate (e.g., 2%). If the limit is only on property tax, then local governments often can generate other revenues such as user fees or increasing the sales tax. However, school districts are impacted more severely because the majority of their revenue streams are from property taxes and state revenues. Districts have very few options in terms of generating alternative revenue sources. The TELs index for local governments was constructed in a similar fashion to the state TELs (Amiel et al., 2009).

According to Deller and Maher (2009), perceptions of government efficiency do matter and, as a result, if the belief is that the level of services is not aligned with the level of taxation, it will place downward pressure on economic growth. Ultimately, the level of distrust for government has led to the implementation of TELs, along with major changes in national politics, as evidenced by the establishment of the Tea Party Movement.



Table 2.1

*State TEL Index*

Categories	Restrictions	Points
Type of TEL	• Revenue and Expenditure	6
	• Revenue (all)	5
	• Expenditure	4
	• Appropriations	3
	• Tax Revenues (only)	2
	• General Fund Expenditures	1
Statutory/Constitutional	Constitutional	1
Growth Restriction	• Less than or equal to inflation and/or population growth rate	7
	• Less than or equal to the rate of personal income growth	6
	• Limited to the rate of growth in the state economy	5
	• Less than seven percent of state income	4
	• Restricted to a percent greater than or equal to seven percent of state income	3
	• Equal to a share of total revenue and expenditures	2
	• No new taxes or fees	1
Method of Approval	• Constitutional Convention	4
	• Legislative Referendum	3
	• Citizen Initiative	2
	• Legislative Vote	1
Override Provisions	• No override allowed	4
	• Voter approval to raise taxes and expenditure of surplus wages	3
	• Supermajority vote	2
	• Declaration of emergency funds	1
Exemptions	• Budget Reserves	-1
	• Grants	-1
	• Capital Projects	-1
	• Debt Service	-1
	• Court Mandates	-1
	• Non-Recurring General Fund Appropriations	-1

The Leviathan-Niskanen-Buchanan model (Cutler, Elmendorf, & Zeckhauser, 1999) of government spending was developed based on the premise that government cannot keep taxes and spending under control without impacting services. The model

“suggests that more restrictive TELs should improve economic growth by cutting out wasteful spending and providing transparency and stability in taxing policies” (p. 186). However, only a few empirical studies have been conducted on TELs, and they have concluded that TELs neither have a positive nor negative impact on economic growth (Deller et al., 2012; Deller & Stallmann, 2007; McGuire & Rueben, 2006; Stallmann & Deller, 2010).

Amiel et al. (2012) conducted a study using the indices created from their 2009 study to further explore the impact on economic growth using the Barro-type empirical growth framework. The study used a generalized method of moments approach to project a Barro-type growth model with three separate restrictiveness indices of state tax and expenditure limitations. The results of the study revealed that more restrictive TELs in poorer income states had a positive effect on economic growth due to those restrictions, which created greater fiscal discipline. However, in wealthier income states, the opposite was true, because the restrictiveness would eliminate non-essential services, thereby hindering growth in higher income states.

The research also indicates that because TELs are heterogeneous, generalizations are difficult to make. Maher and Deller (2010) also used the 2009 report to study the relationship between the TELs and fiscal condition of 1,000 municipalities in 47 states and found that the “severity of TELs on local governments affect most aspects of local financial condition including revenues, expenditures, unreserved fund balances, debt service, general-obligation debt and unfunded pension liability” (p. 18). The hypothesis was that the more severe the local TELs, the lower the level of the community’s own-source revenues and general fund expenditures.

Ballal and Rubenstein (2009) conducted a meta-regression analysis to examine the relationship between TELs and education resources in an effort to understand the differences that exist within the research. The analysis identified and collected all relevant studies excluding any publication bias. The study revealed that, although “TELs are designed to constrain spending, the effects on state funding sources suggest that states may step in to ‘fill the gap’ when local revenues are reduced,” that is, property taxes (p. 680). The study also noted that more years of data yielded a negative correlation between TELs and education resources, compared to earlier studies with less data.

### **Funding of Public Schools in New York State**

According to the Office of the State Comptroller (2016), school districts in New York State have three main sources of revenue. The two largest are the local property tax and state school aid, which accounted for about 48% and 36% of total revenues, respectively, in 2014-15, depending upon the district. The balance is made up of a combination of federal aid, use of fund balances, and other revenue, such as interest earnings, tuition charges, facility rental fees, etc.

**Foundation state aid.** The impact of the Great Recession that began in 2008 affected state aid to school districts, especially in terms of implementation of the new Foundation Aid formula that was to be phased in over 4 years based on the settlement of the Campaign for Fiscal Equity litigation (2007). The state committed \$5.5 billion, which was intended to provide “sound basic education” (p. 4) for all students within the state. The distribution of the aid would be based on regional costs, student population, demographic profile (poverty, Limited English Proficiency, and special needs), a

minimum increase of 3% per district with a maximum increase of 25%, regardless of funding levels (Marcou-O'Malley, 2016c; Office of the State Comptroller, 2016).

However, according to a report from the Alliance for Quality Education (Marcou-O'Malley, 2016c), only 2 years of aid were phased in, and in 2009, after the economic downturn, the state began “slashing funding from schools, taking back the CFE funding and more” (p. 8). As of the 2015-16 school year, the state owed \$4.4 billion to school districts and, according to the Office of the State Comptroller (2016), current budgets do not reflect any plans to fund the formula at the original level proposed (p. 4).

**GAP elimination adjustment.** In 2010 and 2011, the state reduced \$2.7 billion in aid to school districts through the implementation of the Gap Elimination Adjustment (GEA) in order to close the state’s multi-billion-dollar budget deficit. As a result, schools were forced to make deep reductions to programs in the form of staff reductions, increased class size, and reduced services to students. The reductions were lower for high-need districts on a percentage basis, but often they had a greater impact per pupil during the first years of the GEA, since much more of their revenue came from state aid to begin with (Marcou-O'Malley, 2016c; Office of the State Comptroller, 2016). Although, the state restored the GEA for 2016-17, it is unlikely that districts will be able to recover from the cumulative impact of these lost revenues, especially in light of the implementation of the TELs in 2012.

According to the Alliance for Quality Education (Marcou-O'Malley, 2016b), the “funding gap between the wealthiest school districts and the poorest is now at a record-setting level of \$9,796 per student and growing” (p. 5). They also reported that the gap grew by \$1,772 per pupil since Governor Cuomo ended the state’s commitment to the

Foundation Aid formula that was enacted in 2007 (Figure 2.1). In addition, they link the gap in funding with the gap in graduation rates. The wealthy school districts have graduation rates at 92% versus the poorest school districts with graduation rates at 66%. At the beginning of the 2015-16 school year, 189 districts, or 28%, of all school districts received less school aid than they did in 2008.

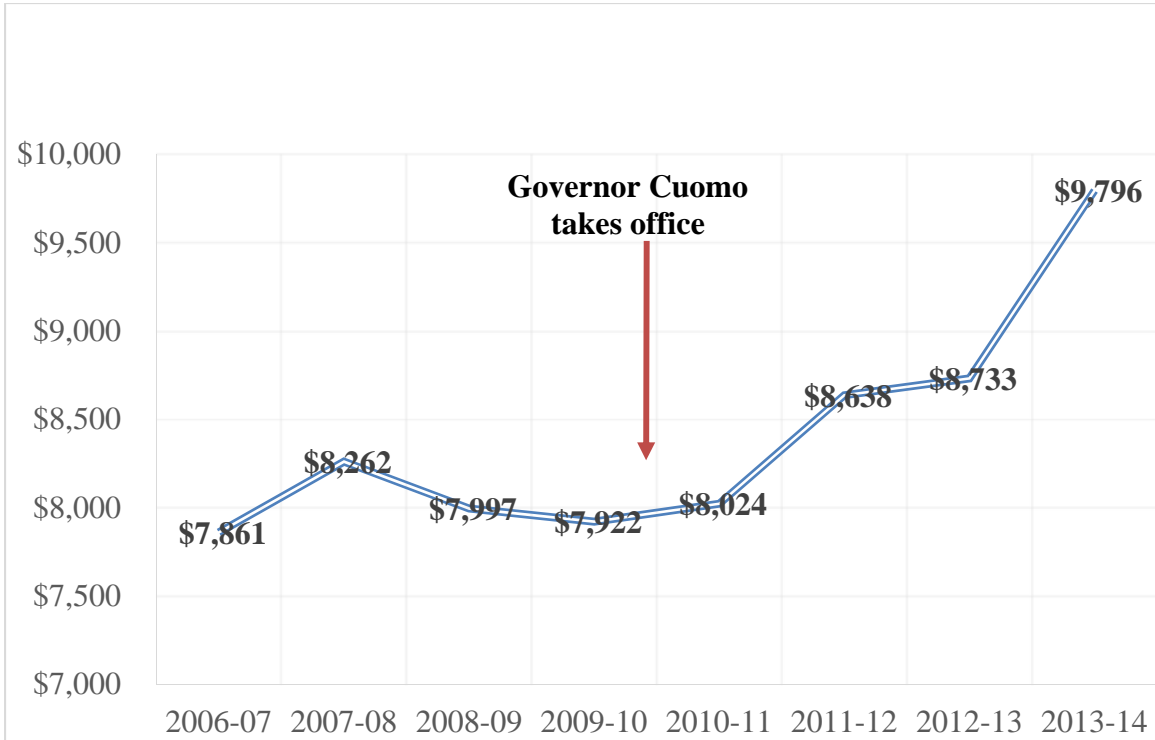


Figure 2.1. Gap between 100 wealthiest and 100 poorest school districts.

**Property taxes.** According to a report by the Empire Center for New York State Policy (McMahon, 2011), “New Yorkers pay some of the highest real property taxes in the country, with homeowner taxes in most of the state ranging from 30 percent to 178 percent above the national average as a percentage of property values” (p. 1). Even when property values, personal income, and consumer prices were going down during the start of the Great Recession in 2008, average property taxes continued to increase. During a

10-year period between 1999 and 2009, total property tax levies increased by 5.4% a year, compared to the average rate of inflation of 2.6%, and school districts' average tax levy grew at 6.3% per year (McMahon, 2011). It was also reported by the Office of Governor Andrew M. Cuomo (2012) that property taxes, as a percentage of personal income, were the highest in the United States at 79% above the national average. The report also stated that property tax levies in New York rose by 73% between 1998 and 2008 or 7.3% per year.

As a result, despite a decline in the economy and significant cuts in state aid to school districts, on June 24, 2011, New York State enacted the property tax cap, Chapter 97 of the Laws of 2011 (tax and expenditure limits). The legislation limits overall growth in the property tax levy to the lesser of 2% or the rate of inflation. The tax cap applies to all independent school districts and all local governments outside the cities of New York, Buffalo, Rochester, Syracuse, and Yonkers. This law applies broadly to property taxes that support local governments, including special districts that are independently governed, as well as special districts that are established, governed, and administered by another municipality. For municipalities, the cap can be exceeded in a given year, if a two-thirds majority of the governing board approves the override. However, in order for school districts to override the tax cap, it requires a supermajority of at least 60% of the voters in the school district to approve the increase. Keeping his campaign promise, Governor Cuomo provided tax relief to New Yorkers who pay the fifth highest property taxes per capita out of all 50 states (Table 2.2) (Chang & Wen, 2014; McMahon, 2011).

According to the Empire Center (McMahon, 2011) report, the New York State cap was modeled after Proposition 2 ½, a property tax limitation adopted in 1980 by the

voters of Massachusetts, although New York’s cap is only 2% percent. The Empire Center contended that under Proposition 2½, the state and local tax burden in Massachusetts decreased without harming public services. Their public schools generally rank among the best in the country. Opponents of the cap say it would be devastating, in the wake of state aid cuts and a decline in the economy, but they do not offer any alternative solutions to reduce the tax burden. The report purports that the cap will bring reform, such as relief from unfunded mandates from the state and federal government, as well as any mandatory legal contractual obligations.

Table 2.2

Ranking of Selected States by Highest and Lowest Property Tax Per Capita in FY 2010

State	Collections Per Capita	Ranking Top Five Highest & Top Five Lowest
New Jersey	\$2,819	1
Wyoming	\$2,633	2
Connecticut	\$2,522	3
New Hampshire	\$2,463	4
New York	\$2,280	5
Kentucky	\$684	46
Oklahoma	\$642	47
New Mexico	\$633	48
Arkansas	\$598	49
Alabama	\$539	50

Several studies regarding Proposition 2 ½, including the report from the Center on Budget and Policy Priorities (Lyons & Lav, 2007; Oliff & Lav, 2010), indicate that although Proposition 2 ½ property tax cap reduced the level of property taxation between

1980 and 1985 from 76% above the national average to 13% in 2010, there was a substantial infusion of state aid. The aid filled the gap created by the decrease in local funding and it was implemented during a period of rapid economic growth in addition to a declining K-12 enrollment, which meant smaller local budgets (Oliff & Lav, 2010; Chang & Wen, 2014).

It was also reported that the cap created greater disparities between the wealthier communities who were more inclined to override the cap and to have access to quality services that poorer communities did not. Since the passage of Proposition 2 ½, override votes have been on the rise (Chang & Wen, 2014). Oliff and Lav (2010) found that communities with higher per-capita income had higher rates of override approvals. Voter surveys also showed that by the 1990s, most people either regretted the severity of the TELs or felt that the mission had been accomplished (Chang & Wen, 2014; Cutler et al., 1999).

Studies have also found strong evidence that property tax caps lead to lower student test scores, higher dropout rates, and reduction in teacher preparedness (Lyons & Lav, 2007; Oliff & Lav, 2010). The Fiscal Policy Institute 2015 Report also stated that, “tax and expenditure limits reduce localities’ flexibility to address growing needs and emergencies, exacerbate inequities, and squeeze investments that could grow local economies” (p. 1).

The cap, which is the lesser of 2% or the change in the rate of inflation (Consumer Price Index), is arbitrary. In addition, the cap does not take into consideration changes in enrollment; it does not factor in the cost of services, which in many cases has grown faster than the allowable tax levy. The Consumer Price Index was significantly



less than 2% for 2014, 2015, and 2016. The average tax levy cap increase from 2012-13 through 2016-17 was 1.44%; 2016-17 was close to zero percent; and 2017-18 is projected at a similar level (NYASBO, 2016). As a result, schools will not have additional property tax revenue to fund increasing costs, such as pensions, infrastructure, unfunded mandates by state and federal governments, healthcare costs, which have been increasing between 8% to 13% per year. Costs have consistently been outpacing the amount of revenue that can be raised through the tax levy. The Fiscal Policy Institute 2015 Report, as well as the report from the New York State Educational Conference Board (2015) have issued several recommendations for changes in the New York State Tax Levy Cap:

- Redesign the override requirement for simple majority approval, not a supermajority of 60% of the voters
- Modify the restrictive zero percent contingent budget cap for schools, that is, if an override fails twice, there is a zero percent increase in the levy
- Make the allowable levy growth factor a consistent 2%, and adjust upward if the rate of inflation is higher
- Account for enrollment growth
- Allow for the carryover of unused tax levy to subsequent years
- Allow for emergencies
- Exclude capital improvement expenditures
- Exclude court orders and judgements

The Office of Governor Andrew M. Cuomo's (2015) report on the Property Tax Cap called "Results. Success. Savings," declares that the cap was successful. However, according to the report from the Fiscal Policy Institute (2015), there has not been

sufficient time or data to determine the success of the cap and its impact on services. According to the New York State Association of School Business Officials (2016), schools have reduced services and fund balances in order to stay under the cap, which is similar to the results in other States such as Massachusetts and Colorado.

John Yinger (2012) stated that the New York State Tax Cap is “profoundly unfair because the tax levy limit is a percentage” (p. 1). Therefore, the higher the levy, the higher the increase, which creates a disparity between rich districts with higher tax levies than those poorer districts with lower tax levies. For example, the rich district raises \$20,000 per pupil and the tax cap allows this amount to be increased by \$400, but the poor district raises \$2,700 per pupil and the tax cap allows this amount to be increased by only \$54.

**Funding the gap – insolvency.** The New York State Association of School Business Officials (2014) conducted a study to ascertain if New York State school districts were facing financial and educational insolvency. In 2003, the Board of Regents commissioned a study led by Syracuse University’s Bill Duncombe (Ammar et al., 2005), school district insolvency, both financial and educational, is defined as:

The ability to finance adequate student performance over the long run with reasonable tax burdens and without temporary disruptions of service. Adequate student performance implies students reaching the academic standards set by the New York State Board of Regents (NYSABO, 2014, p. 4).

New York State’s Constitution Article XI (1962) states: “The Legislature shall provide for the maintenance and support of a system of free common schools, wherein all the children of the state may be educated” (NYSABO, 2014, p. 4). The NYSABO (2014)

study concludes that if students are not receiving the necessary preparation to become successful in the workplace, then the consequence will be an increase in dropouts, businesses will turn to other countries to obtain skilled employees, and there will be a growing inequity between those who contribute to the economy and those who take from it.

The Office of the State Comptroller and the New York State Education Department have a system for assessing fiscal stress over the short term, nonetheless the system does not address program stress, as evidenced by staff and program reductions, which eventually will lead to educational insolvency. According to the New York State Education Conference Board (2015), as a result of reduced revenues, New York State school districts have cut over 30,000 staff members since 2009.

In addition, the NYSASBO (2014) study examined the level of unrestricted fund balances that school districts retained at the end of each fiscal year. A fund balance is defined as the funds left over at the end of the school year as a result of excess of revenues over expenditures. For New York State school districts, the law limits unrestricted fund balance to 4% of the ensuing year's budget. The NYASBO (2014) study revealed that "high-need districts in rural, urban, and suburban communities were exhausting their fund balance[s] at an alarming rate, representing the cumulative impact of the Great Recession and state efforts to contain school expenditures" (p. 4). The study points to the fact that since 2008, as described in the literature, there has been a significant impact to school revenues, that is, new state funding formula was promised and not received, reduction in state aid through the GAP Elimination Adjustment, limit

on the growth of school aid, and a limit on the tax levy. Each of these events has affected the actual and projected impact on sources of funding for schools.

According to the report by NYSASBO (2014), there have been few empirical studies conducted since the inception of the New York State Tax Levy Cap in 2011 (Bass, 2014; Galligan, 2015; Venettozzi, 2015). Each of the studies share similar concerns that if things continue on the same trajectory, it is likely that many more districts, especially those in low-wealth rural and urban communities, will be facing both educational and financial insolvency.

### **Chapter Summary**

The review of the literature revealed that the history of funding of public education in the United States is not equitable or adequate. Local property taxes by school districts represent the majority of revenue sources for a school district, and because property values vary across school districts, it creates a disparity in per-pupil expenditures. The funding of public education is a responsibility of the states, and despite court decisions in many states that have declared the funding of public education as being inadequate to address the needs of children, many states have failed to put in place state aid-apportionment programs to remedy the problem. As a result, across the United States, there are schools that are rich in resources and those that are struggling and unable to provide a sound basic education.

In addition, there is also the issue of property taxes being too high, and there is a demand by taxpayers to get relief, which further complicates the ability for schools to be funded adequately. As a result, many states have passed legislation that limits tax and expenditure growth, despite the fact that most studies have indicated that they do not

work and create further disparities given that wealthier communities are more apt to override the cap.

Regardless of this evidence and the fact that the funding gap between the top wealthiest school and its poorest is now close to \$9,800 per pupil, New York State enacted its property tax limit in 2011. This, coupled with the economic decline in 2008, reductions in state aid, and the failure by the state to institute the court ruling from the Campaign for Fiscal Equity, had put New York State children at further risk because many schools are unable to provide equitable and adequate education as mandated by the state's constitution. Verstegen, Venegas, and Knoepfel (2006) reflected the following in their analysis of judicial decisions:

America prides itself on justice and liberty for all, yet the shame of America's schools for children of color, the poor, and others fundamentally challenges this notion. The inequalities documented by Jonathan Kozol's *Savage Inequalities* have not lessened over the past decade and half. In fact, today we witness entire states in which school funding is found to be inadequate, unsatisfactory, and insufficient, creating an affront to any standard of decency and caring for America's future – its children and youth. (p. 74)

## **Chapter 3: Research Design Methodology**

### **Introduction**

The funding of public schools equitably and adequately continues to be a struggle for most states across the country, as evidenced by a review of the literature. Despite numerous court rulings mandating states to provide sufficient funding in order for students to be college and career ready, states such as New York continue to impede this effort by passing restrictive tax and expenditure limitations. Placing a limit on the amount of tax levy that can be raised in any given year continues to exacerbate the gap between low and high-need public schools and the gap between expenditures and tax levies.

In an effort to provide a broader perspective on the impact of the tax levy cap on school district expenditures, this research study takes a post-positivist worldview, which according to Creswell (2014), believes that problems need to be identified and tested through numeric observations and measurements based on the research or hypothesis questions presented. The researcher used a quantitative approach and created a forecasting model based on archival data of the fiscal years 2012-13 through 2016-17 to project future New York State School districts' expenditures and tax levies over the upcoming 5 years, 2017-18 through 2021-22. These forecasts were used to determine if there is a potential gap in revenues and the impact this gap could have on children in New York State. This multi-year retrospective analysis and forecast provides a context for

school districts, state officials, and their communities to understand their fiscal, civic, and political responsibilities to provide a sound basic education to all children.

The retrospective component was stratified by district classification based on the Need/Resource Capacity for the purposes of using statistical techniques to conduct a comparative analysis (Appendix A). The prospective component involved the use of scenario development to forecast the trajectory of district expenditures and tax levies in order to address the following research questions:

1. What has been the impact on school district expenditures for the years 2012-13 to 2015-16 as a result of the passage of the Tax Levy Cap Legislation in 2011?
2. What reductions in expenditures, that is, administration, instructional programs, operations and maintenance (O&M), fringe benefits, undistributed (other/capital expenses), pupil transportation, and debt service were made by districts to stay within the cap?
3. What would be the potential gap in revenue if current trends in the allowable tax levy increase (rate of inflation less than 2%) and expenditure increases continued?
4. Based on the study's forecast model, what is the relationship between a school district's expenditure changes and that district's classification based on Need/Resource Capacity, as defined by New York State (low need, average need, high-need rural, and high-need urban/suburban)?

## Context and Participants

The context for this study was the New York State Public School districts that levy local taxes, excluding the Big Five City School Districts (New York City, Buffalo, Rochester, Syracuse, and Yonkers). These school districts are fiscally dependent on their municipalities, which means that the school systems do not levy taxes, but they are dependent upon the citywide taxes for support (University of the State of New York, 2016).

The study used publicly available archival data, which does not require prior approval for use from the New York State Education Department. The data was gathered and analyzed from 669 public school districts in the State of New York, except for the Big Five.

For analysis purposes, the school district's Need/Resource Capacity (N/RC) index was used to classify the districts into four categories: high-need urban-suburban, high-need rural, average-need, and low-need districts, as defined by the New York State Education Department. The capacity index measures a district's ability to meet the needs of its students with local resources, that is, tax levies, and it is calculated by dividing a district's estimated poverty percentage by its combined wealth ratio (CWR) (Table 3.1).

The Need/Resource Capacity index, a measure of a district's ability to meet the needs of its students with local resources, is the ratio of the estimated poverty percentage<sup>1</sup> (expressed in standard score form) to the combined wealth ratio<sup>2</sup> (expressed in standard score form). A district with both estimated poverty and CWR equal to the state average would have a Need/Resource Capacity index of 1.0. N/RC categories are determined from this index using the definitions in the table below.



Table 3.1

*Need/Resource Capacity Categories*

Category	Definition
High N/RC: New York City	New York City
High N/RC: Large City Districts	Buffalo, Rochester, Syracuse, Yonkers
High N/RC: Urban-Suburban Districts	All districts at or above the 70th percentile (1.1835) that have: <ul style="list-style-type: none"> <li>• at least 100 students per square mile, or</li> <li>• an enrollment greater than 2,500 and</li> <li>• more than 50 students per square mile.</li> </ul>
High N/RC: Rural Districts	All districts at or above the 70th percentile (1.1835) that have: <ul style="list-style-type: none"> <li>• fewer than 50 students per square mile, or</li> <li>• fewer than 100 students per square mile and</li> <li>• an enrollment of less than 2,500.</li> </ul>
Average N/RC Districts	All districts between the 20th (0.770) and 70th (1.1835) percentile on the index.
Low N/RC Districts	All districts below the 20th percentile (0.770) on the index.

*Note.* <sup>1</sup>Estimated Poverty Percentage: A weighted average of the 2006-07 and 2007-08 kindergarten through Grade 6 free-and-reduced-price-lunch percentage and the percentage of children ages 5 to 17 in poverty according to the 2000 Decennial Census. (An average was used to mitigate errors in each measure.) The result is a measure that approximates the percentage of children eligible for free or reduced-price lunches.

<sup>2</sup>Combined Wealth Ratio: The ratio of district wealth per pupil to state average wealth per pupil, used in the 2007-08 Governor’s proposal.

According to New York State Education Department, Analysis of School Finances in New York State School Districts 2014-15 (2017), the 669 districts are classified as shown in Table 3.2.

Table 3.2

*Number of School Districts by Need/Resource Capacity Categories*

Need-Resource Capacity Category	Number of Districts
Urban/Suburban High Need	46
Rural High Need	154
Average Need	336
Low Need	133
Total Number of Districts	669

**Methodology**

The study used publicly available archival data from the New York State, Education Management website, which is responsible for the financial oversight of New York State public school districts. Annually, school districts are required to report tax levy data, per a uniformed Property Tax Report Card, as well as, annual financial reports that are maintained in accordance with the New York State Uniform System of Accounts. The key aspects of these reports are the tax levy and expenditures for each district. The use of archival data based on objectively documented variables ensures consistent data recording (Singleton & Straits, 2005).

According to Singleton and Straits (2005), it is critical when using historical data to be assured of how they are derived in order to assess validity and authenticity. Given the uniformity and consistency of the data collection by New York State each year, for all school districts, the data is valid (credible, comprehensive, and longitudinal), reliable, authentic, and complete. In addition, there are also several advantages to using archival data (Singleton & Straits, 2005):

- The data are non-reactive, unlike social research where reactions by human subjects can alter the outcomes of the study. As a result, archival data are considered to be more credible given that they cannot be influenced by human subjects.
- It allows for a larger unit of analysis, instead of collecting data from a limited number of individuals, it can be collected from an entire population under study.
- It provides the ability to study the past using documented evidence, instead of collecting historical data from the memories of individuals, which is not as reliable.
- It also provides the ability to measure social and cultural changes over time by the use of demographic and census information.

According to the Government Finance Officers Association (Kavanaugh, 2011), financial forecasts are an important framework used to analyze current and future conditions in order to guide future decision making based on a quantitative forecasting method. Although, “history is not a perfect predictor of the future, i.e., there is no such thing as a perfect forecast” (G. Louis, personal communication, 2016), the goal of forecasting is to develop a forecast “with as little error as possible” (McDonald, III, 2013, p. 57). The forecasting technique is considered to be extremely accurate, has ease of calculating and understanding, and a lack of subjective elements (Swanson, 2008).

The retrospective portion of the data analysis focuses on spending decisions made by the school districts to bridge the revenue gap, which included, but was not limited to, depleting a district’s fund balance, reducing staffing, and eliminating programs. The

retrospective component of the study looked at the fiscal years 2012 through 2016, while the prospective component of the study looked at the fiscal years 2017 through 2021. Scenario development used the exponential smoothing technique, because school district budgets and their tax levies are set annually and there is no known or anticipated seasonality effect. The exponential smoothing technique is used to produce a smooth time series by assigning an exponentially decreasing weight as the data points get older, and it smooths out volatility and makes it easier to determine trends by giving the same weight to all data points in a set time series for forecasting expenditures, the dependent variable and forecasting tax cap levies, and the independent variable (Vogt & Johnson, 2011). According to Spyros Makridakis (2010), simple methods tend to outperform more complex methods:

It is because complex methods try to find patterns that are not really there by creating a tight statistical “fit” to historical data. These false patterns are then projected forward. Conversely, simple methods ignore such patterns and just extrapolate trends (Makridakis, Hogarth, & Gaba, 2010, p. 85).

It was anticipated that any limitations relating to measurement error would be minimal because the data are maintained and reported by each school district annually, as prescribed by New York State. In addition, the data are verified annually by an external auditor through the audited financial statements and the annual state report, thereby increasing the reliability of the data.

### **Instruments Used in Data Collection**

The instruments used to collect the data came from the following publicly available archival resources:

1. Data related to tax levies were procured through the New York State Education Department, Education Management Services (2016) website for Property Tax Report Card data, which is maintained in a publicly accessible Excel spreadsheet on their website. The data are required to be legally submitted by each of the 669 school districts in New York State the day after their budget is adopted by the Board of Education, reporting various elements of the tax levy limit calculation in accordance with Chapter 97 of the Laws of 2011. The data are reported uniformly through the annual school district Budget Notice and the Property Tax Report Card, which are designed to be closely aligned with each other, as well as the tax cap form filed with the Office of the State Comptroller (OSC) by March first of each year. The data quality is verifiable and reliable based on audits by each district's external auditor, as well as random audits by the OSC.
2. Data related to school district expenditures are classified by major categories, that is, administrative, program, and capital was procured from the Fiscal Profile Reporting System on the New York State Education Department, Fiscal Analysis & Research Unit website. The report is produced by the State Education Department, detailing information on individual districts provided in an Excel spreadsheet called a Masterfile. The reports are based on the data from the New York State Annual Financial Report (Form ST-3), which is in accordance with the New York State Uniform System of Accounts for reporting revenues and expenditures, which is required to be used by all school districts. The ST-3 is an unaudited document, but the data are verified

by the external auditors as part of the annual audited financial statements for each school district.

3. Data related to each school district's ability to meet the needs of its students with local resources, that is, low need, average need, high-need rural, and high-need urban/suburban (Appendix A), was procured through the Fiscal Profile Reporting System on the of the New York State Education Department, Fiscal Analysis & Research Unit website. The classification of each school district was imported into the Excel spreadsheets, as described above, for purposes of classification into like categories.

### **Data Analysis**

The data collected were entered into SPSS statistics, which is a statistical software package produced by IBM. Research questions 1 and 2 were answered by classifying school districts by Need/Resource Capacity ranking into major expenditure categories, that is, administration (board of education, central administration, etc.), program (instruction, curriculum, staff development, pupil personnel services, pupil transportation, etc.) and capital (operations and maintenance and debt service) for the years 2012-13 through 2016-17. The data are presented graphically, along with means, frequency distributions, and standard deviations. Research question 3 is answered through forecast analysis using exponential smoothing.

For research question 4, a one-way analysis of variance (ANOVA) was used to determine the change in total expenditures in each of the need categories (high-need urban-suburban, high-need rural, average-need, and low-need districts). The change in expenditures for each group was calculated by subtracting the 2012 total expenditures

from the 2021 forecast of total expenditures. That change score was then translated into a per-capita expenditure by dividing the change score by the number of students based on the 2016-17 data. The resulting per-capita change in total expenditures is the dependent variable used in the ANOVA. The ANOVA was then used to compare each of the four groups' (high-need urban-suburban, high-need rural, average-need, and low-need districts) mean changes in total expenditures.

The advantage of using a one-way ANOVA versus a series of independent *t*-tests is that each time a *t*-test is run, there is a decision about whether it is statistically significant, which increases the chances of the data being wrong or, in other words, receiving a "Type I error, i.e., rejecting the null hypothesis, when in fact, it is true" (Urduan, 2010, p. 105). A one-way ANOVA takes into account the number of categories being compared and adjusts for the variance attributable between and within the groups (Urduan 2010).

The one-way ANOVA assumes that the dependent variable is normally distributed. Prior to running the one-way ANOVA, the data was screened for normality by examining the skew and kurtosis statistics. Following common practice, if the skew is greater than 2 or -2, and if the kurtosis is greater than 3 or -3, the distribution is deemed to be non-normal (Tabachnick & Fidell, 2001). In that event, the Kruskal-Wallis test was used in place of the one-way ANOVA. The Kruskal-Wallis test is the non-parametric equivalent of a one-way ANOVA (Pett, 2016). Instead of basing the calculations on the group means, the Kruskal-Wallis test bases the calculations on the group medians.

## Summary

The goal of this quantitative study was to highlight, through data analysis, the impact of the TEL instituted by New York State on school district's future ability to adequately fund student's education, in order to prepare them to be college and career ready in the 21<sup>st</sup> century. The implementation of the TEL is compounding the effects on an already inequitable and inadequate system of funding for schools, as it is pushing schools toward the risk of becoming both educationally and fiscally insolvent, if the structure of funding schools is not immediately addressed (NYSASBO, 2014).

The quantitative study used and analyzed archival data from the Education Department of New York State for 669 public school districts within the state (excluding the five large cities) for the period of 2012/13 through 2016/17. Each district was classified into four categories (high-need urban-suburban, high-need rural, average-need, and low-need districts) based upon their Need/Resource Capacity index. The state's database maintains information regarding prior years' expenditures and tax levies for each school district, and by using exponential smoothing, the study forecasts the potential revenue gap that may result over the years 2017-18 through 2020-21, as a consequence of the tax and expenditure limit (TEL). In addition, the study used a one-way ANOVA to determine if there are significant differences in the change in total expenditures between and among categories of districts, grouped by New York State, based on its Need/Resource Capacity index.



## **Chapter 4: Results**

### **Research Questions**

As stated in Chapter 1, there has been little research regarding the impact of the New York State Tax Levy Cap Legislation, Chapter 97, of the Laws of 2011 (TEL), on the future of New York State children's education. The purpose of this quantitative archival case study was to analyze the data from the years 2012-13 through 2016-17 and identify how school districts accounted for the impact of TEL as well as create a forecasting model to project future impact over the next 5 years (2017-18 through 2021-22). The retrospective analysis and forecast model provides a context for decision-making for school districts, state officials, and their communities regarding their ability to provide a sound basic education for children as required by the New York State constitution. In addition, this model is stratified in accordance with the state's Need/Resource Capacity index (N/RC), which is the impact of the TEL on the gaps and inequities in funding between and among districts based on their wealth.

The chapter is structured in accordance with four research questions posed in Chapter 1:

### **Research Questions**

1. What has been the impact on school district expenditures for the years 2012-13 to 2015-16 as a result of the passage of the Tax Levy Cap Legislation in 2011?

2. What reductions in expenditures, that is, administration, instructional programs, operations and maintenance (O&M), fringe benefits, undistributed (other/capital expenses), pupil transportation, and debt service were made by districts to stay within the cap?
3. What would be the potential gap in revenue if current trends in the allowable tax levy increase (rate of inflation less than 2%) and expenditure increases continued?
4. Based on the study's forecast model, what is the relationship between a school district's expenditure changes and that district's classification based on Need/Resource Capacity, as defined by New York State (low need, average need, high-need rural, and high-need urban/suburban)?

The researcher used publicly available archival data from the New York State Department of Education's website and analyzed the 669 New York State Public School Districts that levy local taxes, exclusive of the Big Five City School Districts (New York City, Buffalo, Rochester, Syracuse, and Yonkers).

The retrospective component of the data analysis focused on examining the major changes in per-capita expenditures related to administration, instructional programs support, O&M, fringe benefits, undistributed (other/capital), pupil transportation, and debt service for school districts during the period (2007-08 through 2011-12) prior to the implementation of the TEL and for the period after (2012-13 through 2015-16).

The prospective component of the data analysis used archival data for the period 2011-12 through 2016-17 to develop forecasts for expenditures, tax levies, and enrollment for the period 2017-18 through 2021-22, using an exponential smoothing

technique to determine the funding for 669 school districts by Need/Resource Capacity classification on a per-capita basis.

Using the forecasted data for each district's expenditures from 2011 through 2021, a one-way analysis of variance (ANOVA) was used to determine the difference, if any, between the four N/RC categories (high-need urban-suburban, high-need rural, average need, and low-need districts).

### **Data Analysis and Findings**

**Types of school districts.** Table 4.1 reflects the New York State Education Department classification of school districts based on the district's ability to meet the needs of its students with local resources, that is, tax levies, and it is calculated by dividing the district's estimated poverty percentage by its combined wealth ratio (CWR).

The Need/Resource Capacity index, a measure of a district's ability to meet the needs of its students with local resources, is the ratio of the estimated poverty percentage<sup>1</sup> (expressed in standard score form) to the combined wealth ratio<sup>2</sup> (expressed in standard score form). A district with both estimated poverty and combined wealth ratio equal to the state average would have a Need/Resource Capacity index of 1.0. Need/Resource Capacity categories are determined from this index using the definitions in the table below.

**Classification of school districts.** Table 4.2 reflects the classification of all 669 school districts into N/RC categories as defined by New York State.

Table 4.1

*Need/Resource Capacity Categories*

Category	Definition
High N/RC: New York City	New York City
High N/RC: Large City Districts	Buffalo, Rochester, Syracuse, Yonkers
High N/RC: Urban-Suburban Districts	All districts at or above the 70 <sup>th</sup> percentile (1.1835) that have: <ul style="list-style-type: none"> <li>• at least 100 students per square mile, or</li> <li>• an enrollment greater than 2,500 and</li> <li>• more than 50 students per square mile.</li> </ul>
High N/RC: Rural Districts	All districts at or above the 70 <sup>th</sup> percentile (1.1835) that have: <ul style="list-style-type: none"> <li>• fewer than 50 students per square mile, or</li> <li>• fewer than 100 students per square mile and</li> <li>• an enrollment of less than 2,500.</li> </ul>
Average N/RC Districts	All districts between the 20 <sup>th</sup> (0.770) and 70 <sup>th</sup> (1.1835) percentile on the index.
Low N/RC Districts	All districts below the 20 <sup>th</sup> percentile (0.770) on the index.

*Note.* <sup>1</sup>Estimated Poverty Percentage: A weighted average of the 2006-07 and 2007-08 kindergarten through Grade 6 free-and-reduced-price-lunch percentage and the percentage of children ages 5 to 17 in poverty according to the 2000 Decennial Census. (An average was used to mitigate errors in each measure.) The result is a measure that approximates the percentage of children eligible for free or reduced-price lunches.

<sup>2</sup>combined wealth ratio: The ratio of district wealth per pupil to state average wealth per pupil, used in the 2007-08 Governor's proposal.

Table 4.2

*Types of School Districts by Need/Resource Capacity Categories*

Need/Resource Capacity Category	<i>n/N</i>	%
Urban/Suburban High Need	46	6.87%
High-Need Rural	154	23.02%
Average Need	336	50.22%
Low Need	133	19.89%
Total	669	100.00%

School districts classified as *average need* represent the majority of districts within the state at 50.22% ( $n = 366$ ) and the balance comprises high-need districts (rural and urban/suburban) at 29.89% ( $n = 200$ ) and low-need districts at 19.89% ( $n = 133$ ).

**Demographics of school districts.** Table 4.3 reflects the demographic characteristics of school districts in terms of student enrollment, total expenditure budget, and tax levy for the base-line school year of 2011-12. The information was gathered from New York State Education Department's database for the annual Property Tax Report Card. Each school district was then coded and sorted based on its N/RC classification (high-need urban/suburban, high-need rural, average need, and low need). The data was further analyzed for the minimum, maximum, mean, and standard deviation of each category for enrollment, budget expenditures, and tax levy.

Table 4.3

*Base-Line Demographics of School Districts*

Variable	Minimum	2011-12 Maximum	<i>M</i>	<i>SD</i>
<b>High-Need Urban</b>				
<b>Suburban</b>				
Enrollment	147	16,739	4,835	3,450
Tax Expenditures	\$3,618,880	\$311,477,042	\$94,756,557	\$65,547,729
Tax Levy	\$2,490,968	\$134,606,242	\$40,751,257	\$35,482,920
<b>High-Need Rural</b>				
Enrollment	175	4,260	1,026	742
Tax Expenditures	\$5,378,429	\$77,444,923	\$20,021,028	\$67,547,729
Tax Levy	\$1,070,000	\$42,189,923	\$5,927,173	\$35,198,576
<b>Average Need</b>				
Enrollment	74	14,464	2,381	2,273
Tax Expenditures	\$2,152,314	\$287,834,125	\$46,151,092	\$44,749,513
Tax Levy	\$1,647,622	\$181,889,144	\$30,639,509	\$26,919,902
<b>Low Need</b>				
Enrollment	43	10,624	2,327	2,944
Tax Expenditures	\$3,432,805	\$215,978,880	\$69,747,706	\$49,815,630
Tax Levy	\$2,461,129	\$182,231,882	\$55,954,430	\$40,713,342

**Research question 1.** *What has been the impact on school district expenditures for the past 5 years as a result of the passage of the Tax Levy Cap legislation in 2011?*

The data related to school district expenditures was procured through the website of the New York State Education Department, from the annual financial report (Form ST-3). Figure 4.1 compares the increase in spending on a per-capita basis classified by districts N/RC for the period prior to the implementation of the tax levy cap (2008-2011) to the period after its implementation (2012-2015). The data show little change in low- and average-need districts between the two periods. Low need had no change in total spending, and average need had a decrease in spending of 1% for the period after the

implementation of the tax levy cap (2012-2015). However, for high-need districts (rural and urban/suburban) total spending decreased by 3% for the period after the implementation of the tax levy cap (2012 to 2015).

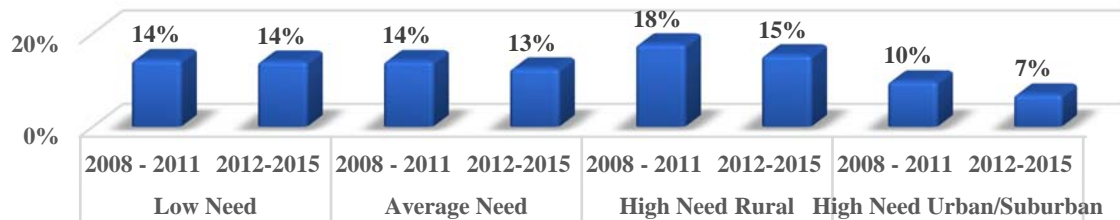


Figure 4.1. Comparison of Per-Capita Spending Increase by Need/Resource Capacity Index.

**Research question 2.** *What reductions in expenditures, that is, administration, instructional program, operations and maintenance (O&M), fringe benefits, undistributed (other/capital), pupil transportation, and debt service were made by districts to stay within the cap?"*

Table 4.4 shows that the average yearly spending decreased in all categories except for the low-need districts, which remained flat for the period after the implementation of the tax levy cap (2012-15). High-need urban/suburban districts had the lowest spending increase at 1.7%, compared to the spending increase of the other classifications, which ranged from 3.0% to 3.7%.

Table 4.4

*Comparison of Per-Capita Expenditure Categories by School District Classification*

Expenditures	LN		AN		HNR		HNU/S	
	2008-11	2012-15	2008-11	2012-15	2008-11	2012-15	2008-11	2012-15
Administrative	10.0%	12.0%	18.0%	7.0%	19.0%	18.0%	5.0%	5.0%
Instructional	12.0%	12.0%	10.0%	12.0%	10.0%	14.0%	6.0%	6.0%
O&M	4.0%	10.0%	0.0%	7.0%	5.0%	7.0%	-6.0%	2.0%
Benefits	29.0%	21.0%	29.0%	19.0%	31.0%	16.0%	22.0%	11.0%
Other	13.0%	41.0%	4.0%	23.0%	8.0%	64.0%	5.0%	15.0%
Transportation	10.0%	6.0%	9.0%	7.0%	14.0%	12.0%	9.0%	7.0%
Debt Service	9.0%	5.0%	25.0%	4.0%	54.0%	10.0%	29.0%	11.0%
Total	14.0%	14.0%	14.0%	13.0%	18.0%	15.0%	10.0%	7.0%
Avg.	3.4%	3.4%	3.4%	3.0%	4.2%	3.7%	2.4%	1.7%

District spending remained flat or showed a decrease in administration and transportation costs. Clearly, the districts were making efforts to avoid reductions to instructional programs. Additionally, there was a decrease in benefits, which is likely due to changes in staffing related to retirements, reductions in staffing, increased contributions from employees for health insurance premium costs, and the stock market, which drives pension costs. Facility and capital expenses include operations and maintenance, other expenses (fund transferred for capital expense), and the issuance of debt for construction and renovations. Although the issuance of debt and debt payments



decreased, there was an uptick in spending under O&M and other/capital expenses.

Based on the complexity of the tax levy cap calculation, there may have been a change in strategy by school districts, which was to reduce debt service and incorporate construction and renovation as part of their operating budgets.

**Research question 3.** *What would be the potential gap in revenues if current trends in the allowable tax levy increase (rate of inflation less than 2%) and expenditure increases continued?*

Using retrospective data (2011 through 2016) from the New York State Real Property Tax Report Cards, forecasts were developed using Microsoft Excel and its statistical tool for exponential smoothing to forecast expenditures, tax levy, enrollment, and the funding gap for the period 2017-18 through 2020-21. Figure 4.2 shows the school districts by Need/Resource Capacity for the years 2011, 2016, and 2021.

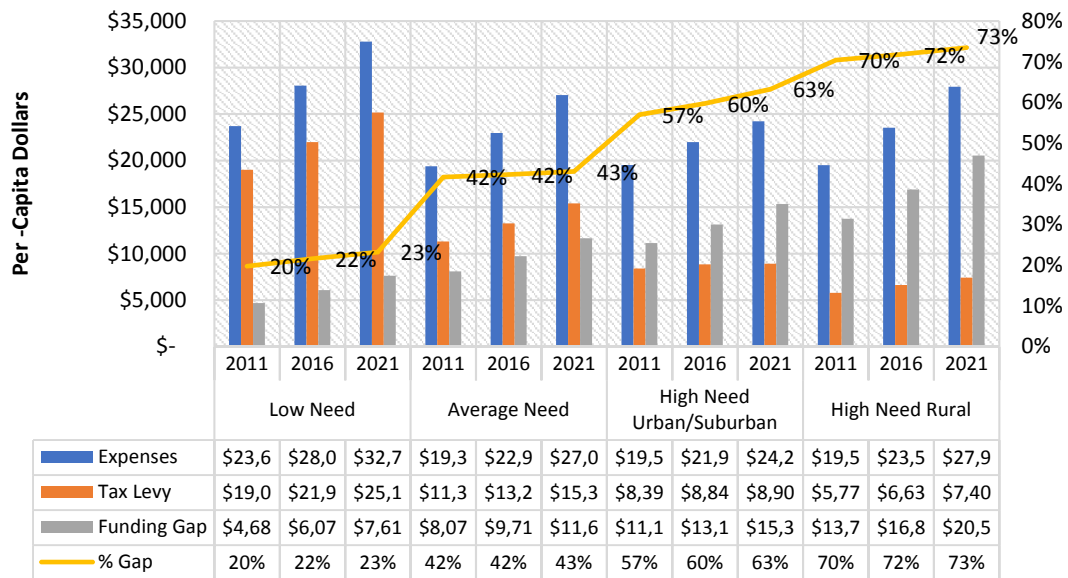


Figure 4.2. Per-Capita Expenditures, Tax Levy, and Funding Gap by Need/Resource Capacity.

Figure 4.2 shows that the average funding gap, which reflects the difference in expenditures versus revenue from the local tax levy on a per-capita basis for high-need rural districts (HNR) in 2011 was \$13,734, representing a 70% gap in tax levy revenue needed to fund expenditures. Highlighting the fact that high-need districts have less revenue from local sources than low-need districts. The funding gap for high-need urban/suburban districts (HN U/S) was \$11,123, or 57%, average need districts (AN) were at \$8,078, or 42%, and low-need districts (LN) were at \$4,686 or 20%. The difference in funding gaps on a per-capita basis between low-need and high-need rural districts was \$9,048; as a result, high-need rural districts had a funding gap that was 193% greater than the funding gap for low-need districts.

For 2016, the funding gap continued to grow for each classification. HNR districts grew to a gap of \$16,889, or 72%; HN U/S was \$13,128, or 60%; AN was \$9,716, or 42%; and LN was at \$6,070 or 22%. The difference in funding gaps between LN and HNR districts was \$10,819, or 178%, on a per-capita basis.

The forecast for 2021 shows a funding gap of \$20,529, or 73%, for HNR; \$15,321, or 63%, for HNU/S; \$11,641, or 57%, for AN; and \$7,617, or 23%, for LN. The difference projected in the funding gaps between LN and HNR districts is \$12,912 or 170%. The growth in the funding gap is the most significant for high-need urban/suburban districts that grew from a funding gap of 57% in 2011 to a forecasted funding gap of 63% in 2021, a difference of 6 percentage points or an 11% increase.

**Research question 4.** *Based on the study's forecast model, what is the relationship between a school district's expenditure changes and that district's*

*classification based on Need/Resource Capacity, as defined by New York State (low need, average need, high-need rural, and high-need urban/suburban)?*

A one-way analysis of variance (ANOVA) was used to test whether the forecast results in 2021 were significantly different in district expenditures based on the type of district classification (LN, AN, HNR, HNU/S). However, prior to testing for the ANOVA, the Levene’s test for homogeneity (equality) of variances in distributions was used. The Levene’s test was significant, and the alpha level for the test was reduced to .025, which is a standard correction when the assumption of equality of variances is violated and corrects for the fact that inequality of variances can distort the sampling distribution (Gamst, Meyers, & Guarino, 2008).

Table 4.5

*Tests of Between-Subjects Effects – Dependent Variable: FY2021*

Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power
Need/Resource	4.731E+17	3	1.577E+17	53.886	.000	.196	1.000
Error	1.946E+18	665	2.927E+15				
Total	4.813E+18	669					

The omnibus ANOVA results indicate that there is a statistical difference in expenditures between district types in the final year of the forecast,  $F(3,668) = 53.886$ ,  $p = .000$ ,  $\eta^2 = .196$ . Statistical significance indicates that the difference between the means is unlikely to occur if the null hypothesis is true (Gamst et al., 2008; Urdan, 2010). However, the  $p$ -value was not able to indicate how strong an effect the independent variable (e.g., type of district) will have on the dependent variable (e.g., expenditures).

To interpret the strength of a significant effect, it was necessary to use a measure of effect size.

In this analysis, eta-squared was used to measure the effect size. It indicates what percentage of the variability in expenditures can be attributed to the type of district (low need, average need, high-need rural, high-need urban/suburban). Eta-squared ranges from 0 to 1. Interpreting eta-squared depends on the context of the research (Gamst et al., 2008). What a researcher interprets to be a weak, moderate, or a strong effect can vary. Common cut-offs of eta-squared values of .09 or less are considered weak, .10 to .21 are considered moderate, and .22 or higher are considered strong (Gamst et al., 2008). By these standards, the effect of district type on expenditures was moderate.

Due to having four levels of the independent variable, post hoc pairwise comparisons were required to locate where the significant differences occurred. The post hoc comparisons were calculated using the Games-Howell test, a test that is appropriate when variances of groups are not equal. The Games-Howell has a built-in correction for the alpha, so an alpha of .05 can be used when interpreting these results. As shown in Tables 4.6 and 4.7, all pairwise comparisons were statistically significant. The differences were such that the low-need districts were forecast to have the highest average expenditures, and the high-need urban/suburban districts were forecast to have the lowest average expenditures.

Table 4.6

*Descriptive Statistics – Dependent Variable: FY2021*

Need/Resource	Mean	SD	n/N
	Dollars In Millions		
Low Need	84.5	60.1	133
Average Need	56.9	55.1	336
High-Need Rural	25.0	17.1	154
High-Need Urban/Suburban	126.2	93.8	46
Total	59.8	60.2	669

Table 4.7

*Post Hoc Comparisons – Games-Howell*

Need/Resource	Need/Resource	Sig.
Low Need	Average Need	.000
	High-Need Rural	.000
	High-Need U/S	.032
Average Need	Low Need	.000
	High-Need Rural	.000
	High-Need U/S	.000
High-Need Rural	Low Need	.000
	Average Need	.000
	High-Need U/S	.000
High-Need U/S	Low Need	.032
	Average Need	.000
	High-Need Rural	.000

## Summary of Results

Based on the data analysis examined in response to Research Questions 1 and 2, there was a decrease in spending realized by high-need districts after the implementation of the TELs in 2011. However, low- and average-need districts remained relatively unchanged. The data also points to the fact that the decrease in spending was primarily in the area of spending outside of the classroom, such as transportation, facilities, and debt service, thereby preserving the quality of instructional programs and its impact on children.

The forecast analysis in response to Research Question 3, and based on the historical data from 2011-2016 for tax levies and expenditures, demonstrates that the per-capita funding gap in revenue will continue to widen through 2021. The largest funding gap projected is at 73%, or \$20,529, for 153 high-need rural districts, representing 138,000 students. This is followed by high-need urban/suburban school districts with a funding gap of 63%, or \$15,321, for 46 school districts that represent 239,000 students. Average-need school districts represent the majority of schools within the state, with 336 schools and 707,000 students, with a projected funding gap of 57% or \$11,641. Finally, for the 153 schools classified as low need, their funding gap projected is 23% or \$7,617.

Additionally, in response to Research Question 4, the forecast results for 2021, based on using a one-way ANOVA, shows that there will be a significant difference in expenditures,  $F(3,668) = 53.886$ ,  $p = .000$ ,  $\eta^2 = .196$  and the eta-squared analysis shows that there will be a moderate effect on expenditures due to the type of district (low need, average need, high-need rural, and high-need urban/suburban). It is clear from the analysis of data that the districts with high Need/Resource Capacity, that is, low property

values and household wealth, have experienced and will likely continue to experience disproportionate, adverse impact from the New York State TELs. Inequities in the state funding formula for school districts, which seems to defy correction, despite repeated successful court challenges over several decades, are exacerbated by the TELs. The implications of all this, along with recommendations are discussed in Chapter 5.

## **Chapter 5: Discussion**

### **Introduction**

This chapter discusses the outcomes of the data analysis presented in Chapter 4, in relation to the problem statement, research questions, and the literature. It also discusses the implications of the TEL instituted by New York State on a school district's ability to fund a student's education in the future, as well as giving recommendations for further research.

Public schools across the country are primarily funded by levying taxes on the value of property owned by its citizens and, because property values vary significantly from municipality to municipality, the funding of local public schools is unequal (Urban & Wagoner, 2014). Although, there have been dozens of lawsuits regarding how to fund schools equitably and adequately, as mandated by state constitutions, there continues to be significant funding and achievement gaps between and among low- and high-need districts (NYSASBO, 2017; Zernike, 2016).

In New York State, despite the ruling in 2003 by the Court of Appeals, which requires the state to provide all students with the opportunity to be college and/or career ready, the state still has not fashioned a more equitable funding formula that would satisfy the court's mandate. In addition, notwithstanding the Great Recession in 2008 and warnings from scholars about the flaws of property tax limits, New York State enacted the Tax and Expenditure Limitation (TEL) in 2011. The New York State TEL is structured to limit the increase in the tax levy by the lesser of 2% or the rate of inflation,



and because the tax levy limit is a percentage, it continues to widen the gap that exists between rich districts with higher tax bases and poor districts with lower tax bases. As a result, the purpose of this study was to examine, through a quantitative analysis, the trends set in motion by the New York State Tax Cap Legislation, Chapter 97, of the Laws of 2011.

This case study used archival data from the period 2012-13 through 2016-17 to create a financial forecast model to project the gap in revenues from 2017-18 through 2021-22. This financial forecast provides a critical framework to analyze current and future conditions in an effort to call attention to the fact that school districts will be facing an even greater funding gap between expenditures and tax levies due to the implementation of the TEL. As a result, some districts will likely be facing educational and fiscal insolvency, which means the inability to provide a sound basic education as mandated by the state constitution.

### **Implications of Findings**

The implications of the findings in this study provide a context for school administrators, state officials, parents, and communities to determine if the funding of education is equitable and adequate and whether or not a potential funding gap will be insurmountable—especially for those high-need, low-wealth districts.

The four research questions were designed based on a review of the literature in relation to a theoretical framework for forecasting and social justice. They also originate from this researcher's extensive experience in New York State school finance; first as a certified public accountant specializing in public school districts for 14 years, and second, as a school business official for 20 years. During the past 5 years (2012-2017), in the

position of an Assistant Superintendent for Business, the researcher's district has been under the mandates of the TEL and it has affected the all of the districts' ability to plan and manage their school district budgets.

**Classification of school districts.** New York State classifies school districts based on their ability to meet the needs of its students with local resources (property taxes). Those districts that are classified as low need have a high level of local support through property taxes, and those classified as high need generally have more state support through the state's existing foundation aid program. The majority (70%) of the 669 districts included in this study are classified as low- and average-need districts with the balance of the districts being classified as high-need districts. However, based on the demographic data, high-need urban/suburban districts serve many more students, and thus, have a lower per-capita spending ratio.

**Spending patterns of districts.** An analysis of the data related to the changes in spending by type of school district for the period after the implementation of the Tax Levy Cap legislation in 2011, for 2012-2015, compared to the period prior to its implementation, 2008-2011, revealed that total spending increased at a significantly lower rate of 12.5% than during the period prior to the enactment of the TEL. But the decline in spending occurred primarily in those schools classified as high need with little to no change in spending for those schools classified as average or low need. The data confirm what the literature points out, which is those schools that are classified as low-need/rich districts have a larger tax-base property wealth, which helps mitigate the impact of the TEL, and given that the TEL is based on a percentage, the tax levy in dollars will continue to yield more money per capita for low-need districts. Very simply, the richer

districts will have more dollars to spend under the tax cap legislation versus poorer districts.

Another issue with the TEL that impacts this analysis is that the tax levy cap calculation does not include adjustments for changes in enrollment. For the period 2007 to 2015, enrollment declined in public schools across the state, with the highest declines occurring in low-, average-, and high-need rural districts at a rate of 10%. However, high-need urban/suburban districts have seen an increase in enrollment of 4%. In both situations, there was no adjustment to the tax levy calculation and, as a result, low-need districts had more dollars to spend on fewer students, and high-need districts had less dollars to spend on more students, thereby compounding the disparity between districts. As a result, it makes sense that high-need urban/suburban districts had to make reductions in spending in order to accommodate more students. The New York State Educational Conference Board (2015) compiled a list of recommendations to address flaws in the tax levy legislation, compared to other tax cap models, one of which was to account for enrollment growth within the tax levy cap calculation.

**Decisions made by districts to stay within the tax levy cap.** The research further analyzed the historical data for the period prior to, and after the institution of, the TEL to determine the areas in which districts reduced spending in order to remain compliant within the cap. Based on the data, decreases in spending occurred primarily in areas that some believe do not have a direct impact on instructional programs and services delivered to students within the classroom. Cuts were made in administration (19%), transportation (24%), debt service (74%) (principal and interest obligations), and

benefits (40%), while, during this time frame, instructional expenses remained the same or increased slightly.

The data also seemed to indicate that districts, deliberately, either paid off/down debt obligations from savings in the current year's budget, or refinanced debt at a lower interest rate, and shifted to using the operating budget to fund renovations and improvements instead of issuing debt service. This is evidenced by a decrease in debt service and an increase in O&M/other/capital expenses, which is part of the operating budget. The goal with any of these strategies would be to maximize the allowable tax levy limit in each year.

The general philosophy by most school districts after the Great Recession was to find efficiencies that did not impact the classroom and to prevent the district from falling *off the cliff* and becoming educationally and financially insolvent, as defined by the Board of Regents. As a result, areas, such as transportation, were scrutinized by districts to find efficiencies. Districts reduced the number of buses needed to transport students by increasing the number of students assigned to each bus. They evaluated bus routes and stops to ensure efficiencies in travel time, and they asked voters, through a separate proposition or referendum, to increase mileage limits, thereby requiring more students to walk to school. In addition, districts also looked at reducing administrative costs, renegotiating salary contracts, increasing employee contributions toward benefits, offering retirement incentives to replace high-paid staff with lower paid staff, pay down debt service, and lay off of non-essential staff. Many districts commissioned demographic studies to determine if enrollment within the school buildings could be

consolidated, which would reduce overhead and provide an additional revenue source if the building could be leased.

As reported by the New York State Council of School Superintendents (2012), districts worked to find efficiencies after the Great Recession in order to reduce expenses and save taxpayers' money. However, despite these efforts, Governor Cuomo proceeded to reduce state aid through the Gap Elimination Adjustment in 2010 and 2011, and he withdrew from compliance with the Campaign for Fiscal Equity (CFE) court ruling in order to address the state's budget deficit and implemented the TEL in 2011, regardless of warnings by scholars (Oliff & Lav, 2010; Zycher, 2013), that TELs were not effective. In fact, the research states that TELs actually led to lower student test scores, higher dropout rates, and a reduction in teacher preparedness (Lyons & Lav, 2007; Oliff & Lav, 2010).

Additionally, Governor Cuomo publicized the TEL as a way to manage the rising cost of taxes and promoted that it was a 2% tax cap, when, in fact, it is the lesser of 2% or the change in the rate of inflation. As stated in Chapter 1, as a result of an unprecedented period of low inflation, the average allowable tax levy from 2012-13 through 2016-17 was 1.44%, significantly lower than the 2% promised. In addition, the Governor provided taxpayers with additional incentives to demand that their districts remain tax levy compliant by offering an additional tax rebate if they did so. As a result, school districts were much less likely to risk the ire of their communities by not staying within the cap. Instead, districts reduced expenditures in order to remain compliant. High-need urban/suburban districts reduced spending to an average yearly increase of only 1.7%, compared to the other classifications of districts that had a yearly spending increase in

excess of 3.0% after the implementation of the tax levy cap (complexity in the formula, as prescribed by law, will often yield rates in excess of the publicized 2% cap). Thereby providing further evidence of the funding disparity among districts and the gaping wealth divide across the state.

**Forecast of funding gap in revenues.** Forecasting expenditures and tax levies based on types of school districts (low need, average need, high need rural, high need urban/suburban) through 2021 showed a significant disparity in the per-capita funding gap between expenditures and tax levies for high-need rural school districts at \$20,529, compared to low-need districts at \$7,617. The gap between these two categories of school districts is almost \$13,000 per child, which is enough to educate another child at the average state per-capita spending level. The funding gap between expenditures and tax levies for high-need rural districts in 2011 was at 70%, and in 2016, it grew to 72%, and it is projected to be 73% in 2021. How can these districts continue to survive without a permanent change in funding? At this time, there is no guarantee from year to year that the state will fill this growing gap.

If we are going to provide children with an equitable and adequate education, the data are a wakeup call for political leaders and residents who must realize the urgency of addressing this significant inequity in funding. If not, high-need school districts are headed toward financial and educational insolvency by the year 2021.

**Significance of district expenditures between the types of districts.** The data analysis in response to the research questions and the results of the statistical analysis confirm that there is a significant difference in expenditures between district types due to the TEL. The differences are such that the low-need districts were forecast to have the

highest average expenditures and high-need urban/suburban were forecast to have the lowest average expenditures. As a result, the disparity between low-need districts and high-need districts will likely continue to grow and create funding gaps that will eventually be unsustainable for high-need districts.

### **Limitations**

Due to the comprehensiveness of this analysis, there were no limitations regarding access to data and participants. Although not a limitation for the purposes of design, analysis, and goals of this study, the Big Five School Districts (Buffalo, New York City, Rochester, Syracuse, and Yonkers) and Special Act School Districts (state-funded schools for children with emotional and physical disabilities) were not included because they do not levy taxes and are not directly impacted by the implementation of the TEL by New York State. If there are limitations at all, it would be the limited ability to discern or correlate reductions in expenditures to the dynamics of the TEL, due to the fact that districts were experiencing enrollment decline and still dealing with the effects of the Great Recession.

### **Recommendations**

Based on the forecast modeling provided in this study, the impact of the New York State Tax Levy Cap on children's education is clear. The findings from this study confirm what other scholars have said about the impact of the TEL, as it provides actual data on 669 school districts within the state that levy taxes. It is abundantly clear that high-need school districts are and will be in jeopardy of becoming educationally and financially insolvent unless there is a dramatic shift in thinking—not only by the State of

New York but also by counties and municipalities—about the importance of education to our society and its future.

**Recommendations for future research.** In an effort to solidify the results of this study for the entire state, there should be further statistical analysis that incorporates forecasting the expenditures, tax levy, and funding gaps for the Big Five School Districts and determining their Need/Resource Capacity index. This would provide further data that could confirm the magnitude of the funding gap in revenues for the entire state on a per-capita basis. Further analysis, which would isolate and control for the variables associated with the impact of decreasing enrollment and the Great Recession, could provide evidence of their actual impact on expenditures and tax levies as a result of the TEL. Going forward, research should be conducted to compare actual data to the forecast model to determine its predictive accuracy for the years 2017-18 through 2021-22.

In addition, it would be important to understand the state's position if a district does go into receivership/bankruptcy. If a district is unable to pay its bills and the taxpayers have not approved an override to the TEL, what would the state do in this situation, and what would happen to the students, staff, and retirees? As we move forward with no permanent solution on the horizon on how to fund the gap, it is important for school officials, elected officials, and the community to understand what would take place when a school district becomes insolvent.

Another matter that requires further research is the impact on property taxes if all property owners, who are currently exempt from paying property taxes, were required to pay their fair share based on the full-market value of their property. According to a 2013 report by the Office of the State Comptroller, Property Tax Exemptions in New York



State, there was an estimated \$2.5 trillion at fair-market value of exempt properties in 2012. Property that is exempt shifts the burden of tax onto fewer property owners, thereby increasing the tax rate. This fuels the debate about high property taxes and voters wanting tax relief from their politicians. If all property owners were required to pay their fair share, whether they were governments, not-for-profits, veterans, senior citizens, etc., it would mean less property taxes for everyone because there would be a larger tax base, thereby spreading the burden out to more taxpayers. Although, this would mean government taxing itself, it would at least establish a consistent, equitable measure of the cost of conducting business for all property owners. Included in the analysis could be a correlation of the amount of exempt properties in a community, the Need/Resource Capacity of that school district, and the percent of state aid that is needed to offset the loss of tax dollars due to exempt properties.

**Recommendations for policy.** One of the major underpinnings of this study is the theoretical framework of the *Theory of Social Justice* by John Rawls (1971). This theory was relied upon in many of the various school finance litigation cases in terms of equity and adequacy of funding education. The argument was that education is a basic right as a citizen, which is similar to the right to vote, hold office, free speech, due process, and the right to hold property. The New York State Education Conference Board (2015) and various advocacy groups, such as the Campaign for Educational Equity (2016), Alliance for Quality Education (2016), New York State Association of School Business Officials (2016, 2017), and others, have made significant contributions regarding recommendations to amend the current tax levy cap legislation and suggestions

on how to comply with the CFE court ruling. However, these calls for change from researchers and experts in the profession have fallen on deaf ears.

The findings in this study highlight the fact that the gap in revenues will continue to widen over the years 2017 through 2021, based on the current trajectory of expenditures and the tax levy allowed, and as a result, it is clear that something has to be done, especially for those districts classified as high need if we are to prevent them from sinking into educational and financial insolvency. Many have said that Governor Cuomo and the legislature appear to be focused on what makes political sense, and they were unable to see the potential damage to children as a result of implementing the TEL (Marcou-O'Malley, 2016a, 2016b, 2016c; Mitchell, 2013; Morse, 2007; New York State Council of School Superintendents, 2016; NYSASBO, 2016; Oliff & Lav, 2010; Yinger, 2012; Zycher, 2013).

How long do we as a society wait before action is taken to change how we fund education in the United States? The review of the literature shows that funding based on property values increases the disparity between the haves and have nots. The TEL only further exacerbates this disparate system of funding, and the courts have been powerless in making states comply with their rulings to equalize and make adequate the funding system.

Other countries fund education at the national level, and they do not delegate it to state and local governments. It is also important to realize that other countries are not looking to replicate our system of funding—and for good reason—it does not work. It is time that we stop denying the fact that our educational funding system is broken, and it only enriches those with means and not an entire society. We need to look to other

countries who value the work of educators as being the most important responsibility of a nation for the future of its children (Hatfield, 2015)

In the short term and in an effort to equalize the lack of funding available through local property taxes, New York State is delegated with the responsibility for providing education and state revenue to fund anywhere from 50% to 80% of the budgets of 40% of the school districts within the state. These districts are already dependent upon the yearly decision making of the governor and the state legislature for survival. If there is another recession, will the state once again look to these highly dependent districts to fund their budget gap through a reduction in aid? Most districts have already depleted their fund balances, and if an override of the cap is not approved by the taxpayers and program expenses are decreased to a level that does not comply with the state constitution, then the districts will be at risk of being educationally and financially insolvent. Therefore, a strong case could be made that the state should take over the funding of school districts entirely. This would force the legislature to create a system that clearly defines and provides a sound basic education (Rebell & Wolff, 2016).

Many would resist any effort by the state to take over funding, but the reality is that with the number of unfunded mandates implemented in the past 20 years by the state, and now with the implementation of the TEL, the state has already significantly diminished local control. Providing funding through the state income tax would reduce the tension at the local level over the property tax burden. It would allow for per-pupil spending to be set in relation to student outcomes, and most importantly, it would allow for the equalization of funding, perhaps with a regional cost adjustment, across the state. Some will say this is exactly what Governor Cuomo wanted in his attempts to “starve-

the-beast” (Bartlett, B. 2007; Mitchell, 2013) by cutting state aid, providing tax incentives to taxpayers in order to force governments into being tax levy compliant, forcing a 60% majority for overrides, not complying with the court’s mandate on CFE, and providing additional funding for those governments that share or consolidate services, etc. But does that matter, as long as there is a system that provides for all children equally and adequately, a system that diminishes segregation between communities, a system that is student centered, a system that cares about the future of America? It is time to consider this alternative and for citizens to speak up. “It is an inquiry not on behalf of the final truth or the one right way but on behalf of the something better” (Siebert, 1994, p. 213).

**Recommendations for professional practice.** One of the most important aspects of school finance is for business officials to engage in long-range financial planning and forecasting to provide critical information to the administration, school board, and the community regarding the future state of their districts including the stability of existing programs and services (Government Finance Officers Association, 2008). It is not enough, in this post TEL era, to simply forecast needs for 1 year, particularly since the TEL has taken away school districts’ flexibility to raise additional funds when needed, and to return funds to taxpayers when it is not needed. Additionally, an essential part of this long-range planning would be to consider all aspects of the organization, that is, instructional programs, technology, special education, facilities, etc., in developing scenarios, based on district goals and assumptions regarding financial trends. This process would provide a meaningful plan for navigating through a very perilous future in an effort to be proactive and prevent insolvency.

## **Conclusion**

The purpose of this study was to call attention to the impact of the Tax Levy Legislation, Chapter 97, of the Laws of 2011 on the education of children in New York State. Despite repeated warnings from scholars that TELs were not effective and ignoring the Court of Appeals ruling in the 2003 Campaign for Fiscal Equity lawsuit to provide a sound basic education, the governor and the legislature proceeded to institute a measure that further exacerbated the inequities of the existing system of funding for school districts within the State of New York.

Throughout the history of our nation, there has been an assumption that education would be accessible to everyone. However, the authority and power to provide education to its citizens has always resided at the local and state levels. Because of this history of local control, and based on a review of the literature, funding for education is not equitable and adequate due to the fact that the majority of funding is through the local property tax. This creates disparity among communities, because of the varying levels of local property wealth. Many states have attempted to equalize these inequities by adopting apportionment plans, called Foundation Aid Programs. In spite of this, some communities have the capacity and authority to raise more tax revenue, which results in great disparities in per-capita spending among districts. These huge gaps in funding have led to litigation throughout the nation, challenging the local property tax and state funding formulas.

Compounding these issues has also been the fact that taxpayers generally do not see a correlation between rising property taxes and student achievement. Many taxpayers have become frustrated and abide a negative perception of government and taxes. As a

result, many states across the country imposed a tax and expenditure limitation (TEL) on the growth of the tax levy. This, coupled with a significant downturn in the economy in 2008, created an uncertain future for districts and for their ability to provide a sound and basic education as prescribed by their state constitutions.

This study was focused on the future of New York State schools and their ability to remain educationally and financially solvent through the year 2021. This study was informed by the theoretical framework of developing a financial forecast for expenditures, tax levies, enrollment, and funding gaps that would provide data to political leaders and its citizens for future decision making. The study also used the *Theory of Justice*, by John Rawls (1971), which supports the idea of equal basic liberties and the redistribution of social goods as they relate to the funding of a sound basic education.

This quantitative study analyzed archival data from the Education Department of New York State for 669 public school districts (excluding the Big Five School Districts) for the period of 2012-13 through 2016-17. Each district was classified into four categories: high-need urban/suburban, high-need rural, average-need, and low-need districts, based upon its Need/Resource Capacity index, as defined by the state. The state's database maintains information regarding prior years' expenditures and tax levies for each school district, and by using an exponential smoothing technique, the study forecast an increase in the revenue gap from 2017-18 through 2020-21. In addition, the study used a one-way ANOVA to determine if there were significant differences in the change in total expenditures between and among categories of districts, grouped by New York State, based on its Need/Resource Capacity index.

Based on the data analysis, there was a decrease in spending realized by high-need districts after the implementation of the TEL in 2011. However, low- and average-need districts remained relatively unchanged, which means that the state's poorest children were most negatively impacted by the TEL. The data does point to the fact that the decrease in spending was primarily in operational areas of the district, such as transportation, facilities, and debt service, but ultimately, these reductions impacted staff and, most importantly, the children.

The forecast analysis, which is based on the historical data from 2011-2016 for tax levies and expenditures, demonstrated that the per-capita funding gap in revenues will continue to widen through 2021. The largest projected funding gap is \$20,529, or 73%, based on the difference in the projected per-capita expenditures of \$27,936 and tax levy of \$7,408 for 153 high-need rural districts, representing 138,000 students. This is followed by high-need urban/suburban school districts with a funding gap of 63%, or \$15,321, for 46 school districts that represent 239,000 students. Average-need school districts represent the majority of the schools within the state with 336 schools and 707,000 students, with a projected funding gap of 57% or \$11,641. Finally, for 153 schools classified as low need, their funding gap is 23% or \$7,617. This data confirms the per-capita difference between low- and high-need districts of \$13,000. It is clear from the analysis of data that districts with high-Need/Resource Capacity, that is, low property values and low household wealth, have experienced and will likely continue to experience disproportionate, adverse impact from the New York State TEL. In addition, inequities in the state funding formula for school districts, which seem to defy correction

despite repeated successful court challenges over several decades, are also exacerbated by the TEL.

This study is meant to send up a red flag to show how serious and tenuous the future of school districts in the State of New York is and how their ability to service the children in their communities is being compromised. This study calls for immediate action by its citizens to demand that the funding of school districts change and that the injustice of not providing the same level of education to all students comes to an end.

America prides itself on justice and liberty for all, yet the shame of America's schools for children of color, the poor, and others fundamentally challenges this notion. The inequalities documented by Jonathan Kozol's *Savage Inequalities* have not lessened over the past decade and half. In fact, today we witness entire states in which school funding is found to be inadequate, unsatisfactory, and insufficient, creating an affront to any standard of decency and caring for America's future—its children and youth (Verstegen et al., 2006, p. 74).



## References

- Amiel, L., Deller, S., & Stallmann, J. (2009). *The construction of a tax and expenditure limitation index for the U.S.* (Staff Paper No. 536). Madison, WI: University of Wisconsin-Madison, Department of Agricultural and Applied Economics.
- Amiel, L. N., Deller, S., & Stallmann, J. (2012). Economic growth and tax and expenditure limitations. *The Review of Regional Studies*, 42(3), 185-206.
- Ammar, S., Duncombe, W., Jump, B., & Wright, R. (2005). A financial condition indicator system for school districts: A case study of New York. *Journal of Education Finance*, 30(3), 231-258.
- Ballal, S., & Rubenstein, R. (2009). The effect of tax and expenditure limitations on public education resources: A meta-regression analysis. *Public Finance Review*, 37(6), 665-685. doi:10.1177/1091142109345265
- Bass, G. S. (2014, March 14). *Forecasting financial insolvency under New York State's property tax cap: A diagnostic tool for public schools* (Unpublished doctoral dissertation). St. John's University New York, Jamaica, NY.
- Bartlett, B. (2007). Starve the beast: Origins and development of a budgetary metaphor. *The Independent Review*, pp. 5-26.
- BenDavid-Hadar, I. (2016). School finance policy and social justice. *International Journal of Education Development*, 46, 166-174.
- Brimley, Jr., V., Verstegen, D. A., & Garfield, R. R. (2016). *Financing education in a climate of change* (12<sup>th</sup> ed.). Upper Saddle River, NJ: Pearson.
- Brown v. Board of Education of Topeka, 347 U.S. 483 (United States 1954).
- Burroughs, N. A. (2016). Rawls, republicanism, and the adequacy-equity debate. *Theory and Research in Education*, 14(2), 226-240. doi:10.1177/1477878515622700
- Chang, H., & Wen, C. (2014, December). *Tax caps in other states: Lessons for New York*. Local Fiscal Stress, State Austerity Policy & Creative Local Response.
- Connecticut Coalition for Justice in Education Funding, Inc. v. M. Jodi Rell, et al., X07 HHD CV 145037565 S (Superior Court Judicial District of Hartford State September 7, 2016). Retrieved from <http://www.courant.com/education/hc-read-ccjef-v-rell-20160907-htmlstory.html>

- Creswell, J. W. (2014). *Research design, qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.
- Cubberley, E. (1905). *School funds and their apportionment* (Unpublished doctoral dissertation). Columbia University, New York, NY:
- Cutler, D. M., Elmendorf, D. W., & Zeckhauser, R. (1999). Restraining the leviathan: Property tax limitation in Massachusetts. *Journal of Public Economics*, 71(3), 313-334.
- Deller, S., & Maher, C. (2009). Government, effectiveness, performance, and local property values. *International Journal of Public Administration*, 32(13), 1182-1212.
- Deller, S., & Stallmann, J. J. (2007). Tax and expenditure limitations and economic growth. *Margquette Law Review*, 90(3), 497-554.
- Deller, S., Stallmann, J., & Amiel, L. (2012, March). The impact of state and local tax and expenditure limitations on state economic growth. *Growth and Change*, 43(1), 56-84.
- Eom, T. H., & Lee, S.-H. (2014). A longitudinal analysis of impacts of court-mandated education finance reform on school district efficiency. *Journal of Public Budgeting, Accounting & Financial Management*, 26(1), 1-49.
- Fiscal Policy Institute. (2015, June 10). *Addressing the unintended consequences of the property tax cap*. Retrieved from <http://fiscalpolicy.org/wp-content/uploads/2015/06/Addressing-Unintended-Consequences-of-Property-Tax-Cap-06-10-2015.pdf>
- Fisher, G. (2002). *History of property taxes in the United States*. Retrieved from <http://eh.net/encyclopedia/history-of-property-taxes-in-the-united-states/>
- Galligan, J. J. (2015, June 22). *An analysis of the New York State tax cap on school district financial planning in the Town of Islip New York*. (Unpublished doctoral dissertation). St. John's University New York, Jamaica, NY.
- Gamst, G., Meyers, L. S., & Guarino, L. S. (2008). *Analysis of variance designs: A conceptual and computations approach with SPSS and SAS*. New York, NY: Cambridge University Press.
- Government Finance Officers Association. (2008). *Financial forecasting in the budget preparation process*. Washington, DC: GFOA. Retrieved from <http://www.gfoa.org/financial-forecasting-budget-preparation-process>
- Hatfield, J. (2015, February 23). Here's how different the US education system is vs. other nations. *AEIdeas*. Retrieved from <http://www.aei.org/publication/global-perspective-features-american-education/>

- Johnston, J. S. (2005). Rawls's Kantian educational theory. *Educational Theory*, 55(2), pp. 201-218.
- Joyce, P. G., & Mullins, D. R. (1991, May/June). The changing fiscal structure of the state and local public sector: The impact of tax and expenditure limitations. *Public Administration Review*, 51(3), 240-253.
- Kavanagh, S. C. (2011). *Building a financially resilient government through long-term financial planning*. Washington, DC: Government Finance Officers Association. Retrieved from <http://www.gfoa.org/building-financially-resilient-government-through-long-term-financial-planning>
- Kozol, J. (1991). *Savage inequalities: Children in America's schools*. New York, NY: Crown.
- Ladd, H. F., & Wilson, J. B. (1982). Why voters support tax limitations: Evidence from Massachusetts' proposition 2 1/2. *National Tax Journal*, 35(2), 121-148.
- Locke, J. (1690). *Second treatise of government*. London, England. Retrieved from <https://www.gutenberg.org/files/7370/7370-h/7370-h.htm>
- Love, N. S., & Mattern, M. (2011, December). The great recession: Causes, consequences, and responses. *New Political Science*, 33(4), 401-411.
- Lowery, D., & Sigelman, L. (1981, December). Understanding the tax revolt: Eight explanations. *The American Political Science Review*, 75(4), 963-974.
- Lyons, K., & Lav, I. J. (2007, June 21). *The problems with property tax revenue caps*. Washington, DC: Center on Budget and Policy Priorities.
- Maher, C. S., & Deller, S. C. (2010, February). *Measuring the impacts of TELs on municipal financial conditions*. Paper presented at the States as Facilitators or Obstructionists of Local Governments Conference, Florida State University.
- Makridakis, S., Hogarth, R. M., & Gaba, A. (2010). Why forecasts fail. What to do instead. *MIT Sloan Management Review*, 51(2), 84-90.
- Mann, H. (1841). *The fifth annual report: The effect of education upon the worldly fortunes of men*. Retrieved from <http://library.uml.edu/clh/All/hman.htm>
- Mann, H. (1846). *Tenth annual report to the secretary of the Massachusetts State Board of Education*. Retrieved from <https://genius.com/Horace-mann-tenth-annual-report-to-the-secretary-of-the-massachusetts-state-board-of-education-1846-lyrics>
- Marcou-O'Malley, M. (2014, August). *Billions behind: New York State continues to violate students' constitutional rights*. New York: Alliance for Quality education, Public Policy and Education Fund of New York, & Opportunity Action.

- Marcou-O'Malley, M. (2016a). *CFE derailed: The state of our schools in the sake of the 2016 New York State budget*. Albany, NY: Alliance for Quality Education & Public Policy and Education Fund of New York.
- Marcou-O'Malley, M. (2016b). *No appetite to educate: Stacking the deck against children in poverty*. Albany, NY: Alliance for Quality Education & Public Policy and Education Fund of New York.
- Marcou-O'Malley, M. (2016c). *Students v. State of New York: What happens to a dream deferred?* Albany, New York. Alliance for Quality Education & Public Policy and Education Fund of New York.
- Massachusetts Legislation. (1647). Old Deluder Satan Act.
- McDonald, III, B. D. (2013, October). An introduction to dirty forecasting. *Government Finance Review*, 29(5), 57-60.
- McGlashan, P. (2006, August). School finance litigation: The history and its current status in New York. *Journal of Race, Gender, and Ethnicity*, 1, 110-130.
- McGuire, T. J., & Rueben, K. S. (2006). The Colorado revenue limit: the economic effects of TABOR. Economic Policy Institute.
- McMahon, E. (2011, March 1). The case for a cap: Why and how it can work in New York. *Empire Center*. Retrieved from <https://www.empirecenter.org/publications/the-case-for-a-cap/>
- McMahon, E. J., & Girardin, K. (2015, May 19). School tax growth sinks under cap. *Empire Center*. Retrieved from <https://www.empirecenter.org/publications/school-tax-growth-sinks-under-cap/>
- Mitchell, D. J. (2013, May 13). *Tax and expenditure limits: The challenge of turning Mitchell's golden rule from theory into reality*. Retrieved from <https://www.cato.org/blog/tax-expenditure-limits-challenge-turning-mitchells-golden-rule-theory-reality>
- Morse, J. (2007). *Education, inequity, and the level playing field*. Albany, NY: State University of New York.
- Morse, J. F. (2006). Education as a civil right: The ongoing struggle in New York. *Journal of the American Educational Studies Association*, 40(1), 39-59.
- Mullins, D., & Wallin, B. (2004). Tax and expenditure limitations: Introduction and overview. *Public Budgeting & Finance*, 24(4), 1-24.
- New York State. (2011). *Chapter 97 of the Laws of 2011*. Retrieved from [http://assembly.state.ny.us/leg/?default\\_fld=&bn=A08518&term=2011&Summary=Y&Text=Y](http://assembly.state.ny.us/leg/?default_fld=&bn=A08518&term=2011&Summary=Y&Text=Y)

- New York State Association of School Business Officials. (2014, January). *The road ahead: School district insolvency*. Albany, NY: Author. Retrieved from [https://www.nysasbo.org/uploads/publications/1390919081\\_NYSASBO%20School%20District%20Insolvency%20Report%20January%202014.pdf](https://www.nysasbo.org/uploads/publications/1390919081_NYSASBO%20School%20District%20Insolvency%20Report%20January%202014.pdf)
- New York State Association of School Business Officials. (2015, September). *The education dollar: A look at spending and funding trends*. Albany, NY: Author.
- New York State Association of School Business Officials. (2016, May 9). *Districts report levy increases close to zero for 2016-17*. Albany, NY: Author. Retrieved from [https://www.nysasbo.org/uploads/reports/1462804439\\_NYSASBO-PTRC%202016.pdf](https://www.nysasbo.org/uploads/reports/1462804439_NYSASBO-PTRC%202016.pdf)
- New York State Constitution. (1962). *Article XI*. Retrieved from [https://www.dos.ny.gov/info/constitution/article\\_11\\_education.html](https://www.dos.ny.gov/info/constitution/article_11_education.html)
- New York State Council of School Superintendents. (2012). *Can't get there from here: Budgeting challenges call for new directions in state policy to help schools raise student achievement*. Albany, NY: Author.
- New York State Council of School Superintendents. (2016). *Statewide finance data -- Before and after the tax cap*. Retrieved from [https://www.nyscoss.org/img/news/advocacy\\_7fygga3x4y.pdf](https://www.nyscoss.org/img/news/advocacy_7fygga3x4y.pdf)
- New York State Education Department. (2011-2016). *Educational management services: New York State property tax report card*. Retrieved from <http://www.p12.nysed.gov/mgtserv/propertytax/>
- New York State Education Department. (2016). *Fiscal analysis and research unit: The fiscal profile reporting system*. Retrieved from [http://www.oms.nysed.gov/faru/Profiles/profiles\\_cover.html](http://www.oms.nysed.gov/faru/Profiles/profiles_cover.html)
- New York State Education Department. (2017). *Analysis of school finances in New York State school districts 2014-2015*. Retrieved from [http://www.oms.nysed.gov/faru/PDFDocuments/2016\\_Analysis\\_a.pdf](http://www.oms.nysed.gov/faru/PDFDocuments/2016_Analysis_a.pdf)
- New York State Educational Conference Board. (2015). *Tax cap adjustments can help schools balance student needs, fiscal stability, and taxpayer concerns*. Latham, NY: Author.
- Nickerson, B., & Deenihan, G. (2002). From equity to adequacy: The legal battle for increased state funding of poor school districts in New York. *Fordham Urban Law Journal*, 30(4), 1341-1392.
- Odden, A., & Picus, L. (2014). *School Finance: A policy perspective* (5<sup>th</sup> ed.). New York, NY: McGraw Hill.

- Office of Governor Andrew M. Cuomo. (2012, September 27). *Reducing property taxes for New Yorkers: The New York State property tax cap's successful first year*. Retrieved from <http://www.governor.ny.gov/sites/governor.ny.gov/files/archive/assets/documents/CappingPropertyTaxReport.pdf>
- Office of Governor Andrew M. Cuomo. (2015). *The New York State property tax cap: Results. Success. Savings*. Retrieved from <https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/PropertyTaxCap.pdf>
- Office of the State Comptroller. (2016). Fiscal stress monitoring system. Retrieved from <http://www.osc.state.ny.us/localgov/fiscalmonitoring/>
- Office of the State Comptroller. (2016, March). New York State school aid: Two perspectives. *ResearchBrief*.
- Oloff, P., & Lay, I. J. (2010). *Hidden consequences: Lessons from Massachusetts for states considering a property tax cap*. Washington, DC: Center on Budget and Policy Priorities.
- Pett, M. (2016). *Nonparametric statistics for health care research: Statistics for small samples and unusual distributions* (2<sup>nd</sup> ed.). Los Angeles, CA: Sage.
- Pijanowski, J. (2015). Reconciling educational adequacy and equity arguments through a Rawlsian lens. *eJournal of Education Policy*. Retrieved from <https://nau.edu/COE/eJournal/Spring-2015/>
- Poulson, B. (2005). *A fiscal discipline report card: Grading the state's tax and expenditure limits*. Washington, DC. Retrieved from <http://www.americansforprosperity.org/fiscal-discipline-report-card-grading-states-tax-and-expenditure-limits>
- Rawls, J. (1971). *A theory of justice*. Cambridge, MA: The Belknap Press of Harvard University.
- Rebell, M. A. (2012). Safeguarding the right to a sound basic education in times of fiscal constraint. *75 Albany Law Review*, 1855-1930.
- Rebell, M. A., & Wolff, J. R. (2016, November). *Students' constitutional right to a sound basic education: New York State's unfinished agenda*. New York, NY: The Campaign for Education Equity, Teachers College, Columbia University.
- Singleton, Jr., R. A., & Straits, B. C. (2005). *Approaches to social research* (4<sup>th</sup> ed.). New York, NY: Oxford University Press.

- Siebert, R. (1994). *The liberal/ironist leader: A Rortyan perspective on school leadership* (Unpublished doctoral dissertation). Retrieved from DigitalResearch@Fordham. (AA 9511250)
- Sirmans, S., & Sirmans, S. C. (2012). Property tax initiatives in the United States. *Journal of Housing Research*, 21(1), 1-13.
- Stallmann, J. I., & Deller, S. C. (2010). Impact of state and local tax and expenditure limits on economic growth. *Applied Economic Letters*, 17(7), pp. 645-648.
- St. Clair, T. (2012). The effect of tax and expenditure limitations on revenue volatility: Evidence from Colorado. *Public Budgeting & Finance*, 32(3), 61-78.
- Stein, R. M., Hamm, K. E., & Freeman, P. K. (1983). An analysis of support for tax limitation referenda. *Public Choice*, 40(2), 187-194.
- Swanson, C. J. (2008). Long-term financial forecasting for local governments. *Government Finance Review*, 24(5), 60-66.
- Tabachnick, B., & Fidell, L. S., (2001). *Using multivariate statistics* (4<sup>th</sup> ed.). Boston, MA: Allyn and Bacon.
- The University of the State of New York, The State Education Department Fiscal Analysis and Research. (2016). *State aid to schools: A primer*. Retrieved from <http://www.oms.nysed.gov/faru/PDFDocuments/Primer16-17A.pdf>
- The University of the State of New York, The State Education Department. (2017). *Need/Resource Capacity categories*. Retrieved from <http://www.p12.nysed.gov/irs/accountability/2011-12/NeedResourceCapacityIndex.pdf>
- United States Congress. (1787). *An Ordinance for the Government of the Territory of the United States north-west of the River Ohio*. Retrieved from <https://www.ourdocuments.gov/doc.php?flash=false&doc=8#>
- United States Congress. (1789). *The Constitution of the United States*. Retrieved from <https://constitutioncenter.org/media/files/constitution.pdf>
- United States Congress. (1785). *Land Ordinance of 1785*. Retrieved from [http://www.ohiohistorycentral.org/w/Land\\_Ordinance\\_of\\_1785](http://www.ohiohistorycentral.org/w/Land_Ordinance_of_1785)
- Urban, W. J., & Wagoner, J. L. (2014). *American education: A history* (5<sup>th</sup> ed.). New York, NY: McGraw Hill.
- Urdan, T. C. (2010). *Statistics in plain English* (3<sup>rd</sup> ed.). New York, NY: Routledge.

- Venettozzi, C. J. (2014, September 29). *Tax levy limit implications on educational programs and public school budgets in New York State* (Unpublished doctoral dissertation). The Sage Colleges. Retrieved from [http://library2.sage.edu/archive/thesis/ED/2014venettozzi\\_c.pdf](http://library2.sage.edu/archive/thesis/ED/2014venettozzi_c.pdf)
- Verstegen, D., & Knoeppel, R. (2012). From statehouse to schoolhouse: Education finance apportionment systems in the United States. *Journal of Educational Finance*, 38(2), 145-166.
- Verstegen, D. A., Venegas, K., & Knoeppel, R. (2006). Savage inequalities revisited: Adequacy, equity, and state high court decisions. *Educational Studies*, 40(1), 60-76.
- Vogt, W. P., & Johnson, R. B. (2011). *Dictionary of statistics & methodology*. Los Angeles, CA: Sage.
- Yinger, J. (2012, June). Four flaws In New York State's property taxes and how to fix them: Levy limits. *It's Elementary*, pp. 1-3. Syracuse, NY: Maxwell School, Syracuse University. Retrieved from [http://cpr.maxwell.syr.edu/efap/about\\_efap/ie/June12.pdf](http://cpr.maxwell.syr.edu/efap/about_efap/ie/June12.pdf)
- Zernike, K. (2016, September 8). An F-minus for America's schools from a fed-up judge. *The New York Times*. Retrieved <https://www.nytimes.com/2016/09/09/nyregion/crux-of-connecticut-judges-grim-ruling-schools-are-broken.html>
- Zycher, B. (2013). *State and local spending: Do tax and expenditure limits work?* Washington, DC: American Enterprise Institute.



## Appendix A

### Need/Resource Capacity Categories

The need/resource capacity index, a measure of a district's ability to meet the needs of its students with local resources, is the ratio of the estimated poverty percentage<sup>1</sup> (expressed in standard score form) to the Combined Wealth Ratio<sup>2</sup> (expressed in standard score form). A district with both estimated poverty and Combined Wealth Ratio equal to the State average would have a need/resource capacity index of 1.0. Need/Resource Capacity (N/RC) categories are determined from this index using the definitions in the table below.

Category	Definition
High N/RC: New York City	New York City
High N/RC: Large City Districts	Buffalo, Rochester, Syracuse, Yonkers
High N/RC: Urban-Suburban Districts	All districts at or above the 70th percentile (1.1835) that have: 1) at least 100 students per square mile; or 2) an enrollment greater than 2,500 and more than 50 students per square mile.
High N/RC: Rural Districts	All districts at or above the 70th percentile (1.1835) that have: 1) fewer than 50 students per square mile; or 2) fewer than 100 students per square mile and an enrollment of less than 2,500.
Average N/RC Districts	All districts between the 20th (0.770) and 70th (1.1835) percentile on the index.
Low N/RC Districts	All districts below the 20th percentile (0.770) on the index.

<sup>1</sup> **Estimated Poverty Percentage:** A weighted average of the 2006–07 and 2007–08 kindergarten through grade 6 free-and-reduced-price-lunch percentage and the percentage of children aged 5 to 17 in poverty according to the 2000 Decennial Census. (An average was used to mitigate errors in each measure.) The result is a measure that approximates the percentage of children eligible for free or reduced-price lunches.

<sup>2</sup> **Combined Wealth Ratio:** The ratio of district wealth per pupil to State average wealth per pupil, used in the 2007–08 Governor's proposal.