

Research Report



Measuring Municipal Fiscal Disparities in Connecticut

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Table of Contents

I. Introduction	1
II. Capacity	2
III. Cost	4
IV. Municipal Gaps	8
V. Comparing Gaps to Nonschool Aid	11
VI. Conclusions	13
Reference List	13
Appendix 1	14
Appendix 2	17
Acknowledgments	18

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I. Introduction

Fiscal disparities exist when some municipalities face higher costs for providing a given level of public services or fewer taxable resources to finance those services than others. A municipality's economic and social characteristics can affect both costs and resources. For example, communities with higher unemployment tend to see more crime, raising the costs of providing police protection. On the other hand, wealthier communities have more available resources to tap for revenue. The disparities that stem from these underlying factors, which fall largely outside the control of local officials, are widely regarded as inequitable.¹

The potential for fiscal disparities in Connecticut is particularly high given the vast socioeconomic differences observed across the state's 169 cities and towns. Stated one *Wall Street Journal* article, "With its coastal mansions and abandoned factories, Connecticut has long grappled with sharp contrasts, a place of soaring wealth on the one hand, and a shrinking middle class and stagnant wages on the other."²

One goal, among many, of the Connecticut General Assembly's Municipal Opportunities and Regional Efficiencies (M.O.R.E.) Commission is to develop recommendations to address fiscal disparities that exist among the state's municipalities. In 2014 the Commission's Municipal Tax Authority Sub-Committee asked the General Assembly's Legislative Program Review and Investigations Committee (PRI) to undertake a Municipal Needs Capacity study similar to an earlier work performed by the Federal Reserve Bank of Boston's New England Public Policy Center (NEPPC) around communities in Massachusetts. To this end, PRI asked the NEPPC to share its expertise in this area. This report provides baseline information for PRI, the M.O.R.E. Commission, and other state and local policymakers in Connecticut, to rely upon as they consider these challenges.

The main purpose of this study is to measure *nonschool* fiscal disparities in Connecticut and to identify their key driving factors. We also examine the extent to which existing nonschool municipal grant programs address existing disparities. In Connecticut, municipalities provide a range of services including education, public safety, public works, human services, and general government. While educational fiscal disparities—and the effectiveness of the state's Education Cost Sharing (ECS) grant in addressing them—have received considerable attention in Connecticut, less is known about how municipalities' underlying characteristics affect their ability to provide other vital public services and the degree to which state policies ameliorate differences. This research should help to fill this void.

To measure fiscal disparities we rely on a framework used previously in Massachusetts and other states, known as the "cost-capacity gap" or "municipal gap."³ Under this framework, we measure the difference (gap) between the costs of providing nonschool public services ("costs") and the economic resources available to cities and towns to pay for those services ("capacity"). A larger gap signifies a worse fiscal condition. Importantly, our measures of costs and capacity, and therefore gap, do not represent actual spending or revenues, but instead are based on factors that are outside the direct control of local officials. Thus, under this framework, a town that engages

1 Yinger (1986).

2 Paletta (2014).

3 Bradbury and Zhao (2009); Green and Reschovsky (1993); Ladd, Reschovsky, and Yinger (1991); Yinger (1988).

in wasteful spending would have higher actual expenditures but the same underlying costs as an otherwise identical town that is better managed. Likewise, two communities that have access to the same amount of economic resources have identical capacity, even if one chooses to levy a higher tax rate than the other.

Our results show large nonschool fiscal disparities across cities and towns in Connecticut. These disparities are driven primarily by differences in revenue-raising capacity. Because municipalities in Connecticut rely almost exclusively on property taxes for own-source revenue, this is directly tied to the uneven distribution of the property tax base. The most resource-rich towns in Connecticut had, on average, a per capita revenue capacity that was more than eight times the average of the most resource-poor communities' capacity.

We found less stark, but still important, differences in costs across municipalities. Our analysis found that municipal costs are driven by five key factors outside the control of local officials: the unemployment rate, population density, private-sector wages, miles of locally maintained roads ("town maintenance road mileage"), and the number of jobs located within a community relative to its resident population ("jobs per capita"). The highest-cost group of communities had average per capita municipal costs that were 1.3 times the average per capita costs of the lowest-cost group of cities and towns.

The most fiscally challenged communities face both high costs and low revenue capacity, with an average per capita gap of over \$1,000 between fiscal year (FY) 2007 and FY 2011. At the other extreme, towns with the greatest property wealth have an average *negative* gap of nearly \$3,600 per capita during the same period.⁴

A number of states use grants to localities as a means of addressing fiscal imbalances across communities. **Our analysis of gaps compared with current nonschool grants reveals that these programs have a limited effect in reducing nonschool fiscal disparities in Connecticut.** In general, these grants are relatively small and their allocation does not fully consider the factors that affect municipal gaps.

II. Capacity

Local revenue capacity is defined as the ability of municipalities to raise revenues from their own resources. It should reflect resources that local governments are authorized to tax, not actual revenues raised, since localities can choose to tax resources at different rates.

Approach

To measure capacity, we use the "representative tax system" (RTS) approach. This approach calculates how much revenue each locality could raise from its underlying tax base if all localities used the same standard tax rate.⁵ Thus, variation in measured capacity stems from differences in resources, not choices about tax rates. In Connecticut, real and personal property taxes are virtually the only source of revenue that cities and towns are authorized to levy.⁶ Therefore, we compute capacity by applying a standard tax rate to the value of taxable real and personal property in each community captured by the equalized net grand list (ENGL).⁷ The standard tax rate

4 For this exercise, the statewide average municipal gap is normalized to equal zero.

5 We also consider an alternative measure of capacity that accounts for the potential impact of education aid on the resources available for nonschool purposes. Use of this alternative measure, which is presented in Appendix 1, does not substantively alter the relative position of municipalities in terms of capacity and gap.

6 In aggregate, property taxes accounted for about 94.4 percent of own-source revenue for Connecticut cities and towns in FY 2011, with the remaining 5.6 percent coming from real estate transfer taxes, program fees, and other charges for services, licenses, permits, fines, and other miscellaneous sources. There have been various proposals for additional local revenue-raising mechanisms, including the authorization of local options taxes and the elimination of the property tax exemption for certain tax-exempt institutions. While such options could generate additional revenue from untapped sources, this additional revenue is unlikely to be distributed evenly across municipalities (see Zhao (2010)). Future capacity and gap estimates should incorporate any adopted changes to municipal revenue-raising authority.

7 Specifically, Connecticut state law authorizes the local taxation of real estate, motor vehicles, business-owned personal property

is the rate that would need to be applied to statewide ENGL in order to raise revenues exactly equal to statewide nonschool spending.⁸ The computation of municipal capacity for two sample communities—one urban (New Britain) and one rural (Morris)—is shown in Table 1. The table shows that Morris, which has much higher per capita property wealth than New Britain, also has higher capacity.⁹

Table 1. Illustration of Municipal Capacity Calculation for Two Sample Municipalities
(FY 2011, 2012 dollars)

State of Connecticut			New Britain		Morris	
State Nonschool Spending (\$ per capita)	State ENGL (\$000s per capita)	“Standard” Tax Rate	ENGL (\$000s per capita)	Municipal Capacity (\$ per capita)	ENGL (\$000s per capita)	Municipal Capacity (\$ per capita)
(1)	(2)	(3)=(1)/(2)	(4)	(5)=(3) × (4)	(6)	(7)=(3) × (6)
1,382	153	9	56	506	219	1,973

Source: Authors' calculations.

Note: For simplicity, some figures displayed are rounded up to the nearest integer.

Results

Our analysis shows wide variation in per capita revenue capacity across Connecticut municipalities. Figure 1 shows how capacity varies geographically across the state. The highest capacity areas (darkest shades on the map) are located in the southwestern and northwestern corners of the state, and along the shoreline. Connecticut's lowest-capacity municipalities (the lightest shades on the map) are mostly scattered through the central and eastern portions of the state. In general, communities in northeastern Connecticut also tend to have fairly low per capita revenue capacity.

To show how capacity, costs, and municipal gaps vary based on municipal characteristics, we also present average results for different “types” of municipalities: wealthy, rural, suburban, urban periphery, and urban core. These categories, and the municipalities assigned to them, reflect classifications used in a 2004 report by the Connecticut State Data Center (CSDC) on the basis of population density, median family income, and poverty.¹⁰ Given the differences we observe among rural towns, we chose to divide this group into two sub-types: those with per capita taxable property values above the statewide average and those with per capita taxable property values below the statewide average (see Table 2).¹¹

Unsurprisingly, the wealthy towns exhibit the highest average per capita revenue capacity—close to \$5,000, reflecting these areas' extreme property wealth. This is more than eight times the

(for example, fixtures, machinery, and equipment), and some personal property owned by individuals (for example, unregistered motor vehicles). A town's grand list represents the locally assessed value of the above types of property within the town. A town's ENGL, which is computed by the state, is the town's grand list net of any tax-exempt properties (for example, real estate owned by the state or private colleges or hospitals), adjusted or “equalized” to account for differences in local assessment practices across towns.

8 Appendix 2 provides a description of how we construct statewide nonschool spending in the absence of a uniform chart of accounts for municipalities.

9 FY 2011 capacity, cost, and gap estimates and other information for Connecticut's 169 cities and towns are provided in Appendix Tables 1 and 2 (available at <http://www.bostonfed.org/neppc>).

10 The CSDC assigned towns to groupings based on the values of these variables as of 2000. It is possible that some individual towns would be assigned to a different category based on more recent data; however, we do not expect this would alter our overall conclusions. See Levy, Rodriguez, and Villemz (2004).

11 Categorization of individual towns can be found in Appendix Tables 1 and 2 (available at <http://www.bostonfed.org/neppc>).

average capacity of the lowest-capacity group (urban core). The above-average-property rural group had the second-highest average per capita capacity—near \$2,000, considerably less than the wealthy average but still more than three times higher than that of the lowest-capacity group. Towns in this rural sub-category were mainly concentrated in the northwestern corner of the state and along the shore, areas known for featuring many second homes. The suburban, urban periphery, and below-average-property rural groups had the next highest average capacities, respectively.

The low average per capita revenue capacity observed in the urban core group likely reflects multiple factors, including low values of existing taxable property, large populations (which yield lower per capita estimates), and large amounts of tax-exempt property, which is not included in ENGL.

Table 2. Municipal Capacity by Municipality Type
(FY2007–FY2011 population-weighted average, 2012 dollars)

	Wealthy	Above-Average-Property Rural	Suburban	Urban Periphery	Below-Average-Property Rural	Urban Core
<i>Capacity factor:</i>						
Per capita equalized net grand list (000s)	611	242	192	145	118	73
Per capita municipal capacity	4,989	1,979	1,572	1,181	965	596
Number of municipalities	8	21	61	30	42	7
Share of state total population (%)	5	4	26	35	10	18

Source: Authors' calculations and Levy, Rodriguez, and Villemz (2004).

Note: Rural municipalities with five-year average per capita equalized net grand list above the state five-year average are labeled as "above-average-property rural"; the remaining rural municipalities are labeled as "below-average-property rural." For simplicity, some figures displayed are rounded up to the nearest integer.

III. Cost

Municipal cost refers to the amount that each municipality must spend in order to provide a common quality and quantity of nonschool public services, such as general government administration, public works, and public safety, given its underlying socioeconomic and physical characteristics. It does not refer to actual spending, which reflects not only these uncontrollable cost factors, but also the choices and actions of local officials.

Approach

To estimate municipal costs, we use statistical analysis to identify cost factors that are strongly related to nonschool per capita spending levels. To isolate only factors that governments cannot control, we take into account and remove other factors that may lead to cross-community spending differences such as resources and preferences.¹² Our analysis identifies and assigns weights to five cost factors: the unemployment rate, population density, private-sector wage index, town maintenance road mileage, and jobs per capita.¹³

12 Specifically, the statistical analysis allows us to essentially hold the following constant across communities: economic resources (for example, ENGL, school and nonschool grants, income), other factors that may affect preferences (for example, demographic characteristics, political makeup of the electorate), factors that may affect operating efficiency (for example, form of government), as well as each town's arrangements regarding police (for example, paid town force, resident state trooper, or reliance on state police) and fire (for example, paid or volunteer) protection services. Results of the statistical analysis and a list of data sources used are provided in Appendix Tables 3 and 4 (available at <http://www.bostonfed.org/neppc>).

13 We also explored, as potential cost factors, the poverty rate, population size, percentage of the population that is foreign born, and percentage of housing units that are older rental units. These factors were not statistically significant in our analysis.

Some additional examples help to illustrate how these factors can affect spending levels. For instance, higher population density tends to increase costs of fire protection, because housing that is closely packed creates a greater fire hazard than housing that is widely spaced. Local governments may need to pay more to attract and retain municipal employees in an area where private-sector workers receive higher wages than in an area where private-sector workers receive lower wages. The number of jobs per capita indicates cost pressures from employers and commuters who consume municipal services (including roads and public safety) along with local residents.

Table 3 illustrates how the cost measure is calculated for the same sample towns shown in Table 1, New Britain (urban core) and Morris (above-average-property rural).¹⁴ In these example communities, New Britain has a higher municipal cost per capita than Morris, and also differs in the contribution of the various cost factors to overall cost. For instance, the unemployment rate and population density are more important factors in New Britain, while road mileage plays a larger role in Morris.

Table 3. Illustration of Municipal Cost Calculation for Two Sample Municipalities
(FY 2011, 2012 dollars)

	Factor Weight (\$ per capita per cost factor unit)	New Britain		Morris	
		Factor Value	Contribution to Cost (\$ per capita)	Factor Value	Contribution to Cost (\$ per capita)
<i>Cost factors:</i>	(1)	(2)	(3)=(1) x (2)	(5)	(6)=(1) x (5)
Unemployment rate (%)	24.80	14.50	360	6.60	164
Population density (000s per square mile)	36.48	5.46	199	0.14	5
Private-sector wage index (%)	6.66	98.56	656	87.51	583
Town maintenance road mileage (per 000 population)	6.73	2.25	15	12.69	85
Per capita total jobs	217.92	0.35	76	0.17	37
Statewide constant	257	1.00	257	1.00	257
Municipal cost (\$ per capita) (total of above)			1,562		1,131

Source: Authors' calculations.

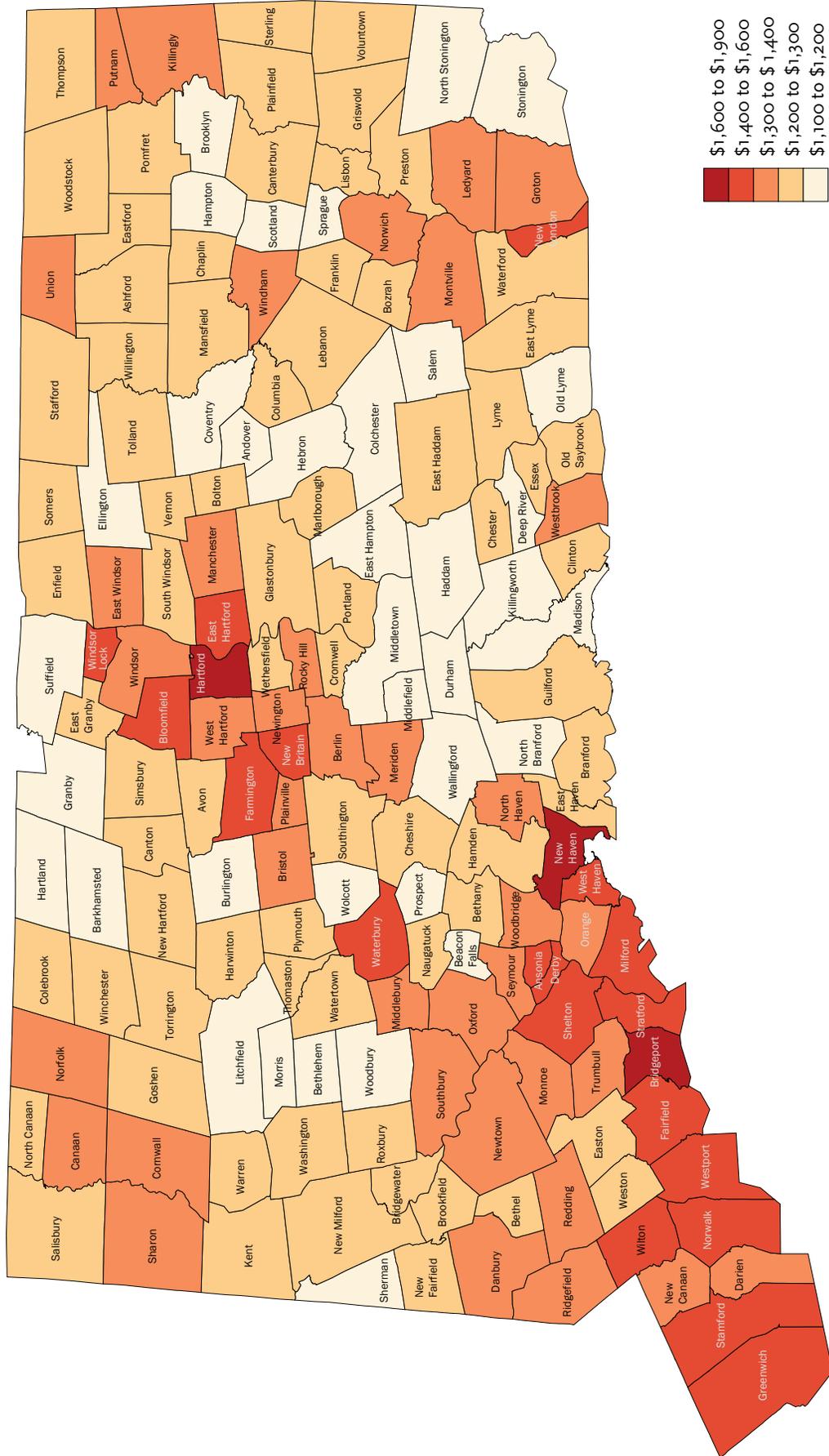
Note: The factor weight indicates how much per capita municipal cost would increase with a one-unit increase in each cost factor. For simplicity, some figures displayed are rounded up to the nearest integer.

Results

Our analysis shows that Connecticut municipalities do vary in the costs they face to provide a given level of public services. That said, the range of costs is much narrower than the range of revenue-raising capacity. Figure 2 shows the geographic distribution of per capita municipal costs. The highest-cost areas tend to be in southwestern Connecticut (including portions of Fairfield and New Haven counties) and in and around Hartford. The lowest-cost communities are somewhat more scattered geographically.

¹⁴ The statewide constant is calculated so as to ensure that statewide per capita municipal cost equals actual statewide per capita non-school spending. For an individual town, this constant can be interpreted as some minimum cost that all towns face, associated with maintaining a municipal government.

Figure 2. Municipal Cost by Municipality
 (FY2007–FY2011 average, 2012 dollars per capita)



Source: Authors' calculations.

Looking at results by municipal type (see Table 4), we find that urban core municipalities, on average, have the highest per capita municipal cost (\$1,659). This is 1.3 times greater than the lowest-cost groups. The urban core communities have the highest unemployment rates, population densities, and number of jobs per capita. Wealthy towns have the second highest average cost (\$1,398), driven largely by high private-sector wages in their surrounding labor market areas. The two rural types have the lowest per capita costs. Although towns in this group tend to have higher road mileage relative to population, they tend to have lower values for all other cost factors.

Table 4. Municipal Cost by Municipality Type
(FY2007–FY2011 population-weighted average, 2012 dollars)

	Wealthy	Above-Average-Property Rural	Suburban	Urban Periphery	Below-Average-Property Rural	Urban Core
<i>Cost factors:</i>						
Unemployment rate (%)	5.89	5.95	6.11	8.37	7.36	13.78
Population density (000s per square mile)	1.07	0.38	0.82	2.21	0.34	6.48
Private-sector wage index (%)	115.29	92.42	98.79	13.100	92.34	98.33
Town maintenance road mileage (per 000 population)	5.64	10.23	6.51	3.44	8.43	2.03
Per capita total jobs	0.47	0.37	0.42	0.48	0.33	0.50
Per capita municipal cost	1,398	1,230	1,280	1,387	1,243	1,659
Number of municipalities	8	21	61	30	42	7
Share of state total population (%)	5	4	26	35	10	18

Source: Authors' calculations and Levy, Rodriguez, and Villemz (2004).

Note: Rural municipalities with five-year average per capita equalized net grand list above the state five-year average are labeled as "above-average-property rural"; the remaining rural municipalities are labeled as "below-average-property rural." For simplicity, some figures displayed are rounded up to the nearest integer.

IV. Municipal Gaps

To calculate the per capita gap for each community, we subtract per capita revenue capacity from per capita cost. A positive gap indicates a municipality that lacks sufficient revenue-raising capacity to provide a given common level of municipal services, with larger gaps indicating a worse fiscal condition. By contrast, a negative gap represents a municipality that has more than enough revenue-raising capacity to provide this common level of municipal services. By design, the state-wide per capita gap is zero, which means that the 169 municipalities as a whole have just enough revenue-raising capacity to provide their nonschool public services.

Results

We find a wide range of municipal gaps among Connecticut's 169 communities, indicating significant fiscal disparities across the state. Although cost differences play a role, these gaps are largely driven by the uneven distribution of revenue capacity across the state. This, in turn, is the direct result of the uneven distribution of the property tax base.

A total of 78 Connecticut municipalities had a positive fiscal gap in FY 2011, representing 46 percent of the state's communities (and close to 60 percent of the state's population). Per capita fiscal gaps in these communities ranged from \$14 to over \$1,300. The state's remaining 91 communities had a negative fiscal gap in this year, ranging from just below zero to over \$5,100, in absolute terms.¹⁵

Figure 3 shows the geographic distribution of municipal gaps, with the darker shades representing larger gaps, or more challenging fiscal circumstances. The state's cities, with the notable exception of Stamford, tend to have the largest positive gaps. Most communities in northeastern Connecticut also have positive gaps. The largest negative gaps—representing communities with high revenue-raising capacity—are generally located in lower Fairfield County, the northwestern corner of the state, and certain communities along the shore in eastern Connecticut.

Table 5. Municipal Gap by Municipality Type
(FY2007–FY2011 population-weighted average, 2012 dollars)

	Wealthy	Above-Average-Property Rural	Suburban	Urban Periphery	Below-Average-Property Rural	Urban Core
Per capita municipal cost	1,398	1,230	1,280	1,387	1,243	1,659
Per capita municipal capacity	4,989	1,979	1,572	1,181	965	596
Per capita municipal gap	-3,591	-749	-291	206	278	1,063
Number of municipalities	8	21	61	30	42	7
Share of state total population (%)	5	4	26	35	10	18

Source: Authors' calculations and Levy, Rodriguez, and Villemz (2004).

Note: Rural municipalities with five-year average per capita equalized net grand list above the state five-year average are labeled as "above-average-property rural"; the remaining rural municipalities are labeled as "below-average-property rural." For simplicity, some figures displayed are rounded up to the nearest integer.

Looking at gaps by municipal type (Table 5) we see that the urban core group has the largest average positive gap (\$1,063), reflecting both high costs and low capacity. The urban periphery (\$206) and below-average-property rural (\$278) groups also feature positive municipal gaps. For the urban periphery communities, this is a result of both moderately high costs and moderately low capacity. By contrast, communities in this rural category have low average costs, but even lower capacity.

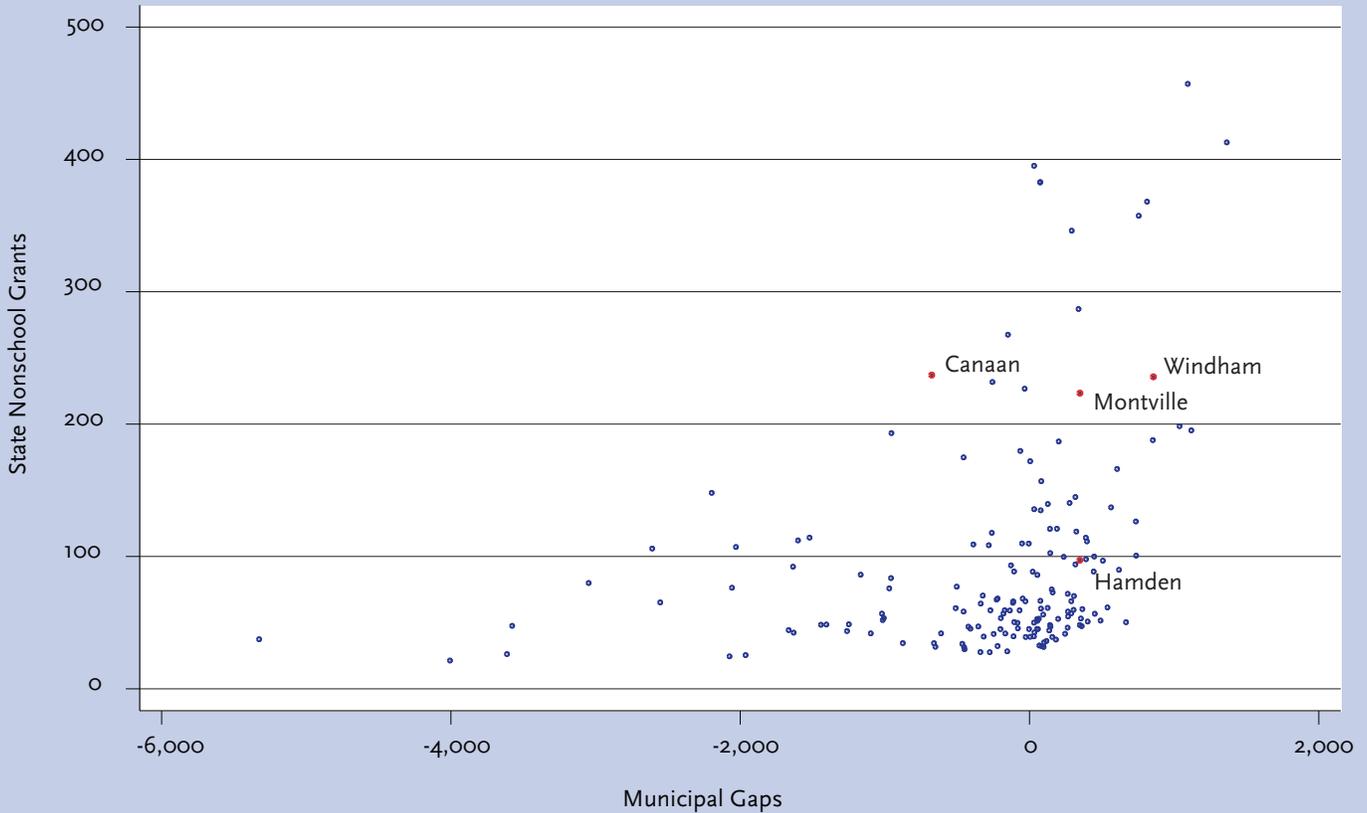
The remaining groups all have negative gaps. For the suburban category (-\$291), this reflects moderately low costs coupled with moderately high capacity. Communities in the above-average-property rural category (-\$749) have the lowest average per capita costs, but relatively high per capita capacity. However, neither group enjoys the same level of fiscal comfort as the wealthy category, with an average per capita gap of -\$3,591. Although communities in this group have relatively high per capita costs, these are substantially exceeded by their high revenue-raising capacity.

¹⁵ This extreme value belongs to Greenwich, which is an outlier even among the state's most fiscally advantaged communities.

V. Comparing Gaps to Nonschool Aid

State grants can be used to reduce fiscal disparities across localities. The state of Connecticut provides municipalities with a variety of grants that are not earmarked for education purposes, including the payment-in-lieu-of-taxes (PILOT) grants for state-owned property and private colleges and hospitals, Mashantucket Pequot-Mohegan Fund grants (“Pequot grants”), and the Town Aid Road program. In aggregate, however, these and other nonschool grants are considerably smaller than those dedicated to education.¹⁶

Figure 4. State Nonschool Grants Versus Municipal Gaps
(FY2007– FY2011 average, 2012 dollars per capita)



Source: Authors' calculations.

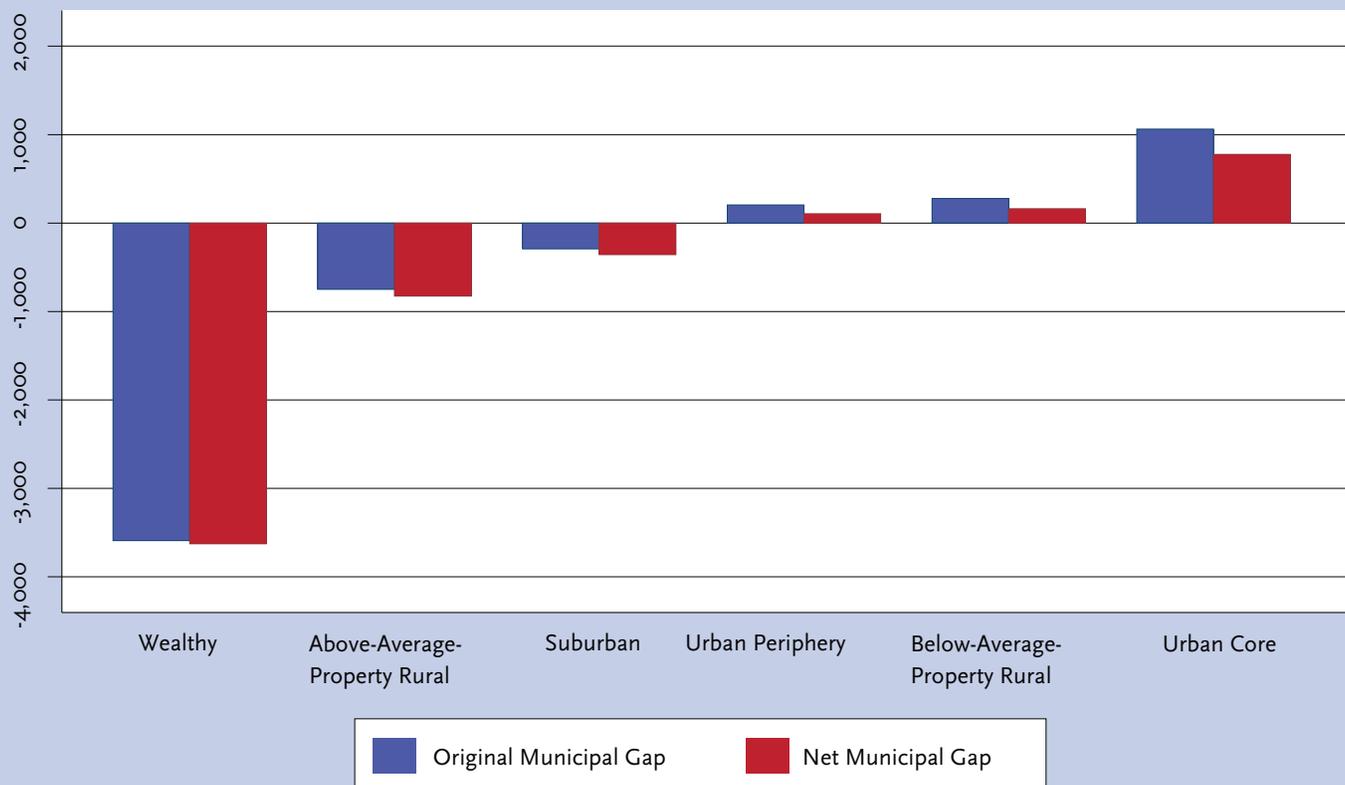
To assess how well—or not—existing aid programs address the fiscal disparities measured in our analysis, we first examine the distribution of nonschool grants in Connecticut by municipal gap.¹⁷ This distribution, shown in Figure 4, reveals that nonschool grants, while generally positively related to municipal gaps, do not always correspond directly to municipalities' fiscal health. Communities receiving similar aid payments often face different municipal gaps. For instance,

16 Total ECS grants per capita are more than five times total nonschool grants per capita for FY 2011. In aggregate, ECS grants accounted for nearly 26 percent of local education expenditures statewide, while aggregate state nonschool grants accounted for only 8 percent of local nonschool expenditures statewide.

17 We specifically included the following grants in our calculation: state-owned property PILOT, colleges and hospitals PILOT, Pequot grants, Town Aid Road, Local Capital Improvement Program (LOCIP), elderly tax relief circuit breaker program, property tax relief for veterans, DECD PILOT, DECD tax abatement, property tax relief for the disabled, and the property tax relief elderly freeze program.

between FY 2007 and FY 2011 the towns of Canaan and Windham both received average per capita grants of around \$235, although Canaan had an average gap of -\$676 and Windham an average gap of \$856. Furthermore, many communities with the same municipal gap also receive different amounts of nonschool grants. For example, Montville, with an average per capita gap of around \$350 received, on average, \$223 in per capita grants whereas Hamden, with a similar size gap, received only \$97.

Figure 5. Original Municipal Gap versus Net Gap by Municipality Type
(FY2007–FY2011 population-weighted average, 2012 dollars per capita)



Source: Authors' calculations and Levy, Rodriguez, and Villemz (2004).

Note: State nonschool grants include Veterans' Exemption, Elderly Circuit Breaker, Elderly Freeze, Disability Exemption, State Property PILOT, Colleges & Hospitals PILOT, LoCIP, Pequot Grants, Town Aid Road, DECD PILOT Grant, and DECD Tax Abatement.

We also calculate the so-called “net gap” for each community by subtracting each town’s per capita grant amount from its measured municipal gap. If grants played an equalizing role, we would expect to see larger grant amounts allocated to higher-gap communities and the differences between the gaps of different towns to narrow. When looking the impact of grants by municipality type, we do observe that municipalities with larger average gaps tend to receive larger average grant awards.¹⁸ For example, the urban core group received an average grant of \$286 while the average grant for the wealthy group was only \$36. This suggests that existing grants have a somewhat equalizing effect. However the effect appears to be modest, as illustrated by Figure 5, which

¹⁸ One exception is that the above-average-property rural category had a higher average grant than the suburban category, despite being more fiscally healthy, on average. This is mostly because the above-average-property rural towns receive more Town Aid Road grants, in per capita terms, than the suburban cities and towns.

compares original with net gap estimates for the six municipality types. Although differences are observed between the two measures, these are relatively small and the overall picture remains largely the same whether or not grants are taken into consideration.

The fact that existing nonschool grant programs do not substantially reduce the state's fiscal disparities is not a surprising result, as most nonschool grants in Connecticut do not have a direct equalization goal. The two largest grants (in terms of total dollars) are the colleges and hospitals and state-owned property PILOTs. The objective of both of these grants is to provide partial (or in some cases full) reimbursement to municipalities for property taxes they would have collected if the properties had not been exempt from taxation. In some respects, these grants represent an attempt to “level the playing field” between communities that host tax-exempt property and those that do not. However, their allocation does not take into account other factors that may affect revenue capacity or uncontrollable costs that vary across communities. Other nonschool aid programs, such as the Pequot grants and Town Aid Road, rely on distribution formulas that consider some, but not all, factors that influence municipal gaps.¹⁹

VI. Conclusions

In summary, there are significant nonschool fiscal disparities among Connecticut municipalities. These are mostly driven by the uneven distribution of the property tax base across the state, although cost differences also play a role. These imbalances persist after accounting for existing state nonschool grant programs.

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¹⁹ Specifically, state statute calls for a portion of the Pequot grants to be allocated based on a formula that considers population, ENGL, and income. Town Aid Road is allocated based on population and road mileage.

Appendix 1: Alternative Capacity Measure

In this alternative measure of capacity, we explicitly account for the locally generated resources that municipalities are required to devote to education. By doing so, we aim to address the perception that the large ECS grants flowing to certain communities free up significant capacity in those communities, making it available for nonschool services.

Approach

First, we need to measure the amount of revenue capacity required to be devoted to schools. It is the estimated portion of each municipality's minimum budget requirement (MBR) that must come from locally generated revenues (that is, property taxes), as opposed to coming from selected state or federal grants. The MBR requires towns to budget at least a minimum amount for education in each fiscal year. Failure to meet the MBR can result in penalties reducing the town's ECS grant.

Data on the portion of MBR that must come from locally generated revenues is not readily available and therefore must be estimated by subtracting appropriations supported by state or federal grants that are allowed to count towards this requirement. The Connecticut State Department of Education (SDE) provided the following guidance to municipalities in 2014 regarding the reporting of prior year appropriations used to determine MBRs for each town (emphasis in original):

The appropriations **must** be from local revenues, which may include state grants such as Education Cost Sharing and Transportation that are paid to the town and are not subject to pass through to the board of education and any federal or other sources of unrestricted revenue to the town. Examples include Federal Public Law 874 (Pupil Impact) Funds, non-progress school construction reimbursement payments and any fees and other revenues collected by the town. Do not include state or federal grants awarded directly to the board of education.

Based on this guidance, we estimate the local portion of MBR for a given municipality for a given year as the municipality's reported MBR minus the sum of the municipality's ECS grant, any transportation grants for public schools, and federal impact aid. The ECS grant is generally significantly larger than either of the two other grants. Communities receiving larger ECS grants are thus generally required to devote fewer locally generated revenues to meet the same MBR.

Second, we calculate total property tax capacity for both school and nonschool purposes for each municipality by multiplying the ENGL by a new standard tax rate. We compute the new standard tax rate by first adding statewide local nonschool spending to the statewide local portion of MBR and then dividing the sum by the statewide ENGL. The tax rate derived from this calculation will be larger than the tax rate computed in our original approach to measuring capacity, because the numerator is larger.

Finally, for the third step, we subtract a municipality's local portion of MBR from its total property tax capacity to compute the alternative municipal capacity measure.

We suggest employing a degree of caution when reviewing the results from the above-described approach. Based on our review of the MBR and grant data, the imprecise nature of the SDE guidance, and conversations with state officials and policy practitioners, we believe that some municipalities' MBR may include additional state or federal grants (possibly the result of historical legacy). Furthermore, we believe that there may be reporting inconsistencies across municipalities. For these reasons, it is very likely that we have overestimated the local portion of MBR for at least some municipalities and thus underestimated their capacity to fund nonschool services.²⁰

²⁰ For example, our calculated local portion of MBR for some communities is larger than the actual property tax levy for those communities.

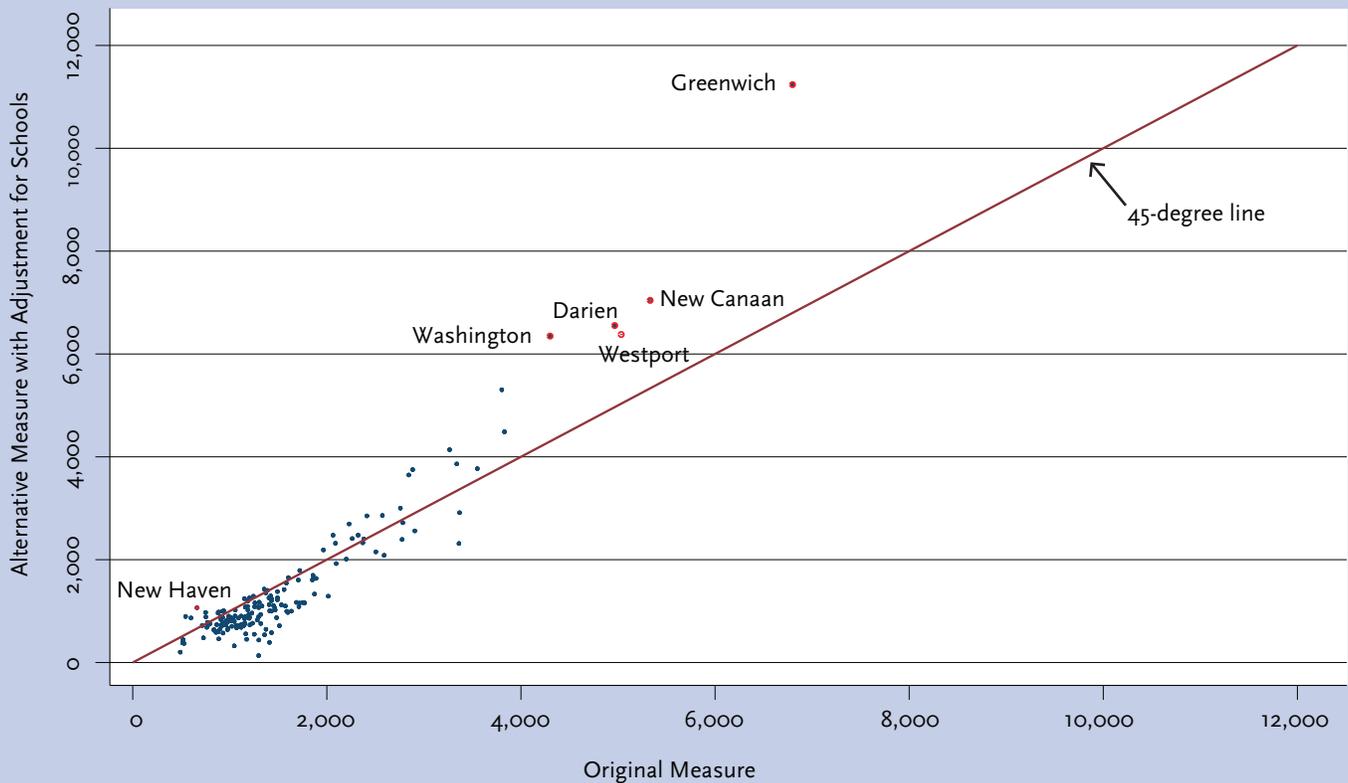
Results

Appendix Figure 1 compares this alternative measure of municipal capacity with the original measure. As the chart shows, there is a strong positive relationship between the two measures. In other words, low-capacity communities tend to remain low-capacity communities and high-capacity communities tend to remain high-capacity communities under either measure. Furthermore, most communities are clustered near the 45-degree line, suggesting that their revenue capacity changes very little between measures.

The largest differences, in absolute dollar terms, are observed for the state's wealthiest communities, which have higher measured capacity under this alternative approach. Although these communities are required to cover a high share of their MBRs from locally generated sources, these amounts are easily outweighed by the additional revenues they could raise from the higher standard tax rates employed in this alternative measure.

Appendix Figure 1. Comparison of Two Municipal Capacity Measures

(FY2007– FY2011 average, 2012 dollars per capita)



Source: Authors' calculations.

Other communities have fairly small absolute differences between the two measures, but fairly large percentage differences. For example, New Haven's measured capacity increases by roughly two-thirds under this alternative measure partly because the city's local portion of MBR is relatively low. Even so, the city still remains one of the state's lowest-capacity municipalities in per capita terms.

In summary, while use of this alternative capacity measure changes the absolute capacity and thus the fiscal gaps calculated for individual communities, most of these changes are relatively small and, importantly, the relative positions of different communities change very little. In other words, large fiscal disparities and their distributional pattern persist even when explicitly accounting for the role of schools in our nonschool capacity measure.

Appendix 2: Calculating Nonschool Spending

In the absence of a uniform chart of accounts for Connecticut municipalities, we computed a measure of nonschool spending that is relatively comparable across municipalities, using data from three sources: the Office of Policy and Management's (OPM) Municipal Fiscal Indicators report, the Comprehensive Annual Financial Reports (CAFRs) from individual Connecticut municipalities, and the U.S. Census Bureau's 2007 Census of Governments.

For each town and each year (FY 2007 to FY 2011), we started with operating expenditures as reported in the Municipal Fiscal Indicators report, compiled by OPM from individual town CAFRs. This figure represents total general fund expenditures minus expenditures for education. We then made three adjustments to this base measure of operating expenditures to improve comparability across towns.

First, we subtracted from operating expenditures any town general fund expenditures associated with water, sewer, or solid waste services, as estimated from individual town CAFRs.²¹ Towns vary significantly in the degree to which they provide these "utility" services and in the way they are accounted for in financial reports. Some towns, for example, offer water services, whereas in other (often rural) communities residents rely on private wells. Among towns that do provide water services, some may fund these services through their general fund (which would be included in the operating expenditures figure reported in the Municipal Fiscal Indicators reports), whereas others use a separate special revenue or enterprise fund for this purpose (which would not be included in operating expenditures).

Second, we added back to operating expenditures any public works spending reported in separate Town Aid Road and Local Capital Improvement Program (LoCIP) funds, as estimated from individual town CAFRs.²² Most Connecticut municipalities report Town Aid Road and LoCIP grants received from the state in their general funds, but about a third have separate special revenues funds for one or both of these programs, meaning that the expenditures of the funds are not included in the operating expenditures figure reported in the Municipal Fiscal Indicators report.

Third, we added back any expenditures associated with boroughs and certain special taxing districts that overlap with individual towns, as estimated from the 2007 Census of Governments data.²³ This adjustment was made to account for that fact that some towns fund fire or other municipal services through their general funds, whereas others rely on a special taxing district or borough. The 2007 Census of Governments provides the most recent and comprehensive fiscal information of special taxing districts and boroughs in Connecticut, since these entities are not required to report to the state.

After making these adjustments, as needed, for each individual town, we summed the adjusted operating expenditures across all towns to obtain total state nonschool spending.

21 We collected each town's general fund expenditures associated with water, sewer, and solid waste services from its FY 2012 CAFR. For 15 towns that had not made available to OPM electronic versions of their FY 2012 CAFRs, we collected the information from FY 2013 CAFRs. We then multiplied the ratio of general fund water, sewer, and solid waste expenditures to total operating expenditures in FY 2012 (or FY 2013) by FY 2007–FY 2011 operating expenditures to estimate general fund spending associated with these services in other years, assuming that the ratio remains constant over time.

22 We used an approach similar to the one described in the previous footnote for estimating Town Aid Road and LoCIP spending falling outside of the general fund in each year.

23 Here we estimated borough and special taxing district spending for each town in each year, based on the ratio of FY 2007 borough and special taxing district spending to FY 2007 operating expenditures of their home towns. We excluded homeowner associations, beach and lake association districts, and any special districts associated with water, sewer, or solid waste.

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