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A Holistic Measure of Socioeconomic Status for Municipal Aid Allocation in Connecticut

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Abstract

Economic disparities between municipalities in the state of Connecticut remain a pressing concern, often complicating efforts to allocate government aid effectively. Although Connecticut boasts one of the highest per capita incomes in the United States, the distribution of wealth and access to resources across its 169 towns is far from equitable. This paper introduces a comprehensive, data-informed approach to measuring socioeconomic status (SES) that seeks to address this challenge. By combining five carefully selected indicators—median home value, unemployment rate, median household income, participation in the Supplemental Nutrition Assistance Program (SNAP), and poverty rate—a composite SES index was developed for each municipality. These indicators were normalized and weighted to ensure consistency and comparability across towns of varying population sizes and economic characteristics. The resulting SES scores allowed for the classification of municipalities into high, medium, and low SES groups, offering a clearer picture of where disparities lie. The methodology is designed to serve as a practical framework for policymakers, particularly in decisions regarding the allocation of state-level financial aid and programmatic support. The analysis highlights stark contrasts between affluent towns such as Darien and New Canaan and economically distressed areas like Hartford and Waterbury. This disparity reinforces the need for targeted intervention strategies. By grounding aid allocation decisions in a transparent, replicable, and holistic measure of socioeconomic conditions, this study provides a foundation for more equitable governance and fiscal planning. The findings have potential implications beyond Connecticut, offering a replicable model for other states seeking to improve equity in municipal resource distribution through empirical assessment of local socioeconomic conditions.

Keywords; *Holistic Measure, Socioeconomic Status, Municipal Aid, Connecticut, Economic disparities.*

INTRODUCTION

Connecticut presents a unique paradox in the landscape of American socioeconomics. Frequently ranked among the wealthiest states in the country based on average income and property values, it nonetheless contains significant pockets of economic distress that contrast sharply with its overall prosperity. These disparities are not evenly spread but are concentrated within specific municipalities, creating wide gaps in public service delivery, educational resources, infrastructure quality, and local government capacity [1]. Affluent towns benefit from robust tax bases and well-funded institutions, while less prosperous communities struggle with chronic underfunding and limited access to essential services.

Over the years, state governments have attempted to address these imbalances through various aid distribution frameworks, yet many of these models rely heavily on limited or outdated indicators that fail to reflect the complexity of socioeconomic well-being. Often, aid decisions are guided by fragmented statistics or singular metrics such as per capita income, which, while useful, do not provide a comprehensive view of local needs or vulnerabilities. This has led to scenarios where communities in genuine need may be overlooked, while others continue to receive disproportionate support.

In this context, there is a growing recognition of the need for more nuanced and data-informed approaches to municipal aid allocation.

A multidimensional understanding of socioeconomic status—one that accounts not only for income but also for factors like employment, access to nutrition programs, property values, and poverty levels—can offer a more accurate reflection of a community's overall condition. By establishing a holistic framework for evaluating socioeconomic conditions at the municipal level, policymakers can make better-informed decisions that promote fairness and efficiency in resource distribution. This study emerges from that very necessity, aiming to build an inclusive and scalable model that captures the realities of economic inequality across Connecticut's diverse municipalities.

Connecticut, though often ranked among the most affluent states in the nation, exhibits pronounced economic imbalances across its 169 towns. The uneven spread of income and essential resources has led to significant differences in how municipalities can support public services and administrative functions. In response to these disparities, the present study introduces a comprehensive approach to measuring socioeconomic status at the town level. By incorporating multiple locally relevant indicators, the proposed framework offers a structured and adaptable method for classifying municipalities according to their overall economic condition and social needs. This classification is intended to guide more equitable and evidence-based distribution of state-level support.

Need for a Holistic SES Measure

Assessing socioeconomic status through a single lens—such as income or employment—often fails to reflect the true complexity of community needs. In Connecticut, municipalities with similar income levels may still vary widely in housing affordability, food security, or poverty rates. These overlooked dimensions can distort aid allocation, resulting in underserved towns not receiving adequate support. A holistic SES measure, built on multiple indicators, offers a more accurate and actionable basis for distributing state aid fairly and transparently.

Table 1 Limitations of Traditional vs. Holistic SES Measures

Criteria	Traditional SES Measure	Holistic SES Measure
Primary Focus	Income or employment only	Multiple indicators (income, poverty, SNAP, etc.)
Sensitivity to Inequality	Low	High
Reflects Social Services	No	Yes

Geographic Flexibility	Limited	High
Policy Relevance	Outdated in complex scenarios	Data-driven and context-aware

Objectives of the Study

Following are primary objectives of the study:

- To construct a composite index measuring socioeconomic status across Connecticut's municipalities.
- To categorize towns into high, medium, and low SES groups for comparative analysis.
- To support equitable municipal aid allocation through data-driven policy insights.

LITERATURE REVIEWS

The resource book summarises and analyses research in three key areas of social determinants of health: “education, social protection, and urban development, housing, and transportation infrastructure.” A major market failure exists in each of these domains, which may theoretically warrant interventions by the state. For example, credit markets that lend money for school can collapse because lenders cannot tell whether a borrower is good academically and will likely graduate, and they cannot stop a borrower from opportunistically pilfering. Economic externalities of education manifest, for example, in higher productivity within work teams as a result of interactions between individuals with higher levels of education. A more educated society usually achieves a better degree of social cohesiveness and higher standards of citizen collaboration, which are non-economic advantages of education. [2]

Students from low-income families tend to have worse success in school, according to studies. There is a robust relationship between the family income of a school district and the educational achievement of its children in Connecticut. To ensure that kids with greater needs have access to educational opportunities on par with their non-needy classmates, experts and policymakers agree that more funding is necessary. This led to the implementation of weighted school financing formulas in 30 states, with 17 of those states already making some kind of effort to help low-income pupils. At present, kids' eligibility for the National School Lunch and School Breakfast Programs run by the United States Department of Agriculture is used to identify those with low incomes in Connecticut and over 30 other states as well as the United States Department of Education (USDE). Students in Connecticut who qualify for these

programs are often known as "FRPL," which stands for free and reduced price lunch. [3]

Researchers found a number of key performance indicators (KPIs) that reveal Connecticut's equity starting position and that the state might use to monitor equality progress over time as part of the first landscape analysis for the equity study. Finally, these 10 indications have been carefully examined and the results show: Almost every indicator we looked at in the areas of housing, education, economic opportunity, and healthcare and public health points to significant racial and ethnic inequities. It would indicate that these racial and ethnic differences have persisted over the last three to five years. In general, the increases in KPI performance among Black and Hispanic populations are tiny compared to the underlying performance discrepancies, however there are several metrics that imply moderate improvements over time. There is a lack of data to enable inequality assessment among various marginalised areas in Connecticut, since much of the available data is based on race and ethnicity. [4]

Population decline, severe income inequality, and sluggish economic development are some of Connecticut's most pressing long-term problems. For their part, local tax systems rely much too heavily on property taxes. Particularly in uncertain times brought on by economic downturns, external shocks like global pandemics, or other disruptive occurrences, keeping this structural characteristic in place is not a strong risk management approach for local governments. Policymakers must prioritise a comprehensive evaluation of potential local revenue system changes that might address the current structural issues in light of these circumstances. One promising strategy for addressing issues like income inequality and economic instability is a balanced diversification of local revenue sources. [5]

The purpose of the research was to propose and evaluate a theoretical framework for socioeconomic status (SES) and its measurable components using resources accessible to Canadian and international scholars. In order to help quantitative researchers overcome the challenges that come with including SES into their analysis, we provide the following recommendations. The research looked at statistics that showed how socioeconomic status and student performance in maths and reading were related. Hierarchical linear modelling results demonstrated that compared to using a composite or individual SES measure, using intersecting factors better suited to answer study objectives. Also suggested are SES assessments used at the community and school levels. [6]

A worrying trend that has to be addressed soon to guarantee that everyone has access to timely treatment is the large rural-urban difference in ambulance response times in Connecticut, which is unrelated to median income. Policy and innovation in both acute care and treatment for long-term, avoidable health problems will be the backbone of any successful plan to achieve this goal. [7]

The report is the first of its kind to use a cost-capacity gap paradigm to measure non-school budgetary inequalities among towns in Connecticut. Based on variations in their property tax bases, it reveals that Connecticut towns vary greatly in their ability to raise funds. Due to variations in the five cost factors—the unemployment rate, population density, private-sector salary level, local road distance, and the number of jobs compared to the number of residents—they also fluctuate significantly in the costs of delivering non-school services. Therefore, there are large discrepancies across Connecticut communities in terms of non-school funding. Among various kinds of municipalities, the differences are widest in urban cores and narrowest in affluent communities. There is some equalisation impact from state non-school funding, which helps to reduce budget gaps, although it is not huge. [8]

Table 2 Relevance of Reviewed Literature to the Present Study

Citation	Key Focus of the Study	Relevance to Present Research
WHO (2013)	Explores public policy interventions in education, social protection, and infrastructure	Supports the inclusion of multi-dimensional indicators (education, housing) in a composite SES measure
Seidman (2016)	Links low-income households to educational outcomes in Connecticut; reviews FRPL as an SES indicator	Justifies the use of SNAP/FRPL as valid SES indicators for identifying economically disadvantaged municipalities
Faulkner (2024)	Assesses racial and ethnic disparities using KPIs across sectors in Connecticut	Reinforces the need for disaggregated, locality-specific socioeconomic data for equity-driven aid distribution
Kauppinen (2021)	Discusses over-reliance on property tax and Connecticut's long-term fiscal challenges	Aligns with the rationale for a holistic SES framework to reform local revenue systems and reduce inequity
Patten (2019)	Proposes and tests a conceptual SES model; advocates for	Validates the use of composite, geographically specific

	school- and neighborhood-level SES measurement	SES models, aligning directly with this study's design
Krishna (2024)	Highlights rural-urban disparities in emergency healthcare independent of income	Emphasizes non-income dimensions of inequality, supporting the broader SES approach beyond just financial indicators
Zhao (2018)	Measures non-school fiscal disparities using cost-capacity gap model across CT municipalities	Directly supports this study's municipality-level analysis and highlights structural funding inequalities

RESEARCH METHODOLOGY

This study uses a quantitative, data-driven approach to construct a composite index measuring the socioeconomic status (SES) of Connecticut's municipalities. Five key indicators—median home value, unemployment rate, median household income, SNAP participation, and poverty rate—were selected based on their relevance to economic well-being. Data was obtained from the School + State Finance Project and U.S. Census sources.

All indicators were normalized using min-max scaling to ensure comparability. Equal weights (20% each) were assigned to avoid bias, and a composite SES score was calculated through weighted summation. Based on these scores, towns were categorized into high, medium, and low SES groups to visualize and compare disparities.

Table 3 Research Methodology

Step	Details
Data Sources	School + State Finance Project, U.S. Census ACS
Indicators Used	Home Value, Unemployment, Income, SNAP, Poverty
Normalization Method	Min-max scaling
Weighting	Equal weights (20% each)
Index Construction	Weighted summation of normalized scores
Classification	High, Medium, and Low SES categories
Units Analyzed	169 municipalities in Connecticut

RESULTS AND DISCUSSION

The application of the composite socioeconomic index revealed pronounced disparities in economic well-being across Connecticut's municipalities. Towns situated at the upper end of the spectrum, including Darien and New Canaan, exhibited consistently high scores, signaling favorable conditions in terms of income levels, employment,

housing stability, and reduced reliance on public assistance. These findings align with their reputations as affluent communities with strong fiscal health and substantial local resources.

In contrast, municipalities such as Hartford and Waterbury emerged at the lower end of the index, reflecting significant economic challenges. Elevated poverty rates, higher unemployment, and greater dependence on assistance programs contributed to their low composite scores. These indicators point to systemic disadvantages that limit local governments' capacities to deliver essential services and maintain infrastructure, thereby highlighting the urgency of targeted support from state-level aid programs.

Municipalities like Storrington and Clinton occupied a middle ground, neither facing acute distress nor enjoying the full benefits of economic prosperity. These towns demonstrated moderate performance across most indicators, suggesting a mixed economic profile that may require careful monitoring and periodic support to prevent potential decline.

It can be concluded that the index not only differentiated towns based on their present economic standing but also served as a diagnostic lens for understanding where state resources can be most effectively deployed. The nuanced variation in scores underscores the inadequacy of one-size-fits-all policies and affirms the need for data-driven, place-based policy responses.

The following visualizations illustrate the relationships identified during the analysis:

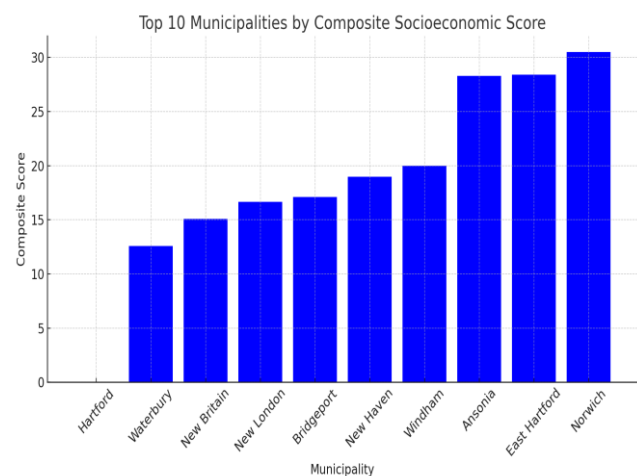


Figure 1 Top 10 Municipalities by Composite Socioeconomic Score

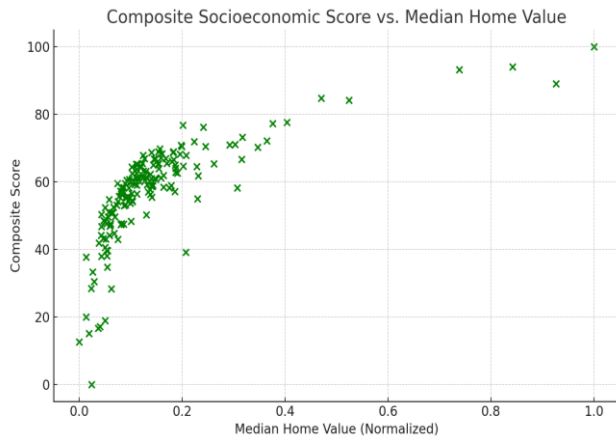


Figure 2 Composite Socioeconomic Score vs. Median Home Value

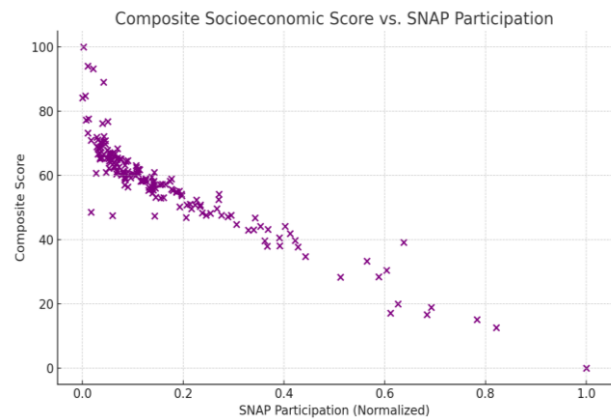


Figure 5 Composite Socioeconomic Score vs. SNAP Participation

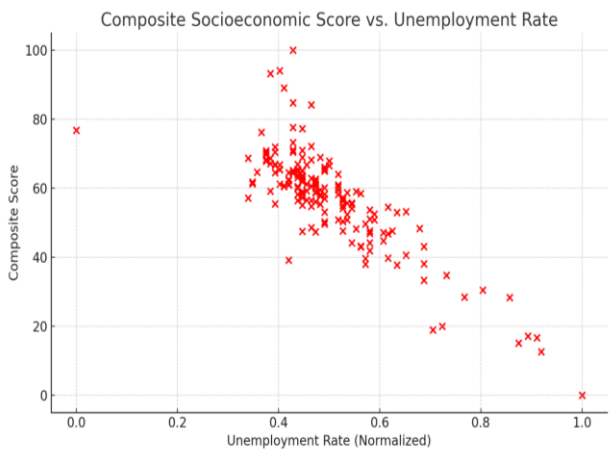


Figure 3 Composite Socioeconomic Score vs. Unemployment Rate

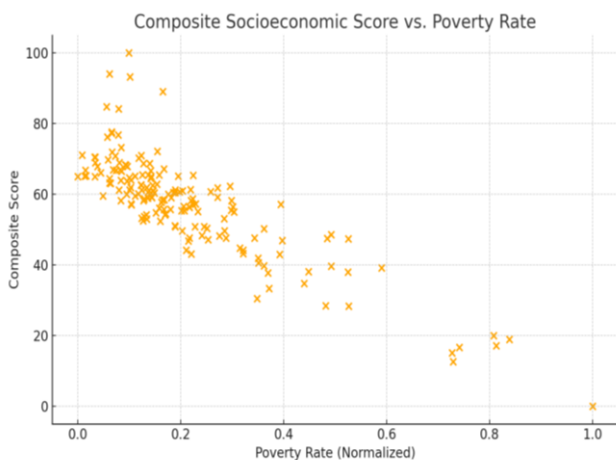


Figure 4 Composite Socioeconomic Score vs. Poverty Rate

CONCLUSION

This study introduces a multidimensional approach to evaluating socioeconomic status (SES) across Connecticut's municipalities, offering a more inclusive and accurate method of capturing community-level disparities. The composite index developed herein integrates critical indicators such as median income, home values, unemployment rates, SNAP participation, and poverty levels—each representing a facet of economic and social well-being. Through this framework, significant contrasts between affluent and distressed towns are brought into sharper focus, underscoring the uneven distribution of opportunity and access across the state. The value of this model lies not only in its diagnostic capability but also in its practical application. By quantifying the relative socioeconomic standing of each municipality, the index serves as a strategic tool for guiding policy decisions, particularly in the allocation of state aid. This is especially important in a state like Connecticut, where traditional financial metrics alone fail to reflect the complexity of local needs. The use of a data-driven and indicator-based classification system provides policymakers with a clearer understanding of which municipalities require greater support, thereby facilitating more targeted and equitable public investment. Also, the methodology's adaptability ensures that it can evolve over time to incorporate additional variables or respond to changing economic conditions. In doing so, it not only addresses present inequities but also establishes a foundation for long-term, evidence-based governance. Ultimately, this holistic measure offers a meaningful step toward reducing structural disparities and enhancing the fairness and effectiveness of municipal support programs across Connecticut.

FUTURE ASPECTS

This model can be refined further by incorporating additional variables such as educational attainment, healthcare access, and housing stability to capture broader dimensions of community well-being. Longitudinal analysis using time-series data could also help monitor socioeconomic changes over time and assess the impact of policy interventions at the municipal level.

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