To Bear a Reasonable Part: The Use of Special Assessments in New Haven, 1870 – 1920

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In 1865, the New Haven Board of Road Commissioners reported that “the constant increased demand for street pavements and sewers. . .convinces the Board. . .that the time has arrived when the citizens will be willing to bear a reasonable part of such expenses as may be necessarily incurred in the execution of those improvements. . .”1 The idea of directly charging citizens for a portion of infrastructure costs was not a new one; special assessments on the adjoining property owners who benefitted most directly from such improvements had existed, in one form or another, for centuries. In the decades following the Civil War, however, special assessments became an increasing source of revenue and a much-discussed topic in New Haven and other American cities. In 1874, New Haven appears to have collected nearly $100,000 in sewer assessments and over $50,000 in paving assessments2; ten years later, at a time when special assessments were beginning to receive growing scholarly attention, the mayor presented a list of the methods of assessment used by other cities for comparison with New Haven’s approach.3 By 1895, a prominent economist would write, “No American who treats of public finance as a whole can fail to be struck by the importance of special assessments in actual practice.”4

Despite the attention devoted to them, special assessments – even at their highest levels – never comprised a large percentage of New Haven’s total budget in the period between 1870 and 1920. Citywide property taxes regularly generated as much as a hundred times the combined

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1 CITY OF NEW HAVEN, NEW HAVEN ANNUAL REPORT 66-67 (1865).
2 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 23 (1874). These figures are in 1874 dollars. As will be discussed later, the pattern of assessments in New Haven rarely followed a steady path of increase. The 1874 assessment figures represent peaks in that pattern. See infra Figure 2.
3 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 25-26 (1893).
revenue of sewer and street assessments. With some notable exceptions such as Chicago (where special assessments were unusually high), such proportions were typical of cities across the country. Nonetheless, the historical and theoretical significance of this unique fiscal instrument goes beyond its seemingly minor place in New Haven’s budget. This paper will explore how the use of special assessments in New Haven underscores both historic trends and current issues relating to theories of taxation, the perceived role and responsiveness of local government, and patterns of urban infrastructure improvement. I argue that special assessments not only played an important historical role in the development of local governance and public finance; they also vividly demonstrated some of the advantages and concerns associated with benefit taxation generally. New Haven’s use of assessments during the study period embodied valuable principals of efficient taxation and resource allocation, while at the same time highlighting potential inequities that future systems of assessment should seek to avoid or mitigate.

Part I provides an overview of special assessments, outlining their history in the United States – from pre-colonial origins to twentieth-century decline – and locating them in the theoretical landscape of benefits charges. Part II focuses on the specific case of New Haven, with an emphasis on the city’s special assessment process and the quantification of special assessment fees relative to other measures of financing and public infrastructure. In Part III, I attempt to place New Haven’s use of special assessments in broader theoretical and historical context, focusing particularly on its implications for theories of benefit taxation, mechanisms of government responsiveness to local constituencies, and facilitation of coordinated infrastructure development.

5 See infra Figure 1.
I. Overview of Special Assessments

A. Historical Background on Special Assessments

The earliest origins of special assessments are somewhat murky, in part due to disagreement over which types of payments can properly be considered assessments. Generally speaking, special assessments have been levied to finance capital improvements rather than services. Over time, however, the term has been used to describe a range of compulsory charges, including those to finance ongoing services. Given this historical fluidity, and the similar theories underlying both approaches (discussed in the following subpart), this paper will generally not draw strong distinctions between special assessments used to finance capital improvements and those used to finance services. The early historic precedents most frequently cited by nineteenth- and twentieth-century commentators did, however, tend to emphasize the former, capital uses of special assessments: for example, the assessment-like per-acre charge imposed to pay for the repair of a sea wall around England’s Romney Marsh in 1250, as well as seventeenth-century statutes assessing improvement costs during the reconstruction following the Great Fire of London.\(^6\) Other commentators rejected such notions of European origin; the prominent turn-of-the-century economist Edwin Seligman called special assessments “a comparatively modern and specifically American development,” though he acknowledged that “the germ of the system” could be found in Roman law.\(^7\) It appears, however, that the special

\(^6\) Stephen Diamond, The Death and Transfiguration of Benefit Taxation: Special Assessments in Nineteenth-Century America, 12 J. LEGAL STUD. 201, 203 (1983) (citing early-twentieth-century writers and expressing skepticism about the historical accuracy of these “alleged ancestors” of assessment). See also CHARLES HAMILTON, A TREATISE ON THE LAW OF TAXATION BY SPECIAL ASSESSMENTS 4-6 (1907) (generally discussing the history of special assessments).

\(^7\) SELIGMAN 413 (noting also the infrequent use of special assessments in continental Europe). But see VICTOR ROSEWATER, SPECIAL ASSESSMENTS: A STUDY IN MUNICIPAL FINANCE 24-25 (1898) (“The idea was not as has often
assessment emerged in its modern form in New York at the end of the eighteenth century, spreading from there to other municipalities over the course of the nineteenth century. Writing in 1898, Victor Rosewater, a politician and newspaper editor who was one of his era’s most prominent commentators on special assessments, characterized the post-Civil-War period as the “final movement” in the spread of special assessments: “it is a more general phenomenon than the earlier ones and has not yet ceased its victorious march. . .”

The growth of special assessments in this period can be attributed to a number of factors. Most generally, the mid-nineteenth century witnessed a significant increase in the scope of municipal responsibilities. It was the age of, to use Eric Monkkonen’s phrase, the “service city,” in which municipal government began to provide not only the economic regulations and limited land use controls of colonial towns, but also a broader range of public safety programs, infrastructure, and other social services. In part, the demand for more active municipal government was a function of dramatic urban growth during the second half of the nineteenth century. In 1850, less than one fifth of Americans lived in urban places; by 1920, this proportion had risen to over one half. Population increases alone would probably have necessitated a greater role for urban governments as enforcers of public order. Adding to that need, however,

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8 See Diamond 204 (“Other states freely borrowed New York constitutional and statutory language for their own special assessment procedures.”); ROSEWATER 24-25; SELIGMAN 414. For a general overview of the history of assessments in New York, see ROSEWATER 26-38.
9 ROSEWATER 25.
was the growing cultural diversity of urban residents and a national tendency toward individualism; as Monkonnen puts it:

Rampant individualism and plural, nonsharing cultures can coexist and function only when each culture is willing to adapt and change or where the environment specifically accommodates culturally divergent groups. The latter can be accomplished by replacing social structures carried in each individual's head with formally and externally enforced ones.  

Municipal governments were well-positioned to provide such “externally enforced” structures. Indeed, they had little choice but to do so. Changing demographics and the effects of industrialization “called for an almost immediate response in urban areas”; where “rural areas and small towns could afford to delay in dealing with new challenges. . .in the city these demands were both sudden and pressing.”  

The public order enforcement provided by local government took a variety of forms, starting with quasi-professionalized police forces and fire brigades, and later expanding into new innovations such as boards of health and education.

The new roles of local government, however, were not restricted merely to controlling the changing urban population; nineteenth-century American municipalities also took steps toward serving that population through the development of public works on an unprecedented scale. Jon Teaford, defending the achievements of often-maligned nineteenth-century city governments, writes,

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12 MONKKONEN 92. See also Gerald E. Frug, City Services, 73 N.Y.U.L.R. 23, 39 (1998) (arguing that “one important reason for the creation of city services was the recognition by educated, enlightened elites that it was in their own self-interest to improve the circumstances of the immigrants and other poor people who were increasingly populating America’s cities”).

13 BLAINE A. BROWNELL & WARREN E. STICKLE, BOSSES AND REFORMERS: URBAN POLITICS IN AMERICA, 1880-1920, at xii (further noting that rural interests also dominated state legislatures, leaving state government unprepared to address urban problems and forcing Americans to turn to local movements and institutions).
urban rulers faced the awesome challenge of a spiraling population and an ever-changing technology, and they met that challenge at least as ably as urban leaders in any other nation of the world. During the last half of the nineteenth century American city governments sponsored feats of engineering never before attempted, provided comforts and conveniences previously unknown to urban dwellers. . . By 1900 the city governments of the United States, those conspicuous ‘failures’ of American life, provided the most extensive, most advanced public services known to urban residents.  

The extent of American cities’ sewer systems, paved streets, and street lighting in this period far exceeded that of comparable European cities; their parks, too, were considered “equal, if not superior, to any in the world.”

As Teaford notes, science and technology, along with population growth, drove the growth of public infrastructure by introducing both new problems and new solutions that called for increased coordination and funding beyond what existing private groups could provide. In the realm of sanitary sewer services, a greater awareness of the connections between unclean water and illness “led to several citywide technologies of sanitation” during the 1830s, with American cities experiencing “their first major sanitary awakening” in the period between 1830 and 1880. Newly developed steam-powered fire engines and other fire-fighting tools required costly capital outlays that could not be organized on a volunteer basis. (Some have argued that

15 See generally id. at 219-234.
16 Id. at 252.
17 Melosi, supra note 10, at 40. Lewis Mumford, in typically poetic style, observed of the end of this period that “[c]leanliness got new scientific reinforcements after 1870. . . At last, the industrial town’s indifference to darkness and dirt was exposed for what it was, a monstrous barbarism...Hygiene demanded space and municipal equipment and natural resources that had hitherto been lacking.” Lewis Mumford, The City in History 475-476 (1961). Rollin Osterweis has documented the existence of this trend in New Haven. See Rollin G. Osterweis, Three Centuries of New Haven, 1638-1938, at 335 (“The rapid increase of population after the Civil War stimulated a new consciousness in regard to public health problems. In June, 1872, the Court of Common Council voted to petition the legislature ‘for an amendment to the city charter for the establishment of a Board of Health Commissioners, with all necessary powers.’”). In New Haven, the introduction of public water infrastructure (another nineteenth-century technological advance) also contributed to the need for sewer systems. See infra notes 77-78 and accompanying text.
cities had an even greater interest in “substituting fire-fighting technology for firemen” as a means of controlling the violence and ethnic rivalry often associated with urban fire brigades.\(^\text{18}\) In 1874, New Haven’s mayor noted that the recent increase in public street lamps (already established as a government responsibility) was “mainly owing to the introduction of...naphtha lamps, by means of which streets not supplied with gas mains can be successfully lighted.”\(^\text{19}\) The existence of such technologies did not, of course, necessarily imply that they would be provided by the government. In combination with other factors, however, new scientific developments increased the perceived demand for citywide services, while simultaneously highlighting local governments’ comparative advantages in providing capital-intensive equipment and infrastructure. And American cities were unusually quick to apply the most up-to-date techniques in a variety of fields.\(^\text{20}\)

The provision of these new technologies, services, and capital projects relied on increased levels of municipal funding.\(^\text{21}\) By one measure, inflation-adjusted expenditures per capita by local governments were 43 times larger in 1902 than in 1820 (compared to federal spending, which grew approximately 3.5 times during the same period).\(^\text{22}\) The years following the Civil

\(^{18}\) MONKKONEN, supra note 10, at 107.

\(^{19}\) CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 35 (1874).

\(^{20}\) See generally TEAFORD, supra note 14, at 218 (“Throughout the United States municipalities employed the latest engineering techniques to create ambitious water and sewerage projects; quickly applied electricity to street lighting, transportation, and fire alarm systems; and pioneered the development of bacteriological laboratories. By the close of the century...city governments...had ensured their residents technological superiority in public services.”).

\(^{21}\) There is some debate over the causal relationship between municipal service growth and revenue growth. For an intriguing twist on the assumption that increased demand for services necessitated increased revenues, see Randall G. Holcombe & Donald J. Lacombe, Factors underlying the growth of local government in the 19th century United States, 120 PUB. CHOICE 359, 373 (2004) (arguing, based on evidence from Baltimore and Boston, that “growth in local government expenditures in the 19th century was driven more by an increase in the supply of revenues, in the form of increases in the property tax base, than by an increase in the demand for services”).

\(^{22}\) Holcombe & Lacombe 361. See also Randall G. Holcombe & Donald J. Lacombe, The Growth of Local Government in the United States from 1820 to 1870, 61 JOURNAL OF ECONOMIC HISTORY 184 (Mar. 2001)
War saw an overall increase in systematic taxation. Gradual antebellum tax growth gave way during the war to dramatically increased local taxation, generally in the form of property taxes, levied to pay for war-related expenses such as relief programs and draft bounties; “thereafter local taxes continued their climb, but from a new, higher plateau and at a steeper rate.”

Along with increased direct tax revenues, cities began increasingly to rely on debt financing during the mid-nineteenth century. Eric Monkkonen attributes this shift both to the challenges presented by limited property tax bases, particularly in newer cities that “literally built themselves from nothing,” and to the influence of the “corporate revolution” as it was experienced by cities: “Debt, the critical feature of the modern corporation, allowed . . . costs to be distributed over time and space.” I should note that, for the majority of this paper, I will attempt to put aside the large and important issue of municipal debt as an independent historical topic. Special assessments were frequently used to cover payments on what appear to have been revenue bonds, the payment of which was guaranteed solely from the specified assessment revenue stream. However, city budget records do not clearly trace assessment revenues

(analyzing local, state, and federal government expenditures during the nineteenth and early-twentieth century); John B. Legler, Richard Sylla, & John J. Wallis, U.S. City Finances and the Growth of Government, 1850-1902, JOURNAL OF ECONOMIC HISTORY 347 (June 1988) (theorizing that “the historical origin of government’s rising relative share of U.S. economic life lies . . . in the increased local activity, especially of large city governments, in the latter decades of the nineteenth century”).


24 MONKKONEN 213, 138.

25 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 130 (1905) (showing sewerage bond proceeds and sewer assessment revenues in the accounting for the City Sewerage Fund Account); id. at 44 (showing ledger balances of city accounts, including credits for street pavement and sewerage bonds, as well as for non-assessment-supported library, park, and high school bonds). The City also issued “Municipal Bonds” for unspecified uses, most likely in the form of general obligation bonds, although the records do not explicitly categorize them in this way. See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 80 (1887).
through to their ultimate disposition, making it difficult to analyze the relationship between debt
and assessments in a meaningful way. Furthermore, my goal is to focus on the justifications for
and uses of special assessments; how assessment revenues were translated into public
infrastructure improvements – whether by direct payment or repayment of previously issued
bonds – is less directly relevant to the purpose of this paper.\textsuperscript{26}

In the search for funds, special assessments offered specific advantages as a supplement
to traditional property taxation. From a procedural and logistical perspective, assessments were
in many ways uniquely suited to administration by local government, taking advantage of local
governments’ capacity for precision by relying on highly individualized evaluations of how
much benefit any given property owner received (and therefore owed, in part or whole, to the
city in repayment). Diamond quotes an 1851 judicial decision laying out this argument:

\begin{quote}
A property tax. . .apportions the burthen according to the benefit more nearly than
any other inflexible rule of general taxation. . .But the amount of each man’s
benefit in general taxation cannot be ascertained and estimated with any degree of
certainty; and for that reason a property tax is adopted instead of an estimate of
benefits. In local taxation, however, for special purposes, the local benefits may
in many cases be seen, traced and estimated to a reasonable certainty.\textsuperscript{27}
\end{quote}

Special assessments were similarly well-suited to many of the types of expenditures for which
municipal governments were increasingly responsible, in particular physical, location-specific

\textsuperscript{26}For in-depth analysis of municipal debt during this period, see, for example, Eric H. Monkkonen, \textit{The Politics of
Municipal Indebtedness and Default, 1850-1936}, in \textit{THE POLITICS OF URBAN FISCAL POLICY} 125-159 (Terence J.
McDonald & Sally K. Ward, eds., 1984); Keith D. Revelle, \textit{BUILDING GOTHAM: CIVIC CULTURE AND PUBLIC
POLICY IN NEW YORK CITY}, 1898-1938 at 143-82 (2003); Teaford, \textit{supra} note 14, at 284-293; John J. Wallis, \textit{A
History of the Property Tax in America}, in \textit{PROPERTY TAXATION AND LOCAL GOVERNMENT FINANCE} 127 (Wallace

\textsuperscript{27}Griffin \textit{v. Mayor of Brooklyn}, 4 N.Y. 419, 426-27 (1851), quoted in Diamond, \textit{supra} note 6, at 218. For further
discussion of special assessments as benefit taxes, see \textit{infra} Part III.
infrastructure such as streets and sewers. For some cities, they also offered a way around strict debt and tax limits, “since such assessments were not considered. . .subject to the tax ceiling.”  

Moreover, political and legal changes during the nineteenth century helped legitimize special assessments as a tool for revenue generation and clarified the rules surrounding their use. Throughout the middle and later decades of the nineteenth century, city charters across the country incorporated special assessment provisions into their original texts and periodic revisions. Judicial decisions provided additional guidance on the use of special assessments. Although assessments drew criticism for their association with corrupt local politics, corruption was rarely the basis of legal controversy over special assessments – in part, perhaps, because the diffuse harms of corruption failed to produce motivated plaintiffs. State and municipal courts did, however, rule on the constitutional and procedural validity of assessments, generally in response to claims that the benefits assessed were not uniquely enjoyed by those assessed or were incorrectly valued.

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28 TEAFORD, supra note 14, at 297.
29 See generally ROSEWATER, supra note 7, at 33-56.
30 Concerns about corruption centered on ward bosses’ use of the assessment mechanism to draw benefits to their neighborhoods and award construction contracts (paid for by special assessments) to their favored constituents. See Diamond 222-24 (citing criticism of special assessments for “facilitating corrupt municipal expenditures”). Arguably, such political favors might be more objectionable if financed by general taxation (i.e., by taxing citizens who would see none of the benefits of improvements in the favored neighborhood); indeed, part of the criticism of special assessments seems to have reflected disappointment that they did not improve upon general taxation as might have been expected in regard to corruption. See ROSEWATER 75 (“Nor would a work upon the subject have a claim to completeness if it did not at least mention the important instances where taxation by special assessment. . .has proved no bar to lavish expenditure or political corruption.”); RICHARD T. ELY ET AL., OUTLINES OF ECONOMICS 694 (3d ed. 1919) (recalling the corruption associated with New York’s special assessment system under Boss Tweed).
31 For examples of such challenges from New Haven, see infra notes 64-67 and accompanying text. See also Diamond 214-18 (discussing some of the earliest challenges to special assessments in New York during the 1840s and 1850s); id. at 224-27 (describing assessment challenges in New Jersey during the 1870s).
In 1898, the Supreme Court reversed its earlier policy of leaving assessment cases to state courts, holding in *Norwood v. Baker* that “[u]ndoubtedly abutting owners may be subjected to special assessments to meet the expenses of opening public highways in front of their property – such assessments, according to well-established principles, resting upon the ground that special burdens may be imposed for special or peculiar benefits accruing from public improvements.”32 The Court went on to hold that, in the specific instance at issue, “[t]he assessment was in itself an illegal one because it rested upon a basis that excluded any consideration of benefits” to demonstrate that the amount assessed did not exceed the benefit received.33 *Norwood* opened the federal courts to a large number of special assessment challenges and called into question the formula approach to assessments used by many cities. Three years later, however, the Court – in a series of related cases – withdrew from “the activist *Norwood* doctrine,”34 holding that “[i]t is within the power of the legislature of a State. . .to charge the cost of local improvement. . .upon property. . .and it was not the intention of this court, in *Norwood*. . .to hold otherwise.”35 In *Louisville & Nashville Railroad v. Barber Asphalt Paving Company*, a similarly deferential majority held that “the legislature is warranted in. . .saying that on the question of benefit or no benefit the land shall be considered simply in its general relations and apart from its particular use” and concluded, “[w]e are not called on to say that we think the assessment fair. But we are compelled to declare that it does not go beyond the bounds set by the Fourteenth Amendment.”36

33 *Id.* at 291.
36 197 U.S. 430, 435 (1905). See also Diamond 229 (characterizing the case as “amount[ing] to an overruling, not a refinement, of [Norwood]”).
Since these cases, special assessment challenges have typically been heard at the state, rather than federal, level.\footnote{37}

The end of the Court’s brief foray into adjudicating special assessments does not appear to have diminished the scholarly and professional interest that had grown up around municipal taxation generally and assessments in particular. This paper will emphasize the work of selected early commentators – several of whom are cited above for their observations on the history of special assessments – not only because they provide some of the best coverage of the subject, but also to highlight historical perceptions of the theoretical basis of assessments. At this stage it is sufficient to note that such scholarship existed and briefly to observe its basic sources and themes. Victor Rosewater’s 1898 work, published by Columbia University as part of its “Studies in History, Economics and Public Law” series, appears to have been among the first books of this period devoted entirely to special assessments. Edwin Seligman, whose 1895 \textit{Essays in Taxation} included a section on assessments, noted in subsequent editions of the collection that Dr. Rosewater’s monograph “contain[ed] a comprehensive treatment of the whole subject, historical, legal, statistical and theoretical, and [was] now the chief authority on the topic.”\footnote{38} (Seligman himself may have lent greater academic credibility than any of his peers to the study of special assessments and other forms of taxation; as a professor of economics at Columbia and}

\footnote{37 Some special-assessment-related cases continued to come before the Supreme Court, but the Court tended to characterize such cases as dealing primarily with other, non-special-assessment-related issues. \textit{See, e.g., infra} note 69 (describing the corporate law issues at stake in \textit{Fair Haven & Westville R. Co. v. City of New Haven}); \textit{Londoner v. City of Denver}, 210 U.S. 373 (1908) (rejecting a special assessment based on the limitations of delegated taxing authority and associated due process requirements, rather than in terms of benefit or lack thereof). \textit{See also} Diamond 232 (noting that \textit{Londoner} did not even describe the tax in question as a special assessment).}

\footnote{38 \textit{SELIGMAN, supra} note 4, at 414 n.1.}
a prominent participant in reform causes, he was among the nation’s preeminent authorities on public finance and Essays in Taxation was considered a key text in the field.  

In the years around 1900, perhaps partly in response to the Supreme Court’s rulings on special assessments, a number of treatises attempted to explicate special assessments from a legal perspective. Journals aimed at an increasingly professionalized municipal leadership also contributed to the growing literature: a 1918 article in The American City extolled the logic and revenue-raising capacity of special assessments, noting that “[e]very local improvement, carries within itself the means of financing the cost of its construction, not always the entire cost, but always some of the cost” and providing summaries of special assessment techniques in various cities. This evidence of engagement with the subject of special assessments – as both an economic and legal concept and a promising practical financing tool – underscores the extent to which assessments’ historical significance seems to have outstripped their relatively minor fiscal role.

By the third and fourth decades of the twentieth century, however, special assessments were beginning to fall out of use. There are a variety of theories about what caused this decline. Stephen Diamond observes that by the end of the nineteenth century, special assessments had settled into “a relatively narrow stream of applications.” Even those limited applications were

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39 REVELL, supra note 25, at 158.
40 See, e.g., HENRY N. ESS, A TREATISE ON THE POWER OF SPECIAL TAXATION: A CRITICAL ANALYSIS OF SPECIAL TAXES FOR LOCAL IMPROVEMENTS, CONSIDERED WITH REFERENCE TO THE CONSTITUTION, STATE AND FEDERAL, AND THE RESTRICTIONS THEREIN CONTAINED (1907); HAMILTON, supra note 6; GEORGE ALLEN MASON, THE LAW OF SPECIAL ASSESSMENTS AND SPECIAL TAXATION FOR LOCAL IMPROVEMENTS IN THE STATE OF ILLINOIS (1898).
42 Diamond 240.
undermined in the 1920s, when “a reckless expansion of urban subdivision financed by a
distorted version of special assessments. . .and the collapse in the Great Depression of the
anticipation bonds issued to finance this expansion. . .threw the entire system into disrepute.”

Special assessments may also have become less appropriate in established cities where the bulk
of infrastructure costs had shifted from initial construction to maintenance. While the one-time
expense of opening or paving a road could logically be charged to adjacent property owners, it
was more difficult to claim that ongoing maintenance of a heavily-traveled road benefitted those
owners uniquely; this was particularly true as automobile traffic increased public use of streets
that in earlier times might have served as essentially private drives. Political factors, too,
played a part. Special assessments have proven an easy target for elimination by local politicians
who wished to decrease focused tax burdens on their constituents. Unlike property taxes,
special assessments are not deductible for federal income tax purposes, making them particularly
unpopular among voters. Perhaps most importantly, new methods for providing infrastructure
came to replace assessments, as developers increasingly – whether voluntarily or under

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43 ROBIN L. EINHORN, PROPERTY RULES: POLITICAL ECONOMY IN CHICAGO, 1833-1872, at 83 (1991). See also TAX
FOUNDATION, INC., SPECIAL ASSESSMENTS AND SERVICE CHARGES IN MUNICIPAL FINANCE 9 (1970) (describing
defaults on special assessment bonds during the Great Depression).
44 EINHORN 84.
45 TAX FOUNDATION, INC., supra note 43, at 20 (“[t]he tremendous increase in automobile traffic has made the width
and quality of many street improvements as much a matter of benefit and interest to the general public as a matter of
convenience to adjacent property owners”).
46 Id. at 19 (noting “instances where elected officials have sought to demonstrate their competence and worthiness of
support at the polls by citing the volume of special assessments they have diverted from their districts”).
47 Id. at 20. See also I.R.C. § 164(a)(1) (providing an income tax deduction for property taxes); I.R.C. § 164(c)(1)
(requiring that special assessments be added to the basis of the benefitted property).
government-imposed exactions – constructed roads and sewers in newly subdivided communities.⁴⁸

In the relatively recent past, special assessments have experienced a rebirth of sorts through the rise of privately-initiated Business Improvement Districts and, in some parts of the country, taxing districts to finance landscaping, streetlights, and other amenities. I will briefly revisit these contemporary incarnations of special assessments in the conclusion to this paper.

Having described the history of special assessments largely without reference to their merits or drawbacks, this paper now turns to the theoretical underpinnings of the financing mechanism. In what is perhaps a testament to the continued relevance of special assessments, there is ongoing academic discussion regarding the merits of benefit charges as a general category. In the following subsection, I discuss this literature on user fees and public pricing, as well as some of the most frequently cited advantages and limitations of benefit-based charges and their general application to special assessments during the study period.

B. The Case for Benefit Charges

While it is difficult to assign a precise definition to special assessments, they can generally be categorized within the broad class of “benefit charges.” I use this phrase to encompass both benefit taxes and user fees, defined by David Duff as constituting, respectively, “mandatory or voluntary levies imposed on persons deriving particular benefits from specific

⁴⁸ INHORN 84 (arguing that “[t]his privatization of public works was a logical extension of the concept of special assessment”).
categories of publicly provided goods and services.\footnote{David G. Duff, \textit{Benefit Taxes and User Fees in Theory and Practice}, 54 \textsc{Univ. of Toronto L.J.} 391, 393 (2004).} In the case of special assessments, those particular benefits are most often the additions to property value associated with proximity to roads, sewers, and other infrastructure. Putting aside – for now – the mandatory/voluntary distinction, the primary rationale for such benefit charges \textit{“is not} to produce revenue but to promote economic efficiency.”\footnote{Richard M. Bird & Thomas Tsiopolous, \textit{User Charges for Public Services: Potentials and Problems}, 45 \textsc{Canadian Tax J.} 27 (1997).} Benefit charges do, of course, generate revenue, and the historic development of special assessments (as well as other use-based charges, such as tolls) was arguably driven by revenue needs more than by any explicit efficiency goal. Functionally, however, the unique advantage of benefit charges lies in their ability to promote efficient use of resources.

First and foremost, benefit charges promote efficiency by providing information about consumer preferences and demand. If we agree that resources are efficiently allocated when employed in their most highly valued uses, then efficiency requires accurate information about how resources are valued by various consumers, as measured in terms of their willingness to pay. By putting prices on publicly provided goods and services, benefit charges generate information about which consumers value those goods most highly and where resources can be most efficiently put to use.\footnote{See generally Duff 398.} As Mushkin and Bird put it, \textit{“[p]rices will provide correct signals to indicate the quantity and quality of things citizens desire and help bring about the proper balance}}
between private and public production of these things.”  

Second, benefit charges contribute to efficient resource allocation by “imposing discipline on investment decisions.” This discipline operates on both beneficiaries – who will be deterred from demanding goods or services on which they place little value – and government service-providers – who may face higher demand from “citizen-consumers” for transparency and accountability. Duff describes this process: “By linking the supply of publicly provided goods and services with the costs that must be incurred in order to produce these goods and services. . .benefit taxes and user fees can facilitate more rational decision making by voters. . .and constrain government actors to adhere to these decisions.”

These efficiency advantages appear in their strongest form in the case of completely voluntary user fees. Because consumers choose whether or not to use the goods or services associated with such fees, the use patterns revealed by such fees will directly reflect willingness to pay and will ensure that no service is provided at inefficiently high levels. Mandatory benefit taxes – including special assessments – are less capable of providing complete, detailed information, since the payment of a required benefit tax does not necessarily indicate willingness

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52 Selma J. Mushkin & Richard Bird, Public Prices: An Overview, in PUBLIC PRICES FOR PUBLIC PRODUCTS 11 (Selma J. Mushkin, ed., 1972). See also Bird & Tsiopolous 34 (“Client responses to user charges can provide public sector managers with vital information about what they should be doing and how. . . .”).

53 Duff 401 (“where preferences for publicly provided goods and services change, benefit taxes and user fees can signal these shifts more quickly and clearly than the political process”).


55 See, e.g., Clayton P. Gillette & Thomas D. Hopkins, Federal User Fees: A Legal and Economic Analysis, 67 B.U. L. REV. 795, 806 (1987) (“[T]he consumer for whom the service holds little value automatically will be deterred from its use.”).

56 Duff 400.
to pay. Where there are opportunities for public input at some point in the process of imposing benefit taxes, however, even mandatory benefit charges can elicit valuable information about how much citizens value a particular service or infrastructure item. As described in Part II, for example, the special assessment process in New Haven was frequently initiated by citizen petition and included opportunities for public comment in support of or against a proposed assessment-funded improvement. This public input presumably generated information similar to that provided by consumers’ decisions to use a fee-based good or service, albeit in a less direct and probably less accurate form. Likewise, even if mandatory benefit taxes cannot impose “discipline” on their beneficiaries’ use of a particular service (beyond discouraging excessive petitioning for improvements), they can create demand for government accountability regarding how tax revenues are spent. Clayton Gillette and Thomas Hopkins note in the user fee context, “[e]ven if there is a degree of coercion in the decision to use the service. . .a user fee may have important efficiency advantages”; for instance, “[t]he payer would be more inclined to insist on prudent service delivery and to press for closer scrutiny of the levels and terms of service continuation.”

Government officials may also be hesitant to take on the political liability of imposing focused taxes where they are not confident that corresponding benefits will result.

This basic model of benefit charges can be complicated by a number of additional factors and critiques. For instance, it is vital that benefit charges – whether voluntary or mandatory – be properly priced in order to generate efficiency advantages. Prices that are too low will result in overconsumption, while those that are too high can prevent services from being provided at the

57 Gillette & Hopkins 807 (noting also that a mandatory user fee “may be superior on efficiency grounds to other means of finance, because it will not burden those who neither use nor benefit from this service, and thus not influence their actions”).
optimal level. Certain types of goods and services may call for price adjustments to account for social benefits that go beyond the individual consumer. Gillette and Hopkins observe that “allowing full-cost recovery [to the government] may induce undersupply of activities that generate positive externalities. If a private beneficiary must subsidize public benefits and cannot recapture those benefits through pricing mechanisms. . .the private beneficiary probably will not engage in an optimal level of the activity from a societal perspective.”58 In such cases, partial payment through general revenues is appropriate. New Haven’s practice of charging special assessment beneficiaries for only two thirds of improvement costs (discussed in the next part of this paper) is an example of such a policy.

Administrative costs, too, should be taken into account in determining whether a benefit charge is worth implementing; any benefits derived from increased efficiency or additional revenues must be netted against the cost of calculating and collecting the fee or tax in question. Because they differ based on individual levels of use and benefits received, benefit charges, for all their advantages, can be especially burdensome from an administrative perspective; as Bird and Tsiopolous put it, “[e]very road could be a toll road, but the cost of collecting all those tolls – both the administrative and compliance cost and the related social cost of added congestion – means that such charging makes no sense.”59 This potential burden often gives rise to methods of approximation: a gas tax, for instance, can be used to charge people for their use of the

58 Id. at 838. See also Richard M. Bird, Charging for Public Services: A New Look at an Old Idea, CANADIAN TAX PAPERS 37 (Dec. 1976) (“If there is indeed a social benefit to be derived from individual consumption of certain services, individuals might, for example, be given subsidies to be spent on health, education or housing or whatever, and the allocatively correct price charged.”); Duff 416-417 (“where the publicly provided good or service provides more general benefits beyond those available to the direct user or imposes uncompensated costs on third parties, economically efficient rates should be adjusted to account for these positive and negative externalities”).
59 Bird & Tsiopolous, supra note 50, at 84.
highway system *without* turning every road into a toll road, although it does so at the cost of precision regarding where and when roads are being used. As we shall see in Part II, special assessments similarly have often relied on formulas intended to estimate the benefit to individual property owners without incurring the costs of individualized assessment.

These practical issues of implementation, however, fail to address the central normative question of whether such charges are fair and in accord with the goals of the tax system. On their face, benefit charges do possess a kind of intuitive fairness. To quote Bird and Tsiopolous, “[i]f taxpayers pay for identifiable public services that they consume, and no one either receives a service without paying for it or pays without receiving a service, this outcome would probably be perceived by many people to be perfectly fair.” Benefit charges also arguably meet standards of horizontal equity insofar as they impose equal taxes (for example, a special assessment corresponding to a given amount of benefit) on similarly situated taxpayers (people who will receive the given amount of benefit); while taxpayers of equal incomes may end up paying different amounts of total taxes under a system of benefit charges, the difference is effectively canceled out by the additional economic benefits accruing to those who make “extra” payments.

However, benefit-based taxes are often criticized for violating principles of vertical equity, insofar as they tax consumption and thus place a greater economic burden on low-income households. David Duff and Richard Bird both respond to this criticism by noting that the incidence of benefit charges is complex and can interact with other events in unpredictable ways.

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60 Id. at 50.
61 See Duff 403 (refuting this criticism).
For example, “[w]here the introduction of a new benefit tax or user fee is accompanied by a decrease in a regressive sales tax. . .the distributional impact of the change may be minimal or even progressive.”62 It may also be possible to mitigate regressivity through the use of waivers or subsidies; “recipients of certain governmental services should pay fees that are keyed to the recipients’ relative affluence, or…the disadvantaged or impoverished should receive user fee waivers or exemptions.”63 (In the case of mandatory benefit charges, a system of waivers may be particularly important because low-income citizens cannot opt out of the good or service in question. This notion is reflected in tax abatement policies such as those intended to provide relief from special assessments in New Haven and elsewhere.64) Nonetheless, the potential for vertical inequity on a system-wide level should be carefully considered in the design of any benefit charge.

Benefit charges may also be unsuitable for certain types of public goods and services. Even advocates of benefit charges acknowledge that benefit taxes are wholly inappropriate as a means of funding welfare or other services where “the primary purpose of a public expenditure is to redistribute resources.”65 Benefit charges are likely also inappropriate to the extent that a good or service is “properly distributed according to right, need, or merit rather than willingness to

62 Id. at 404. See also Bird, supra note 56, at 106 (“[I]t is an empirical question whether the distributional effect of financing improvements from general municipal revenues is more or less progressive than financing them through special benefit taxes.”)
63 Gillette & Hopkins, supra note 55, at 816 (further noting that “[e]ven without waivers, a user fee system is fairer to the disadvantaged who make no use of the service than is tax financing”). See also Duff 406 (“Where the incidence of a benefit tax or user fee might be regressive. . .this result can be prevented by exemptions for low-income households or progressive rates for households that have higher incomes or consume more of the publicly provided good or service.”).
64 See note 170, infra, and accompanying text.
65 Duff 413. See also Richard M. Bird, User Charges: An Old Idea Revisited, in TAX CONVERSATIONS: A GUIDE TO THE KEY ISSUES IN THE TAX REFORM DEBATE 521 (Richard Krever, ed., 1997) (noting that “with respect to programs where the sole and only objective is redistribution. . .[o]bviously, it makes no sense to think of charging the beneficiaries in accordance with the benefits they receive”).
pay,” such that “pricing should not interfere with minimal levels of the relevant good[].” This view assumes that there are certain minimal services that government is expected to provide to citizens regardless of those citizens’ ability to pay (or at least their ability to pay above some minimum level of taxation). While the base level of services in this model of government would probably be those relating to physical safety, other goods have also come to be seen as “rights”; public primary education is one widely accepted contemporary American example. Whether a specific good should be distributed based on “right” is a complex question, the answer to which may change based on a number of contextual factors: the relationship between the good in question and other rights, such as safety and health; the implications of paying for the good through general taxation; and how widespread the good is at a particular time – that is, where a service or technology is new or not yet universal, there may be a less compelling argument for treating it as a need or right. (For example, one can imagine a future in which internet access is so widespread and central to daily life that wireless connections are properly provided by right; at the moment, most communities are comfortable requiring individuals to pay for their own connections, although there are signs that this may already be changing.)

In order to explore these theoretical nuances on the basis of a more concrete example, I now return to the story of New Haven and its use of special assessments during the late

66 Duff 412.
67 Gillette & Hopkins 816.
68 How widespread a public service is may also determine whether the failure to provide it to certain groups is unconstitutional. See, e.g., Hawkins v. Town of Shaw, 437 F.2d 1286 (5th Cir. 1971) (holding that the town’s failure to provide basic municipal services such as street paving and water mains to black citizens, while providing them to most white citizens, violated the equal protection clause).
69 See, e.g., Verne Kopytoff & Ryan Kim, Google offers S.F. Wi-Fi – for free/ Company’s bid is one of many in response to mayor’s call for universal online access, S.F. CHRON., Oct. 1, 2005, available at http://articles.sfgate.com/2005-10-01/news/17393876_1_wi-fi-network-free-wireless-internet-access-google (discussing San Francisco’s now-defunct plan to provide free or inexpensive wireless access, advocated by Mayor Gavin Newsom as “a way to...help bring Internet have-nots – especially the poor – into the digital age”).
nineteenth and early twentieth centuries. The next Part analyzes the city as a case study of special assessment financing during the decades of its greatest popularity.

II. Special Assessments in New Haven

The 1870-1920 period – covering the first decade following the Civil War through the last decade before the defaults of the Great Depression – saw special assessments at the height of their use nationwide. These five decades were also a key period of growth and service expansion in many American cities, of which New Haven provides a representative example. Rollin Osterweis attributes this post-war growth in part to the necessities of wartime, with demand for supplies stimulating industrial development and, in turn, implying “greater concentrations of wealth and population” – particularly in cities, such as New Haven, where urbanization had been underway even prior to the war.\footnote{OSTERWEIS, supra note 17, at 329-30.} New Haven grew eightfold between 1850 and 1920, and the city’s population increased by 111,727, net of death and departure, between 1870 and 1920.\footnote{DOUGLAS W. RAE, CITY: URBANISM AND ITS END 64 (2003).} (Growth in this latter period had particularly long-lasting influences; Doug Rae observes, “The housing stock of present-day New Haven owes more to this period than to any other. . .[S]o too does nearly every other aspect of city life reach back to this era of accelerating growth.”\footnote{Id. Andrew Cappel’s study of pre-zoning land uses in New Haven relies on the same start year, noting that 1870 was when “the city began the largest urban expansion in its history.” Andrew J. Cappel, A Walk Along Willow: Patterns of Land Use Coordination in Pre-Zoning New Haven (1870-1926), 101 YALE L.J. 617, 620 (1991).} New Haven might be seen as representative in other respects as well: it was mid-sized, with a diverse immigrant population typical of most large and medium-sized American cities at the time and the...
industry and transportation links necessary to participate in the country’s growing economic networks.

A. New Haven’s Special Assessments in National Context

It is somewhat more difficult to assess how typical New Haven was in its administration of special assessments, which tended to vary widely by city. Table 1 reproduces selections from Victor Rosewater’s data on the scale and distribution of special assessments in a range of American cities during this period, showing 1891 assessment data for selected cities with over 100,000 residents, as reported in Rosewater’s frequently-cited 1898 monograph. (A more complete version of Table 1, along with more detailed versions of Tables 2 and 3, can be found in Appendix A; some of the following analysis will refer to data from those more detailed tables.) Clear regional variations emerge from this data. Of the twelve cities in eastern seaboard states, in only three (Jersey City, Rochester, and Allegheny) were assessments equal to over ten percent of current taxes, and in only two (Jersey City and Rochester) did the assessment per capita exceed two dollars. Among the twelve remaining Midwestern and western cities, assessments were equal to more than ten percent of current taxes in ten cities (Detroit and St. Louis, at nine and ten percent respectively, being the only exceptions), and the assessment per capita exceeded two dollars in seven cities. Based on this breakdown, New Haven in 1891 had assessment levels that were low compared to the overall average, but somewhat high relative to other eastern cities. (This does not take into account possible differences attributable to New Haven’s smaller size compared to the other cities in the sample, nor is the 1891 data necessarily representative of New Haven’s long-term assessment levels.) Table 2 displays the 1891 distribution of total assessments by specific use for some of the cities listed in Table 1. Given
Table 1
Municipal Revenue for the Fiscal Year 1891 (Selected Cities)

<table>
<thead>
<tr>
<th>Cities</th>
<th>Census Population, 1890</th>
<th>Receipts from all Sources</th>
<th>Receipts from Current Taxes</th>
<th>Receipts from Special Assessments</th>
<th>Assessments as Percent of Current Taxes</th>
<th>Assessments per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>15,155,301</td>
<td>$86,838,344</td>
<td>$30,733,819</td>
<td>$2,541,856</td>
<td>8.3%</td>
<td>$0.17</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>1,046,964</td>
<td>$23,400,496</td>
<td>$12,137,058</td>
<td>$1,063,332</td>
<td>8.8%</td>
<td>$1.02</td>
</tr>
<tr>
<td>Boston (1)</td>
<td>448,477</td>
<td>$24,650,173</td>
<td>$9,653,073</td>
<td>$38,648</td>
<td>0.4%</td>
<td>$0.09</td>
</tr>
<tr>
<td>Washington</td>
<td>230,392</td>
<td>$6,293,523</td>
<td>$2,290,537</td>
<td>$134,065</td>
<td>5.9%</td>
<td>$0.58</td>
</tr>
<tr>
<td>Providence</td>
<td>132,146</td>
<td>$7,473,888</td>
<td>$2,097,479</td>
<td>$47,744</td>
<td>2.3%</td>
<td>$0.36</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>238,617</td>
<td>$4,650,876</td>
<td>$2,711,431</td>
<td>$87,803</td>
<td>3.2%</td>
<td>$0.37</td>
</tr>
<tr>
<td>Chicago</td>
<td>1,099,850</td>
<td>$30,247,317</td>
<td>$9,199,796</td>
<td>$6,407,394</td>
<td>69.6%</td>
<td>$5.83</td>
</tr>
<tr>
<td>St. Louis</td>
<td>451,770</td>
<td>$10,014,607</td>
<td>$3,405,198</td>
<td>$339,010</td>
<td>10.0%</td>
<td>$0.75</td>
</tr>
<tr>
<td>San Francisco</td>
<td>298,997</td>
<td>$5,317,099</td>
<td>$2,517,504</td>
<td>$1,348,877</td>
<td>53.6%</td>
<td>$4.51</td>
</tr>
<tr>
<td>Cleveland</td>
<td>261,353</td>
<td>$4,539,023</td>
<td>$1,412,850</td>
<td>$499,363</td>
<td>35.3%</td>
<td>$1.91</td>
</tr>
<tr>
<td>Omaha</td>
<td>140,452</td>
<td>$1,194,479</td>
<td>$761,196</td>
<td>$461,795</td>
<td>60.7%</td>
<td>$3.29</td>
</tr>
<tr>
<td>St. Paul</td>
<td>133,156</td>
<td>$5,598,655</td>
<td>$1,103,795</td>
<td>$561,887</td>
<td>50.9%</td>
<td>$4.22</td>
</tr>
<tr>
<td>New Haven (2)</td>
<td>81,298</td>
<td>$1,076,300</td>
<td>$543,397</td>
<td>$82,269</td>
<td>15.1%</td>
<td>$1.01</td>
</tr>
</tbody>
</table>

(1) Nine months only.
(2) New Haven population from http://www.library.yale.edu/thecitycourse/Census_PDFs/1900/Population_by_ward_and_town_New_Haven_County_1900_1890.pdf.

Source: Victor Rosewater, Special Assessments: A Study in Municipal Finance (1898).
Table 2
Assessments Levied 1891, Classified According to Purpose

<table>
<thead>
<tr>
<th>Cities</th>
<th>Total Assessment</th>
<th>Street Improvements</th>
<th>Street Opening</th>
<th>Sewerage &amp; Drainage</th>
<th>Water Pipes</th>
<th>Street Sprinkling</th>
<th>Sidewalks and Footways</th>
<th>Lamp Posts</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>$2,126,881</td>
<td>$1,275,234</td>
<td>60%</td>
<td>$851,647</td>
<td>40%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chicago</td>
<td>$8,790,443</td>
<td>$4,868,151</td>
<td>55%</td>
<td>$428,118</td>
<td>5%</td>
<td>$2,363,200</td>
<td>27%</td>
<td>$747,352</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>$1,063,332</td>
<td>$553,373</td>
<td>52%</td>
<td>$10,000</td>
<td>1%</td>
<td>$259,668</td>
<td>24%</td>
<td>$217,547</td>
</tr>
<tr>
<td>St. Louis</td>
<td>$339,010</td>
<td>-</td>
<td>-</td>
<td>$177,245</td>
<td>52%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Boston</td>
<td>$38,648</td>
<td>-</td>
<td>-</td>
<td>$26,922</td>
<td>70%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Omaha</td>
<td>$461,795</td>
<td>$360,545</td>
<td>78%</td>
<td>$57,354</td>
<td>12%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>St. Paul</td>
<td>$561,887</td>
<td>$312,146</td>
<td>56%</td>
<td>$12,464</td>
<td>2%</td>
<td>$102,781</td>
<td>18%</td>
<td>$420,527</td>
</tr>
<tr>
<td>Providence</td>
<td>$47,743</td>
<td>$4,439</td>
<td>9%</td>
<td>$1,581</td>
<td>3%</td>
<td>$28,972</td>
<td>61%</td>
<td>-</td>
</tr>
<tr>
<td>Indianapolis</td>
<td>$388,851</td>
<td>$365,325</td>
<td>94%</td>
<td>$1,673</td>
<td>0%</td>
<td>$13,895</td>
<td>4%</td>
<td>-</td>
</tr>
<tr>
<td>New Haven</td>
<td>$82,269</td>
<td>$414</td>
<td>1%</td>
<td>$81,855</td>
<td>99%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Victor Rosewater, Special Assessments: A Study in Municipal Finance (1898).
the year-to-year variation in assessments observed in New Haven, this data may not accurately convey the average or typical distribution of special assessments in any of the listed cities, but it does highlight the most commonly assessed improvements – street improvements/ opening and sewer installation – and the range of assessment configurations in various cities.

Table 3 reproduces Census Bureau “Statistics of Cities” data on total 1908 assessment figures for cities with populations of at least 100,000. By this measure, New Haven’s assessments per capita appear to be rather low compared to other cities of its size, although its $0.35 per-capita figure is within the range of other mid-sized East Coast cities such as Providence, Worcester, Massachusetts, and Paterson, New Jersey. (It is worth noting that New Haven’s year-to-year assessment figures fluctuated dramatically around 1908; the following year, for example, total assessments were $186,880, or a per-capita assessment of around $1.49 based on 1908 population estimates.) As in the earlier-cited data, western and Midwestern cities generally collected higher assessment receipts on a per-capita basis than their East Coast counterparts. This is probably attributable in part to the relative newness of cities in the West and Midwest and their associated need for revenues. As Eric Monkonnen writes, “The newer cities in the mid-nineteenth century literally built themselves from nothing. . .In new cities, subscription appeals for city construction, though numerous. . .had little success, given a general local capital shortage anywhere urban growth took place away from the eastern seaboard.”73 Eastern cities, by contrast, had greater access to local capital and a more established property tax base, which made them less reliant on special assessment financing. They also had more established populations and interest groups

73 Monkonnen, supra note 10, at 138. See also Diamond, supra note 6, at 239 (observing that “[b]y the end of the nineteenth century, special assessments for street improvements were less important to the older, more developed cities of the East. It was in growing cities of between 100,000 and 300,000 persons, particularly in the West, that special assessments were most extensively used”).
## Table 3
Special Assessment Receipts, 1908

<table>
<thead>
<tr>
<th>City</th>
<th>Est. 1908 Population</th>
<th>Total Area (Acres) (includes land and water)</th>
<th>Total Receipts from Special Assessments</th>
<th>Assessments per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>4,338,322</td>
<td>209,218</td>
<td>$9,855,230</td>
<td>$2.27</td>
</tr>
<tr>
<td>Chicago</td>
<td>2,166,055</td>
<td>122,008</td>
<td>$4,633,426</td>
<td>$2.14</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>1,491,082</td>
<td>84,933</td>
<td>$833,746</td>
<td>$0.56</td>
</tr>
<tr>
<td>St. Louis</td>
<td>674,012</td>
<td>39,277</td>
<td>$2,578,709</td>
<td>$3.83</td>
</tr>
<tr>
<td>Boston</td>
<td>616,072</td>
<td>26,250</td>
<td>$277,294</td>
<td>$0.45</td>
</tr>
<tr>
<td>San Francisco (1)</td>
<td>342,782</td>
<td>81,280</td>
<td>$943,257</td>
<td>$2.75</td>
</tr>
<tr>
<td>Detroit</td>
<td>376,174</td>
<td>25,423</td>
<td>$761,792</td>
<td>$2.03</td>
</tr>
<tr>
<td>Washington, DC</td>
<td>317,380</td>
<td>44,317</td>
<td>$316,794</td>
<td>$1.00</td>
</tr>
<tr>
<td>Indianapolis</td>
<td>234,774</td>
<td>20,944</td>
<td>$1,715,844</td>
<td>$7.31</td>
</tr>
<tr>
<td>St. Paul</td>
<td>217,397</td>
<td>35,482</td>
<td>$408,438</td>
<td>$1.88</td>
</tr>
<tr>
<td>Providence</td>
<td>212,457</td>
<td>11,701</td>
<td>$34,330</td>
<td>$0.16</td>
</tr>
<tr>
<td>Columbus</td>
<td>152,031</td>
<td>10,400</td>
<td>$364,313</td>
<td>$2.40</td>
</tr>
<tr>
<td>Los Angeles (1)</td>
<td>102,479</td>
<td>39,473</td>
<td>$2,102,746</td>
<td>$20.52</td>
</tr>
<tr>
<td>Omaha</td>
<td>131,370</td>
<td>15,680</td>
<td>$369,811</td>
<td>$2.82</td>
</tr>
<tr>
<td>New Haven</td>
<td><strong>125,627</strong></td>
<td><strong>14,340</strong></td>
<td><strong>$43,700</strong></td>
<td><strong>$0.35</strong></td>
</tr>
<tr>
<td>Portland</td>
<td>116,630</td>
<td>28,136</td>
<td>$920,529</td>
<td>$7.89</td>
</tr>
<tr>
<td>Atlanta</td>
<td>109,545</td>
<td>7,680</td>
<td>$271,633</td>
<td>$2.48</td>
</tr>
<tr>
<td>Richmond</td>
<td>107,844</td>
<td>6,373</td>
<td>$25,613</td>
<td>$0.24</td>
</tr>
<tr>
<td>Dayton</td>
<td>106,897</td>
<td>7,661</td>
<td>$162,759</td>
<td>$1.52</td>
</tr>
<tr>
<td>Cambridge</td>
<td>100,762</td>
<td>4,182</td>
<td>$53,102</td>
<td>$0.53</td>
</tr>
</tbody>
</table>

(1) 1900 Census population figure (1908 estimate not available).

that may have proven resistant to the introduction of extensive assessment charges in the mid-
eighteenth century.

 Needless to say, it is difficult to identify any city as truly representative in the face of such wide national variation. However, New Haven appears to have been relatively typical of its size and region in its use of special assessments, and its well-documented experience provides a starting point for a broader inquiry into the use of special assessments as a tool of municipal finance.

B. The Mechanics of Special Assessments in New Haven

New Haven’s authority to impose special assessments derived from the City Charter, which was in turn approved and at times amended by the State Assembly. The city’s original 1784 charter did not explicitly authorize assessments, though it did provide for general property taxation and empowered the Mayor and Aldermen “to lay out new Highways, Streets and public Walks for the Use of [the] City, or to alter those already laid out in said City,” provided that any parties aggrieved by this process had recourse to county courts.74

It was not until 1862 that a General Assembly amendment to the Charter formally established assessment authority, providing “[t]hat all expenses of laying out, making, maintaining, altering or discontinuing highways and streets. . .shall hereinafter be assessed upon

74 NEW HAVEN CITY CHARTER, 1784, at 10. In its very early years, the New Haven Colony had laws imposing individual responsibility for certain aspects of road maintenance, though not in the form of cash payments. In 1646, for example, “it was ordered that each man mayntayne a good way before his house lott throughout the towne, whether it be for cart or foote.” RECORDS OF THE COLONY AND PLANTATION OF NEW HAVEN, FROM 1638 – 1649, at 231 (Charles J. Hoadly ed., 1857).
and paid by the inhabitants and property of [the] city, in the same manner as other city taxes” and that “whenever any sewer or other public work or improvement shall have been lawfully laid out, constructed or altered [the Court of Common Council] may assess a proportional sum of the expense. . . upon any person whose property is especially benefitted thereby, and may estimate the just proportion of such expense which such person shall pay.”

New Haven’s introduction of special assessments, in addition to following a national trend in imitation of New York’s use of the mechanism, coincided with the 1862 arrival of piped-in water in the city – an event that brought with it new demand for sewer infrastructure. The Mayor anticipated this demand in 1861, noting that the “introduction of water into the City and through our streets will, at an early day, require that some system be established for sewerage.” In the following year, the Mayor repeated this admonition and observed that the George Street Sewer, recently constructed “at heavy expense,” could be used as a main channel for additional, potentially assessment-funded connecting sewers. At the same time, improvements in paving technology made the city’s older cobblestone streets appear woefully in

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75 NEW HAVEN CITY CHARTER, 1862, at 1-2. Victor Rosewater’s 1898 book reports that the power to levy special assessments was judicially approved in Connecticut in 1854 and that, at that time, special assessment provisions “were contained in most, if not all, of the city charters in the commonwealth. . . .” ROSEWATER, supra note 7, at 39. However, the 1862 amendment suggests that assessments were not explicitly authorized in New Haven prior to that date. This conclusion is reinforced by the mayor’s address of January 1, 1862, in which the suggestion that sewer assessments be imposed implies that they did not exist before 1862. See CITY OF NEW HAVEN, NEW HAVEN ANNUAL REPORT 21 (1862) (mayor’s address noting that “we have no law assessing benefits on adjoining proprietors, for sewer work” and arguing that “it is a proper subject for inquiry” whether a portion of sewer costs might be paid by such proprietors).

76 Special assessments were not used to finance the construction of water infrastructure in New Haven, which was constructed privately. See infra note 111 and accompanying text.

77 CITY OF NEW HAVEN, NEW HAVEN ANNUAL REPORT 7 (1861).

78 CITY OF NEW HAVEN, NEW HAVEN ANNUAL REPORT 20-21 (1862) (“The George Street Sewer was built under a supposed public necessity, and therefore was paid for entirely from the City Treasury. As other sewers. . . may not come under like influences, and as we have no law assessing benefits on adjoining proprietors, for sewer work, it is a proper subject for enquiry whether a public law is not required, whereby a part of the cost may be assessed to adjoining land owners, and the balance paid by the City.”).
need of improvement: “they offer great resistance to draught, cause great noise, cannot be easily
cleaned, and are soon pressed out of place by heavy loads, making the surface very uneven...”
Inexpensive alternatives were becoming available; as the Engineer Department reported in 1871,
broken stone pavements required little labor and the necessary material could be obtained in New
Haven “at a moderate cost and of easy access.” Even at low cost, increased demand for these
new and improved pavements, like that for sewers, called for additional sources of funding
which could be provided by special assessments.

Subsequent charters retained the original 1862 special assessment provisions, adding
supplementary sections. The 1875 city charter included the language of the 1862 amendment.
In another section, it stated that the Court of Common Council had “the power to estimate. . .the
total probable amount of the expense of [public improvements]. . .and. . .to determine how much
of said estimated total amount shall be paid by persons whose property shall be specially
benefitted by such improvement” and specified more detailed notice and appeal procedures.
Later versions of the charter included substantially similar terms.

Compared to traditional property taxes, the mechanisms of special assessment in New
Haven relied on an unusually high degree of public involvement, from initiation of
improvements by citizen petition, to notice and approval requirements designed to elicit

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79 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 67 (1871).
80 Id. at 68.
81 The demand for improved paving received additional support a decade later, as the nation-wide cyclists’ lobby
known as the League of American Wheelmen (LAW) become an increasingly powerful lobbying force for
“improved touring routes.” See MICHAEL R. FEIN, PAVING THE WAY: NEW YORK ROAD BUILDING AND THE
82 NEW HAVEN CITY CHARTER, 1875, at 13-14.
83 NEW HAVEN CITY CHARTER, 1875, at 18-19.
84 See, e.g., NEW HAVEN CITY CHARTER, 1898, at 50-51; NEW HAVEN CITY CHARTER, 1905, at 56.
comments from those affected by a proposed assessment. Individuals brought their petitions to the City Council, which noted them in its minutes and referred them to the appropriate committees. New Haven’s citizens appear to have brought petitions in large numbers. In 1875, for instance, the Committee on Streets (which appears to have collected information on infrastructure requests for sewers and streetlights in addition to those for streets) reported that 317 petitions had been received during the year, including 17 for sewers, 4 for pavements, 65 for gas lamps, 60 for sidewalks, 23 for the extension or widening of streets, and 5 for the curbing of streets.85

Once received, petitions were referred to specific committees – the Committee on Streets, the Committee on Sewers, and so on – which were responsible for issuing notices, holding hearings, conducting site visits as needed, and making a report to the City Council of their findings and recommendations.86 Notice procedures varied only slightly over time, typically following “[t]he old established custom of advertising the petitions. . .to be acted upon in each of six local newspapers two or three times before the actual date of the meeting.”87 The hearings process was apparently arduous: as the 1884 Committee on Streets noted in its annual report to the City Council,

It is often the case the petitioners and remonstrants [i.e., interested parties who objected to a petitioned-for improvement] are equally divided, both sides claiming

85 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 283 (1875). Note that, while residents were able to petition for gas lamps, such lamps were not – unlike the other items in this list – subject to special assessment.
86 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 39 (1874) (describing the role of the Committee on Streets).
87 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 292 (1887). Similar language can be found in numerous years’ reports. This procedure appears to be similar to, though distinct from, the notice requirements for Board of Compensation hearings as specified in the city charter. See, e.g., NEW HAVEN CITY CHARTER 38 (1905) (“The bureau of compensation shall advertise in two or more daily papers three times the time fixed for a hearing on all matters coming before them, and the subject of said hearing. . . .”).
the right; then it is that members of the Committee have to use their best judgment in order to best serve the interest of the City. Your Committee have had many long and exhaustive hearings and their patience taxed to the utmost capacity. . . .

Perhaps not surprisingly given the effort devoted to this work, the City Council generally adopted the recommendations of the relevant committee about whether to act on a petition. In a minority of cases, the Council ordered special-assessment-funded improvements based not on citizens’ petitions but on the recommendation of the Board of Public Works or another agency.

After a petition was accepted and the improvement in question ordered by the City Council, benefits were assessed on affected property owners. The Board of Compensation was responsible for assessing both damages and benefits resulting from public works projects, reflecting a historic link between special assessments and eminent domain (further discussed in the following Part). The formula applied by the Board to calculate benefit assessment amounts varied over time and by assessment type. In 1875, for instance, city ordinances provided that assessments for sewers or paving would require benefitted owners to pay three-fourths of the total cost of construction, with the balance to be paid by the city. By 1898, the formula had (at least in city ordinances if not in practice) shifted to a more specific cost basis. Separate formulas applied to streets where abutting landowners had never paid a road assessment (“the cost of nine square feet of such roadway pavement as shall be laid for every front foot of . . . abutting land”); streets where abutting landowners had paid previous assessments (“the cost of three and one-half square feet of such roadway pavements as shall be laid for every front foot”); and streets

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88 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 294 (1884).
89 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 292 (1887) (observing that the Council’s appreciation for streets committee members’ hard work was “plain from the fact that, except in one or two isolated instances, the recommendations of the committee were adopted”).
90 NEW HAVEN CITY ORDINANCES, 1875, at 94-95.
occupied by railway tracks. 1905 ordinances appear to have left the Board of Aldermen greater discretion in apportioning assessments, allowing them to assess “a proportional and reasonable part of the expense.” (Somewhat puzzlingly, more anecdotal data from the city’s records suggests that, regardless of the precise formulas provided in the applicable ordinance, the cost proportion imposed in practice was typically around two-thirds throughout this period.)

New Haven’s charter required that the Board of Compensation provide notice to affected parties, and all assessments were appealable to the superior court. Case records and the annual reports of the Corporation Counsel indicate that New Haven did at times face challenges to its levying of special assessments, particularly in earlier decades; in 1875, twenty out of the thirty-six cases involving the city that were reported as pending in the Superior Court were appeals from assessments. Such appeals typically challenged the method of assessment, the existence of a benefit to assessed property owners, or the characterization of the claimed benefit as private and unique. New Haven’s most drawn-out litigation over assessments, against the Fair

91 NEW HAVEN CITY ORDINANCES, 1898.
92 NEW HAVEN CITY ORDINANCES, 1905, at 159.
93 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 8 (1864); CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 321 (1885); CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 357 (1897) (opinion of the Corporation Counsel reasoning that, given the Council’s power to assess “a proportional and reasonable part” of expenses, “[t]wo-thirds of the cost” has been the rule so long, without question, it would seem as if that proportion would be a reasonable one”) (emphasis added); Sarah B. Bassett v. City of New Haven, 76 Conn. 70, 73 (1903) (approving apportionment of assessments based on a formula charging two-thirds of the total cost to adjoining property owners and one-third to the City).
94 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 327-28 (1875). While it is difficult to confirm that reporting practices remained consistent over time, the number of assessment-related suits appears to have decreased in later decades: in 1901, for example, the Corporation Counsel’s report of pending Superior Court cases included just two assessment-related cases out of sixteen total, with a much greater number of tort-related cases.
95 See, e.g., Bassett (challenging the use of front-footage formulas to approximate benefits from sewer construction).
96 See, e.g., Sargent & Co. v. City of New Haven, 62 Conn. 510 (1893) (seeking an exemption from sewer assessments based on possession of a private sewer).
97 See, e.g., Bodwitch v. City of New Haven, 40 Conn. 503 (1873) (appealing assessment for the paving of Whitney Avenue on the grounds that “the avenue is a thoroughfare, and the part covered by the pavement is constantly used by the. . .general public” and “the property of appellant is not specially benefited”).
Haven and Westville Railroad Company, dealt with the question of whether street railroad companies could be assessed for the costs of paving between and on either side of their tracks. The case went on for seven years and ultimately reached the U.S. Supreme Court, which held that levying such assessments was within the city’s rights.98

The published opinions of the Corporation Counsel suggest that city officials, even when not facing litigation, frequently had questions about various legal aspects of special assessments. Some questions were surprisingly basic in light of the clear language of the Charter and other authorizing documents; at one point, the Court of Common Council submitted to the Corporation Counsel the question, “Can the City assess and collect a special assessment for a public improvement from the owner of property whose property is not especially benefited by the improvement?”99 Others were more complex, as when the Counsel received questions about specific notice procedures100 or was asked to comment, on several occasions, on the escalating dispute with Fair Haven & Westville Railway.101 While these legal issues surrounding the use of special assessments indicate that their use was far from undisputed, they were typically addressed and resolved in what appears to have been a routine manner – a necessity for a mechanism that was expected to be an ongoing source of revenue.

98 Fair Haven & Westville R. Co. v. City of New Haven, 203 U.S. 379 (1906). As noted previously, it was unusual for the Supreme Court to rule on special assessments after 1900. This case seems to have made it through on cert because its outcome turned on New Haven’s right to amend the charter originally granted to the Fair Haven & Westville Railway Co.; the opinion makes it clear that the Court saw itself as primarily deciding a question of corporate law rather than returning to the realm of special assessment law that it had relegated to state courts.

99 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 578 (1899). See also CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 408 (1895) (calling upon the Corporation Counsel to confirm that sewer assessments could not be transferred into the General Fund in violation of the basic benefit principles of assessment).

100 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 702 (1905).

101 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 701 (1898); CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 637 (1900).
C. Special Assessment Data and Interpretations

Yet in many other respects, special assessments – at least as they were implemented in New Haven – lacked the routine, steady character of other local taxes. In order to further explore the patterns of assessment revenues and related trends over time, I now examine fiscal data gathered from New Haven’s City Year Books for the period between 1870 and 1920 (displayed in Figures 1 through 3, with public works data displayed in Figure 4), adjusted for inflation to constant 1860 dollars. Appendix B includes a brief discussion of methodological challenges and provides caveats with regard to interpreting this data.

Figure 1 tracks total receipts, property taxes, and special assessments. While total receipts spike in certain years, largely due to the inclusion of temporary loan amounts (which tended to vary from year to year independent of other revenue sources), the property tax component of revenues increases steadily over time, with accelerations in later years possibly attributable to the city’s increasing property tax base. As noted above, assessment revenues in the three major categories – street paving and improvements, sewer construction, and street sprinkling – comprise a very small portion of total revenues, particularly as compared to property taxes. Figure 2 displays only assessment revenues, on a scale that better highlights their changes between 1870 and 1920. In sharp contrast to property tax revenues, special assessments in all three categories do not appear to follow any consistent trend over time but instead move in sharp peaks and valleys. In certain periods – approximately 1870 through 1885 and 1907 through 1920

street and sewer assessments follow similar peaking patterns (with regard to the timing of peaks if not their magnitude); between 1885 and 1907, however, the patterns diverge as sewer assessments peak and street assessments decrease and then remain at a low level for several years. (Street sprinkling assessments were too short-lived to provide a useful point of comparison with street and sewer assessments in this regard.) Versions of Figures 1 and 2 displaying three-year moving averages are included as Figures 1a and 2a in Appendix C; although the averaging approach smooths year-to-year peaking, the graphs generally display similar patterns over time to those shown in Figures 1 and 2.

Figure 3 presents inflation-adjusted assessment data for the study period and the approximately twenty years following. Contrary to the account of a nationwide drop-off of special assessments in the 1920s cited in Part I.A., New Haven appears to have continued using special assessments, particularly paving assessments, at a relatively high level throughout the 1920s, with a somewhat steeper drop-off occurring in the years after 1930. The limits of the historical record make it difficult to provide a convincing positive account of why this drop-off occurred in New Haven; the city’s annual yearbooks offer very little commentary on special assessments in the years after the study period. (I hesitate to attribute this silence to any specific change in policy, given that the yearbooks generally became less narrative and anecdotal as time went on.) The eventual decrease in the use of assessments could simply reflect a more delayed reaction to the factors – such as municipal debt and the development of alternative funding sources – that began to appear nationally in the 1920s. City records also highlight a very specific alternative source of infrastructure finance starting in the mid-to-late 1930s: the federal Works Progress Administration (WPA), which provided labor and funding for, among other projects,
Figure 1: New Haven Budget Data, 1870-1920 (constant 1860 dollars)

Figure 2: New Haven Special Assessment Data, 1870-1920 (constant 1860 dollars)

Figure 3: New Haven Special Assessment Data, 1870 - 1943 (constant 1860 dollars)

paving and sewer construction – and, along with other historical shifts, marked the start of a new era of increased federal funding.\textsuperscript{103} Local special-interest politics, though not clearly documented in any official sources, also doubtless played a role; developers, for instance, may have pushed for an end to special assessments, preferring a system of exactions under their own management to charges based on more expensive government construction costs.

Some of the volatility that appears during (and, to some extent, after) the study period is probably attributable to delayed collection of assessments, with spikes in assessment revenue corresponding to years in which the city was particularly successful in collecting unpaid assessments from prior years. Even taking variability in collections into account, however, special assessment revenue undoubtedly failed to follow the consistent patterns of property tax revenue. As I will further explore in Part III, this lack of consistency arguably reflects one of the key attributes of special assessments, namely their flexibility in responding to changing economic circumstances and residents’ specific needs and preferences. Unlike the more routinized imposition of property taxes, the levying and amount of special assessments in a given year was a function of a combination of independent factors, from the presence of neighborhood support to the city’s infrastructure priorities to the cost of construction contracts, which together could produce widely (and efficiently) varied results from year to year.

\textsuperscript{103}See, e.g., \textsc{City of New Haven, New Haven Municipal Yearbook} 8 (1936) (“3.62 miles of new sewers were laid, with WPA labor, in sections not previously serviced.”); \textsc{City of New Haven, New Haven Municipal Yearbook} 89 (1938) (“A considerable amount of paving work was carried on in conjunction with the WPA during the year.”); \textsc{City of New Haven, New Haven Municipal Yearbook} 57 (1940) (“With the assistance of WPA funds a vast number of projects have been completed, involving such work as building and repair of bridges, street paving, sewers, laying curbs. . .new sidewalks and repair. . .of public buildings.”).
Figure 4, which displays growth in New Haven’s total sewer and paved street mileage, suggests that such volatility in special assessments did not directly impact the rate of infrastructure construction; the length of sewers and paving increased relatively smoothly over time, and even periods of subtly accelerated growth do not appear to consistently track increases in special assessment revenues. This disjuncture probably reflects not only the special assessment collection anomalies discussed earlier, but also the fact that special assessments were frequently used to pay off bond obligations, such that the city could obtain infrastructure debt financing before it collected the assessments intended to pay back that debt. It is also important to keep in mind that a portion of infrastructure funding, even on projects subject to special assessments, came from city general funds, while some paving and sewer construction may have been financed entirely by non-assessment sources (for example, in the case of infrastructure improvements on city-owned land).

D. The Uses of Special Assessments

Along with its quantitative characteristics, the city’s special assessment data contains important information about what assessments were and were not used for in New Haven. As the tables indicate, sewer and street improvements were the primary subjects of assessment. Street sprinkling – necessary to maintain the top surface of certain types of pavement104 – became eligible for assessment under an 1895 Act and accompanying 1896 ordinance, which provided that “[t]he Board of Public Works shall . . .determine the actual cost of sprinkling and

104 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 102 (1883) (observing that too little watering of Telford pavements would allow the wearing surface to blow off, causing the underlying layer to disintegrate).
Figure 4: New Haven Sewer and Paved Street Mileage, 1870-1920

- **Sewers, Year End (miles, net)**
- **Paved Streets, Year End (miles, net)**
watering the paved streets of [the] City. . .during the preceding season and determine the amount to be assessed against each property owner” bordering on the sprinkled streets. Street sprinkling assessment revenues gradually dwindled and were phased out by 1909, possibly because improvements in paving technology made watering less necessary.

In addition to these formally designated assessments, a number of other minor charges imposed by the City of New Haven might be characterized as conceptually similar to assessments. For instance, longstanding practice made sidewalks the responsibility of adjoining property owners, and owners were themselves expected to carry out municipal orders for the repair or construction of walks. This system created a sort of “in-kind” assessment that could be replaced with direct monetary charges (for the full cost of the work, not just the percentage charged for street and sewer assessments) if necessary. The Board of Road Commissioners reported in 1872 that “[a]s a general thing, the property holders have willingly complied with the orders to repair or relay their walks; but the Board have, in some instances, been obliged to carry out the order, keeping an accurate account of the cost, and securing the same to the City by lien.”

The reasoning behind such requirements was, in the words of one annual report by the Department of Public Works, simple: “A good sidewalk adds to the value of the property in front

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105 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 473 (1896).
106 The fact that street sprinkling never appears as a general fund expense line item implies that the service itself was phased out, rather than simply being funded by different sources after 1909.
107 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 59 (1872). See also CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 150 (1874) (noting that “many persons. . .throw the burden upon the City” for sidewalk orders to avoid having “the care and trouble of the work,” and suggesting “that a certain percentage be added to these bills, when work is done at the City’s expense, to cover the expense of looking after the work, inspecting, making out bills, &c.”); CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 246 (1898) (“The matter of new sidewalks presents a comparatively simple problem. The names and addresses of the various property owners affected are ascertained and the same are duly notified of the order. . .In but few cases is it necessary to use further measures.”).
of which it is.”¹⁰⁸ In another variation on assessment charges, tree-planting programs in the early
decades of the twentieth century allowed property owners to make an assessment-like payment
for the privilege of faster service. As the Bureau of Trees reported, following the initial planting
of several streets “entirely at city expense,” “[a]n ordinance was secured. . .allowing citizens to
secure trees at once, without waiting for the regular planting of any street, by paying a fee of
$2.00 each – about the additional expense involved in planting scattered trees. Fifty-five
requests received attention in this way.”¹⁰⁹

In contrast to these categories, there were numerous capital improvements and services
for which New Haven did not impose special assessments. Like the majority of other
municipalities at the time, the city funded most ongoing services, such as fire and police
protection, using general revenues; street sprinkling was a relatively minor and short-lived
instance of special assessment financing for an ongoing service. But capital improvements were
not universally funded by special assessments. Perhaps most strikingly, New Haven did not
(unlike other cities such as Chicago and Philadelphia¹¹⁰) levy assessments to fund the
construction of water infrastructure, which was instead constructed privately by the New Haven
Water Company. This divergence from the city’s approach to sewer infrastructure appears to
have been more of a historical accident than a deliberate choice – a function of the Water
Company’s early origins as a private, state-chartered business, as well as the relatively early date
of water system construction and the common nineteenth-century practice of delegating water

¹⁰⁸ CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 248 (1898).
¹⁰⁹ CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 187 (1912).
¹¹⁰ ROSEWATER, supra note 7, at 85 (also noting the use of special assessments to construct water mains in
Milwaukee and Minneapolis).
service to private companies or independent commissions.  

Similarly, streetlights, although frequently the result of citizen petitions and arguably more location-specific in their benefits than, say, police services, were not paid for through assessments, perhaps because their relationship to public safety implicated broader public goods.

Many of New Haven’s parks relied on private funding, but it came in the form of donations from public-spirited citizens rather than mandatory assessments on nearby property owners. The isolation of the city’s largest parks from higher-density residential areas might have made it more difficult to systematically attribute benefits to adjoining properties. At least some New Haven officials, however, were aware that such benefits existed. In his 1887 address

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111 The New Haven Water Company, a private firm, was issued a charter by the state legislature in 1849. In 1853, New Haven citizens voted to issue bonds for a municipal water supply, but this proposal was ultimately defeated, forcing the Water Company to proceed using private funds when it ultimately began construction of the water system in 1859. In 1862, the company entered into a contract with the city in which it agreed to provide water for city purposes – primarily fire hydrants – for twenty years. The city had the right to renew the contract or to purchase the plant and Company franchises after ten years, giving rise to a heated debate over municipal ownership of the enterprise in the mid 1880s. Citizens ultimately voted against having the city acquire the assets of the Company. For discussion of the New Haven Water Company and its history, see NATIONAL CIVIC FEDERATION, MUNICIPAL AND PRIVATE OPERATION OF PUBLIC UTILITIES: REPORT TO THE NATIONAL CIVIC FEDERATION, COMMISSION ON PUBLIC OWNERSHIP AND OPERATION 120-24; Osterweis, supra note 17, at 278; George L. Priest, The Origins of Utility Regulation and the “Theories of Regulation” Debate, 36 J. L. & ECON. 289, 317-20. On the frequent delegation of water system construction to private companies or independent commissions, see EINHORN, supra note 43, at 134 (attributing such delegation to the “traditional American administrative practice” of “chartering private corporations to perform public tasks in return for monopoly privileges” and to the fact that private boards did not face the debt ceilings imposed on governments and were therefore able to borrow more construction funding.).

112 See supra, note 85. Some cities did levy assessments for street lights, including Chicago, Brooklyn, and Buffalo (as of 1898), see ROSEWATER, supra note 7, at 85 (Table 2), and Los Angeles, Fresno, and Kansas City (as of 1915), see Grant & Butenheim, supra note 41, at 451-56. Victor Rosewater observed in 1898, “[a]ssessments for street lighting are now almost unknown; they. . .seem to fall upon the very border line between the field of assessments and that of fees and tolls.” ROSEWATER 65. The later examples of assessments for street lighting provided by Grant and Butenheim may reflect a westward movement of the practice.

113 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 9 (1865) (mayor’s address to the Council stating, “I cannot withhold my clear convictions of duty, to urge upon you the necessity of a still further increase in the number of Lamps. . .I know of no duty more imperative than the protection of our citizens from insult and injury, to which all are liable to be subjected in a dark and poorly lighted thoroughfare.”). See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 27 (1880) (describing donations of 75 acres of land near East Rock and $6,000 for the purchase of additional land for a city park); CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 545 (1900) (report of the Commissioner of Public Parks noting the lack of public funding for parks and observing that “it is to be hoped that the ever increasing interest of the people of New Haven in their park system, as evidenced by valued donations, will speedily lead to its extension. . .”).
to the City Council, then-mayor Samuel York recommended development of a new park on the grounds that

[East Rock Park] makes New Haven more attractive as a place of residence, and brings many people here who would otherwise find homes elsewhere. It in this way adds to our taxable property, and increases the value of the land which you own. Of course this increase is not the same in all sections of the City. But . whatever increases the value of real property in any one section of a city, decreases the rate of taxation in every section, so that every property owner and taxpayer receives some benefit.\textsuperscript{115}

This characterization frames the benefits of parks as sufficiently widespread to justify funding them through general taxation – perhaps a deliberate strategy to convince the Council to vote general revenues toward park acquisition. Still, it is notable that such notions of increased land value were never used to impose special assessments on property owners whose land might be made particularly “attractive” by the proximity of a city park. (The practice appears to have been rare but not unheard of; as of 1915, Washington, DC, Indianapolis, and Fort Wayne, Indiana, all levied assessments on properties benefited by park improvements.\textsuperscript{116})

Other uses of special assessments adopted in some American cities (but not in New Haven) included weed removal,\textsuperscript{117} moth abatement,\textsuperscript{118} street oiling,\textsuperscript{119} and fire hydrant installation.\textsuperscript{120} Within New Haven itself, the perpetual pleas for funding by some departments – in particular the city’s library – suggested additional candidates for special assessment funding that the city chose

\textsuperscript{115} City of New Haven, New Haven Municipal Yearbook 310 (1887).
\textsuperscript{116} Grant & Buttenheim, supra note 41, at 452-453.
\textsuperscript{117} Id. at 456 (in several Iowa cities).
\textsuperscript{118} Id. at 453-55 (in Maine, Massachusetts, and New Hampshire).
\textsuperscript{119} Id. (in Minneapolis and several Missouri and Kansas cities).
\textsuperscript{120} Id. at 453 (in Louisville, Kentucky).
To some extent, the widely varying applications of special assessments reflect unique regional needs, as well as variations in terminology – which types of improvements were considered sufficiently “local” to merit assessment funding, for example, and whether “special assessments” were considered to encompass payments for services as well as capital improvements. But they also represent a range of perspectives on what constitute public versus private goods, and when it is both practical and appropriate to collect direct payment for benefits received. The next Part will further explore these issues as they played out in New Haven.

III. The Case of New Haven in Theoretical Context

In New Haven, as in other cities, the use of special assessments relied on a set of assumptions and theories about the scope of government powers and responsibilities and about the duties of citizens to contribute to the community at large. In this section, I investigate those assumptions and theories and explore how they relate to more general questions about taxation, municipal government, and infrastructure development during the period between 1870 and 1920 – and perhaps also in our own time.

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121 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 678 (1908) (“The limitations of the activity of the Library on account of lack of funds are very great. There are, of course, many libraries which are as unfortunately situated as this one in having inadequate appropriations from the City. And moreover it is no new situation with us.”).
A. Theories of Taxation

In very simplistic terms, there are two theories of how taxes should be levied. Richard and Peggy Musgrave outline these alternative views:

One approach rests on the so-called benefit principle. According to this theory, dating back to Adam Smith and earlier writers, an equitable tax system is one under which each taxpayer contributes in line with the benefits which he or she receives from public services. The other strand, also of distinguished ancestry, rests on the ability-to-pay principle. Under this approach, [a] given total revenue is needed and each taxpayer is asked to contribute in line with his or her ability to pay.

The ability-to-pay theory is most fully expressed in the graduated federal and state income taxes, under which each citizen must pay a percentage of his income (already an approximation of ability-to-pay) at rates that increase based on income bracket (further incorporating ability-to-pay principles by recognizing the lower marginal burden of taxation on higher-income taxpayers). Local taxation, in contrast, has typically relied almost exclusively on benefit taxes, in particular taxes on real property, which even now are responsible for approximately a quarter of local revenue and over a third of revenue raised locally (i.e., excluding state and federal grants). Property taxes are arguably better suited to local administration than income-based taxes, in that they allow local governments to mitigate the “mobility problem” inherent to local taxation; as John Wallis puts it, “Taxpayers vote with their feet and leave high tax jurisdictions.

122 The debate over whether special assessments constitute taxes is further discussed later in this section. See infra notes 91-99 and accompanying text.
124 Over the course of the twentieth century, municipalities have increasingly turned to sales taxes and occasionally income taxes to compensate for lower property tax yields; however, because these approaches only developed in the late 1920s and late 1940s, respectively, this phenomenon post-dates this paper’s study period. See WALTER HELLERSTEIN ET AL., STATE AND LOCAL TAXATION 607 (9th ed. 2009).
125 Id. at 802.
By taxing an immobile resource – land – local governments are able to minimize the mobility problem.”\(^{126}\) The property tax has been traditionally characterized as a sort of benefit tax by proxy – “a charge for services rendered by local government, it being assumed that the benefits which result are roughly proportional to property values.”\(^{127}\) This link between property taxes paid and benefits received further reduces the incentive to relocate and makes local property taxation more politically palatable.\(^{128}\)

If property taxes act as a proxy for measured benefits, special assessments might be seen as perfecting the notion of benefit taxation by purporting to charge the taxpayer in direct proportion to the benefit he receives. Indeed, Stephen Diamond notes that mid-nineteenth-century legal thinkers viewed special assessments as the foundational model and aspirational goal of all taxes: they “saw special assessments as the model which all taxation approximated and might even increasingly resemble.”\(^{129}\) (This claim may have become less realistic over time,

\(^{126}\) Wallis, supra note 23, at 70.

\(^{127}\) MUSGRAVE & MUSGRAVE 221. See also Griffin v. Mayor of Brooklyn, 4 N.Y. at 426-27 (1851) (“[T]he amount of each man’s benefit in general taxation cannot be ascertained and estimated with any degree of certainty; and for that reason a property tax is adopted instead of an estimate of benefits.”). A more recently developed alternative theory characterizes the property tax as a tax on all capital income. See generally Edward A. Zelinsky, The Once and Future Property Tax: A Dialogue with my Younger Self, 23 CARDOZO L. REV. 2199, 2204-05 (2002) (discussing the application to property tax of Arnold Harberger’s model of the corporate income tax as a tax on all capital).

\(^{128}\) Wallis, supra note 23, at 70. See also id. at 70-71 (discussing state governments’ difficulty in mobilizing political support for property taxes due to the challenges of matching taxpayers to benefits in large geographic areas). But see SELIGMAN, supra note 4, at 56-61 (criticizing the property tax’s failings as a test of ability to pay and its poor administration); id. at 377-78 (citing “the well-nigh complete failure of the general property tax in state and local finance”). For a general overview of the origins and history of the property tax, see GLENN W. FISHER, THE WORST TAX? A HISTORY OF THE PROPERTY TAX IN AMERICA (1996).

\(^{129}\) Diamond, supra note 6, at 218 (discussing Judge Ruggles’s decision in Griffin, a case that was “cited. . . not only in support of special assessments, but as a basic commentary on the theory of taxation”). See also Wallis, supra note 23, at 125 (“[L]ocal governments are better able to coordinate taxpayers with the benefits of public services financed by those taxes. All governments would like to levy benefit taxes – taxes paid by the people who benefit directly from the government services the taxes finance – but local governments are able to do so.”). Victor Rosewater went so far as to suggest that special assessments were, in a world of increasingly ability-based taxes, one of the only remaining elements of the tax system in which benefit “still [found] an acknowledged scope of action.” ROSEWATER, supra note 7, at 3.
as practical challenges forced municipalities like New Haven to make assessments themselves increasingly “approximate,” basing them on frontage or other formulas rather than individual determinations of benefit.\(^\text{130}\) As discussed in Part I.B.’s overview of benefit charges, the model to which these commentators aspired was one that offered not only a new source of funding, but also opportunities for increased economic efficiency and an intuitive “get-what-you-pay-for” form of fairness.

Whether assessments constituted a tax in the strict sense of the term was historically a debated question. Assessments generally were not treated as property taxes for purposes of tax exemptions for charitable institutions\(^\text{131}\) or with regard to constitutional limitations on taxation.\(^\text{132}\) Stephen Diamond explains the reasoning behind this treatment in regard to property-tax-exempt religious institutions: “These assessments were allowed since they only reduced the benefits accruing to church property. In theory, at least, they did not constitute an actual burden, as did the general property tax. . .”\(^\text{133}\) The related requirements of proportional benefit – and the associated restrictions on use of assessment revenues – further distinguished special assessments from property taxes, which, while theoretically based on notions of benefit, did not rely upon a showing of any specific benefit and could be used for any general expenditure.\(^\text{134}\)

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\(^{130}\) See Diamond 220.

\(^{131}\) Diamond 207; CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 414 (1895) (Corporation Counsel opinion noting that church property could be subject to special assessment).

\(^{132}\) ROSEWATER 89-90. There is, it should be noted, a certain circularity to Rosewater’s argument that special assessments should not be considered property taxes because existing policies do not treat them as property taxes.

\(^{133}\) Diamond 207.

\(^{134}\) See M. DAVID GELFAND, JOEL A. MINTZ, & PETER W. SALSICH, JR., STATE AND LOCAL TAXATION AND FINANCE 90 (2d ed. 2000) (distinguishing special assessments from property taxes on the basis of their one-time nature, “their application only to specially benefited property,” and “the requirement that their level be correlated with the benefit received”). See also SELIGMAN, supra note 4, at 415 (“The primary test of a tax is that it imposes a common burden; the primary test of a special assessment is that it implies a special benefit.”).
The issue was further clouded by the close association between special assessments and eminent domain. The two were often functionally paired. In New Haven, for instance, the Board of Compensation was responsible not only for assessing benefits but also for quantifying damages associated with street opening or other infrastructure improvements, a form of compensation akin to eminent domain payments; where an abutting property sustained damages but was still arguably benefited by the improvements, the damages awarded were reduced by assessed benefits (or vice versa). While both eminent domain and special assessments involved forced exchanges, many commentators argued that their association was more circumstantial than theoretically sound. Victor Rosewater rejected the apparent conflation of the two concepts, insisting that special assessments were levied not under eminent domain but under the government’s general taxing power: “Just because, in many instances, the same set of persons act as commissioners to estimate the value both of property taken and of benefits conferred, the courts often assume that the two functions derive their authority from the same source.”

In establishing special assessments as taxes, turn-of-the-century commentators were also at pains to distinguish between assessments and user fees. The two mechanisms share characteristics to the extent that fees, like special assessments, are benefit-based charges for government services. Other factors, however, place them in separate categories. Edwin Seligman, noting that special assessments were “so extremely important and so far overshadow

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135 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 241 (1905) (Board of Compensation report showing benefits and damages associated with street and sewer assessments). See also Diamond 208 (discussing eminent domain justifications for street openings in New York).
136 ROSEWATER, supra note 7, at 92-93. See also Diamond 216 -17 (summarizing Justice Ruggles’s finding in Griffin that special assessments could be distinguished from eminent domain on a number of grounds). For additional discussion of theories on the origins of authority for levying special assessments, see HAMILTON, supra note 6, at 25-26, 33-34, 37-38.
all other cases of special benefit. . .that it seems advisable to put them in a separate category,“\(^{137}\)
pointed out several points of difference. For instance, “a fee is levied on an individual as such”
while “a special assessment is levied on an individual as a member of a class”; indeed, levying a
special assessment on a single lot is generally prohibited. Special assessments also typically
stem from benefits to real property values rather than benefits to individuals or personal property
(such as those provided by, for example, a fee-based licensing program for a particular
profession).\(^{138}\) Finally, fees tend to be voluntary where special assessments are not. While it
may be possible to avoid paying a toll fee by choosing not to cross a bridge, special assessments
– although frequently the result of citizen petitions – can be levied against unwilling
beneficiaries; unlike in the case of a fee, such beneficiaries do not have an equivalent opportunity
to “opt out” of using an adjoining sidewalk or sewer system.\(^{139}\)

The importance of identifying whether special assessments constituted taxes may have
stemmed in part from the period’s anxieties about the purposes and limits of taxation. Some tax
historians have characterized late-nineteenth-century tax policy, particularly the development of
the graduated income tax, as concerned primarily with placating demands for more radically
redistributive schemes.\(^{140}\) Howard Gillman identifies these concerns as part of a broader anxiety
about laws that “singled out specific groups or classes for special treatment”: “More than any

\(^{137}\) SELIGMAN 419.
\(^{138}\) Id. at 419-20.
\(^{139}\) See generally GELFAND, MINTZ, & SALSICH 91.
other power, the legislature’s authority to raise taxes raised the specter of class warfare – powerful groups excluding themselves, majorities exploiting vulnerable minority classes to pay the public tab.”141 Against this ideological background, classifying special assessments as taxes may have been seen as a way of lending legitimacy to local taxation, by including among its methods a mechanism that purported to collect taxes and provide services in direct proportion to one another, with no risk of burdening one group for the benefit of another.

As reflected in Part I.B., contemporary commentators, unburdened by these ideological concerns, typically group benefit taxes and user fees together for analytical purposes – an approach that makes sense insofar as the efficiency and information-gathering advantages offered by taxes and fees differ more in degree than in kind (assuming that a system of mandatory taxes still provides opportunities for public feedback). I will adopt this convention, treating special assessments as a form of benefit tax and thus part of the larger category of benefit charges. Within that broad category, however, special assessments might be seen as occupying a place somewhere between traditional property taxes and voluntary user fees.142 Their use thus struck a balance between the need for authoritative government control over infrastructure provision, on the one hand, and a commitment to measurable benefit as a justification for government charges, on the other.

The ways in which New Haven allocated assessment charges can provide useful insights into the challenges and implications of the benefit theory of taxation. Administering special assessments required walking a fine line between specific evaluation and general approximation

142 See generally TAX FOUNDATION, INC., supra note 43, at 15-16 (1970) (“In some respects the special assessment resembles a service charge, while in others it is more like a tax.”).
of benefits; erring too far in one direction posed high administrative costs, but over-reliance on estimates risked undermining the provision of direct benefits that was fundamental to the special assessment system. New Haven’s changing allocation formulas may reflect ongoing efforts to find an appropriate balance between these two extremes; applying different assessment bases to property owners who had previously paid assessments and those who had not, for instance, allowed for more specific estimates of benefit over time without requiring complex case-by-case evaluations. The city also made efforts to correct for the limitations of its formulas’ location-based criteria when those criteria resulted in clear inequality among property owners: relatively early in New Haven’s use of special assessments, the mayor noted that “some method should be devised to equalize the burden, for a citizen living on the line of a main sewer, should not be compelled to pay four times as much as one living on a cross street, where a small sewer is ample.” These efforts highlight the logistical challenges posed by benefit taxes and underscore the reasons that they have historically been best suited to local-level administration.

The allocation of benefits also sent important signals (and, for our purposes, provides useful historical evidence) about the pricing of public goods and about which groups were perceived to be the primary beneficiaries of infrastructure. Unlike some other cities, New Haven rarely charged property owners for the full cost of improvements. The city’s willingness to accept a share of costs suggests that the benefits of such improvements were seen as partially

143 See supra note 59 and accompanying text.
144 See supra note 92 and accompanying text.
145 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 25-26 (1870). The mayor went on to suggest that “[t]his might be done by fixing upon a medium of average sized sewer, for all to pay for.” Id. at 26. See also CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 26 (1882) (“There is undoubtedly justice in the claim of those property owners on main thoroughfares, that they ought not to be burdened with the greater portion of the cost of paving those streets. . . .”).
public as well as private. This is borne out in the rhetoric used by municipal leaders, who frequently characterized sewers and other infrastructure improvements as at least partially public goods. In describing the benefits of well-paved streets – “continued growth and prosperity,” “our health and business” – one mayor included private benefits almost as an afterthought (“as well as our private interests affected thereby”). Another mayoral address emphasized the community-wide positive externalities that could result from improved sanitary services, describing sewer construction as “especially important in [sic] a sanitary point of view, affecting the health and comfort of our people”; along similar lines, the Board of Health frequently reported on the broad public health implications of inadequate sewer facilities. As we have seen, local improvements were also explicitly recognized as contributing to an increased property tax base and thus decreasing the citywide tax burden.

It is likely that politics played a part in the city’s willingness to pay for a portion of improvements. As the mayor observed in 1887, “[t]he average citizen is very much in favor of such improvement on his street as the public has to pay for”; special assessments were no doubt more palatable to residents when the city appeared to share in the burden. Even taking into account these practical concerns, however, acknowledgements of shared public and private benefit can be read as reflecting a relatively sophisticated sense of the interdependence – from both scientific and economic perspectives – of the city’s various neighborhoods, properties, and individual residents. The city’s partial payment policy may also suggest an implicit

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146 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 33 (1895).
147 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 33 (1872).
148 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 18 (1872) (tying sanitary conditions to the city’s ability to attract new businesses).
149 See supra note 115 and accompanying text.
150 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 313 (1887).
understanding of the importance of properly pricing goods such that they will be produced in socially optimal amounts. If individual property owners were charged for the public benefits of infrastructure as well as the private benefits they received, their objections to assessments might prevent the infrastructure from being built despite the advantages it offered to both individuals and the city as a whole; by charging only two-thirds of the total cost, New Haven adjusted the price of improvements to account for public benefits.151

The private benefit implied by special assessments, meanwhile, also took a variety of forms, which might be broadly outlined in terms of the “increased value or convenience of . . . property.”152 The second of these two categories – “convenience” – included the literal day-to-day benefits of comfort and utility provided by adequate roads and sanitary infrastructure. Such practical benefits were also understood to be capitalized into the value of adjoining property, in excess of whatever increase in value might occur citywide. This special benefit was inherent to the definition of special assessments and the justification for assessment charges; Victor Rosewater identified “those numerous cases where municipal improvements result in distinct and traceable advances in the value of adjacent real property” as the situations that gave rise to special assessments.153

Among nineteenth- and early-twentieth-century thinkers, the relationship between benefits and property value was often associated with the idea of the “unearned increment,” that is, the portion of property value increase attributable to broader economic conditions rather than

151 See supra note 58 and accompanying text.
152 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 80-81 (1868) (Board of Road Commissioners report maintaining that “those who have been assessed very generally feel that they have received the full worth of their money, in the increased value or convenience of their property”).
153 ROSEWATER, supra note 7, at 3.
the efforts of the property owner. John Stuart Mill invented the term\(^{154}\); Henry George later adopted it in his argument for the enactment of a single tax on land, intended in part to recapture the unearned increment for public use.\(^{155}\) Special assessments were, in a sense, a more limited effort to recapture what might otherwise be seen as unearned profit at public expense. Rosewater, who appears to have opposed (or at least wished to distance from special assessments) the socialist connotations of a fully Georgist approach, took this perspective in his monograph:

> Special assessment undoubtedly transforms a certain part of the enhancement of land values from an unearned increment into an earned increment. It does this at the very time that the benefit arises, thus avoiding every taint of confiscation of vested interests. Through it may be secured the chief advantages of the appropriation of the future unearned increment without destroying the healthful stimulus arising from the private ownership of landed property.\(^{156}\)

In this interpretation, the rise of special assessments not only reflected the long-standing notions of benefit taxation already embodied in the property tax, but also incorporated – albeit in a moderated form – some of the cutting-edge tax philosophies of the day.\(^{157}\)

> Special assessments can be seen as constituting an unusually pure form of benefit tax.

Their use in New Haven thus usefully underscores some of the foundational features of benefit-


\(^{155}\) See, e.g., *Henry George, Progress and Poverty*, at ii (4th ed., 1905) (“[W]e have only to abolish all taxes save the tax on real estate. . .leaving only that part of it which now falls on the value of the bare land, increasing that so as to take as nearly as may be the whole of economic rent, or what is sometimes styled the “unearned increment of land values.””).

\(^{156}\) ROSEWATER 144.

\(^{157}\) Although any attempt to find explicit Georgist motives in New Haven’s special assessment policy is necessarily speculative, Henry George’s intellectual influence does appear at least once in the New Haven records during the 1870 – 1920 period. The 1891 inaugural address of Mayor Joseph Sargent advocated – apparently without any lasting effect – a tax exclusively on land: “In the taxation of land only. . .the distribution of tax over the whole community would be equitable, and in proportion as Nature’s God intended.” *CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK* 348 (1890).
based taxation: the need for precise measurement of benefit (up to the point of administrative inefficiency); the recognition of community-wide benefits associated with localized improvements, and the importance of accounting for those benefits in assessment pricing; and the countervailing desire to recoup publicly funded increases in private property values.

B. The Role of Local Government

Part I outlined the post-Civil War period’s general increase in the scope of local government services and infrastructure development. The use of special assessments in New Haven offers one perspective on this process and, in particular, sheds light on the mechanisms for government responsiveness to constituents and changing local conditions. As described in Part I.B., benefit charges, including special assessments, can convey key information to government actors about their citizen-consumers’ preferences, resulting in more efficient and responsive provision of public goods and services.\(^{158}\) To put this idea in political rather than market-based terms, special assessments acted as a kind of “voting mechanism” by which property owners could gain a stake – even if only a limited one that was ultimately still subject to the mandatory imposition of special assessments – in the process of determining which improvements merited an outlay of funds at any given time.\(^{159}\)

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\(^{158}\) See supra notes 51 - 53 and accompanying text.

\(^{159}\) Because special assessments were tied to property ownership, the “voting” stake in assessment decisions was admittedly limited to those citizens who owned property (and potentially to other citizens, to the extent that they had sufficient market power to influence their landlords’ preferences). Robin Einhorn acknowledges this aspect of special assessments, noting that the prevalence of assessments responded to a “demand that cities be run as ‘corporations’ by their propertied ‘stockholders.’” EINHORN, supra note 43, at 22.
In his frequently cited “homevoter hypothesis,” William Fischel theorizes that local political decisions are driven largely by homeowners’ desire to protect and increase their property values. While homeowners who must directly pay for the increased value to their property would seem to have less incentive for political participation than those who stand to gain disproportionate benefits relative to their property tax burdens (as they do in cases where neighborhood-specific amenities are financed by citywide tax revenues), they also have a greater incentive to avoid focused taxation for unwanted goods or services, since such taxation, if ongoing, has the potential to decrease property value. Moreover, infrastructure improvements financed by special assessments could offer net gains to property owners in the form of partial government financing and, perhaps most importantly, the coordination – facilitated by government powers of coercion – of multiple property owners, essential to the development of effective street and sewer networks. Such gains motivated potentially benefited homeowners to petition for and support specific assessment-funded improvements. Conversely, in cases where homeowners viewed proposed improvements as unnecessary or unaffordable, their financial interests moved them to protest assessments.

In New Haven, the “voting” process embodied in special assessments occurred most directly through the initial petition system, in which citizens could bring proposals for desired improvements to the City Council, which then referred the proposals to special committees for

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*Fischel’s own characterization of the homevoter as “a twentieth-century political phenomenon” may argue against historical applications of the theory. Fischel notes that, during the 1800s, people typically lived and worked in the same jurisdiction, such that the citizen’s “town was also his place of work, and he would make trade-offs to promote both his business interests and his interests as a homeowner.” The advent of interurban commuting, however, led to a more exclusive focus on home values in people’s communities of residence. See WILLIAM A. FISCHEL, THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND USE POLICIES 13-14 (2001).*
further hearings and analysis. This system both allowed the city’s “homevoters” to initiate the improvement-and-assessment process and provided channels for support for and opposition to proposed assessments.\footnote{See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 248 (1877) (Report of the Committee on Streets noting that “after hearing numbers of all classes of our citizens in respect to the various petitions which come before us, it is quite certain that the orders for street improvements of all kinds which have been recommended for your [the Council’s] sanction. . .have been fully up to the desires and the ability of those who have to pay for them”).} The work of the Board of Compensation provided further opportunities for public input.\footnote{See supra Part II.} More interestingly, city leaders appear to have considered the economic interests of potential taxpayers in making decisions regarding infrastructure, even where those interests were not expressed by property owners themselves. In 1873, when the country had recently entered a period of financial panic, the mayor warned the City Council, “Upon the subject of public improvements. . .I would advise great caution in carrying them on, and so manage that the work done shall be in those sections where the assessments can be met with the least difficulty.”\footnote{CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 19 (1873). See also CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 21 (1879). (“We must not forget in these times. . .that even light taxes are a burden, and that assessments for public improvements are in many cases a grievous burden upon those who are really unable to pay them.”) The mayor went on to say that he “would not recommend the entire suspension of public improvements even at the present time,” implying that cutbacks short of “entire suspension” might be acceptable or necessary. \textit{Id.}} The mayor’s emphasis on special assessments may reflect the greater perceived flexibility of assessments relative to other taxes; because assessment revenues were generally reserved for discretionary one-time projects, adjusting them to reflect temporary economic conditions did not pose a threat to the day-to-day operations of the city, which were funded through general revenues.

Moreover, special assessments were levied at the neighborhood or block level, which allowed forms of assessment relief to be unusually demographically targeted. It is less
immediately clear whether this flexibility was an advantage from a tax equity perspective. As Robin Einhorn notes,

. . .relatively wealthy owners benefited [from the system]: their wealth was not spent to benefit other, poorer city-dwellers. Some historians have suggested that poorer homeowners also gained a benefit: because they could limit their tax liabilities, working-class families could preserve their savings to finance the houses that were their chief aspirations. It is questionable whether unhealthy neighborhoods lacking basic physical infrastructure ought to be called ‘benefits.’

Einhorn’s doubts about the advantages of limited infrastructure raise the question, briefly posed in Part I.B., of whether “basic physical infrastructure” is an appropriate subject for benefit charges; in other words, should street pavements and sewer facilities have been distributed based on right rather than willingness (or, in some cases, ability or lack thereof) to pay?

Arguably, the link between such infrastructure and health and safety was strong, as was recognized by the municipal leaders and advisors to the Board of Health who cited the health benefits associated with sewer infrastructure. To the extent that municipal leaders’ purportedly benevolent reluctance to levy special assessments on low-income areas left in place known and avoidable health hazards, the economic “benefit” to those areas seems like insufficient justification for the denial of infrastructure and the associated denial of basic rights to health and safety. (Certainly, it would be insufficient today.) That said, it is also important to

164 EINHORN, supra note 43, at 18-19. See also id. at 141 (citing studies of public works provision in the 1890s in Detroit and Milwaukee, which show that “working-class homeowners did indeed delay [street and sewer improvements] in order to marshal their resources for their mortgages”). For a contemporary criticism of the notion that poorer residents may “choose” to receive fewer city services, see Frug, supra note 12, at 30-33 (criticizing the “consumer-oriented vision of city services” for “abandon[ing]. . .the notion of equality traditionally associated with the public sphere”). Notably, this perspective is at odds with evidence from Einhorn and others regarding the prevailing benefit- (rather than ability-) based tax principles of the local public sphere.

165 See, e.g., CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 267 (1885) (Board of Health report describing the higher incidence of infant mortality on unsewered versus sewered streets).
acknowledge the historical circumstances to which those leaders were responding. In 1873, New Haven had only twenty-seven miles of sewers. This figure would quadruple over the subsequent thirty years, during a period in which the city’s population doubled. Relative to its later growth, then, the extent of the sewer system in the early 1870s was quite limited, suggesting that New Haven residents in a range of income groups probably went without sewer infrastructure during the early years of the study period. This possibility does not completely justify the preferential distribution of necessary services to those citizens who could afford to pay for them, particularly as time went on and sewer lines became more common. But it does inform the question of what would have been considered “necessary” and appropriately distributed by right during the relevant years of the study period.

It is also important to consider the implications of alternative funding mechanisms. If we assume that capital improvements could only be financed via general property tax increases or the imposition of targeted special assessments, the argument that poor neighborhoods benefited more from the latter system may have some merit. Special assessments, by establishing direct links between public works benefits and assessment charges, made it possible to lower the latter by accepting fewer of the former. A general property tax increase, meanwhile, provided no such option, nor did it guarantee that a property owner’s tax payments would finance a localized improvement. And while general taxation does present opportunities for redistributive spending, and is today (more) frequently used in that way, the explicit collection of tax from wealthier residents to fund improvements in poorer neighborhoods would have presented serious political
obstacles in nineteenth-century New Haven.\textsuperscript{166} Compared to general taxation, the special assessment system may have been less economically risky to low-income citizens insofar as it ensured they would not be charged for anything from which they didn’t benefit.

This benefit-cost relationship worked in the opposite direction as well, not only through the decision as to whether infrastructure was provided in the first place, but also in the selection of specific construction materials: in at least one instance, the New Haven Bureau of Compensation appears to have adopted higher per-frontage-foot assessment rates for more expensive types of pavement, implying that opportunities existed for property owners to opt in (again, subject to the limits on private control of the assessment process, as well as the majoritarian character of the petitions system) to a higher quality of infrastructure for their neighborhoods, without requiring higher rates of general taxation in order to pay for that increased quality.\textsuperscript{167} The effect was, as Richard Briffault has suggested with regard to more recent forms of sublocal governance, an approximation of Charles Tiebout’s model of local competition writ small – with a diversity of service package options offered at the neighborhood, rather than municipal, level.\textsuperscript{168}

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\item \textsuperscript{166} See supra notes 140-141 and accompanying text.
\item \textsuperscript{167} See City of New Haven, New Haven Municipal Yearbook 785-86 (1910) (Corporation Counsel opinion stating that “if the kind of pavement [in this case Bituminous-Macadam] is a different one from any mentioned in [the relevant statute]. . .the Bureau of Compensation can fix the rate of assessment other than any rate so specified within”). But see Diamond, supra note 6, at 237 (arguing, based on the increasingly routinized administration of special assessments, that “the assessment was not expected to test the public commitment to a particular improvement”).
\item \textsuperscript{168} See Richard Briffault, The Rise of Sublocal Structures in Urban Governance, 82 Minn. L. Rev. 503, 508 (1997) (arguing that sublocal institutions, such as tax increment financing districts and BIDs, “provide for a variety of territorially based differences in taxation, services, or regulation within individual cities” and suggesting ways in which the Tiebout model might apply to larger metropolitan jurisdictions).
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The special assessment data (see Figures 1 through 4) does not appear to track national economic trends in the way one might expect based on the mayor’s 1874 statements; in fact, special assessment collections appear to have spiked between 1870 and 1877. This data could, of course, reflect lags in collection timing. It may also fail to capture neighborhood-specific adjustments to special assessment levels. Figure 5 and Table 4 outline the locations of improvements for which assessments were levied in 1874 and 1886, respectively. (Figure 5 uses a current map of New Haven, which covers a wider area of the city than does the best available map – an 1886 Sanborn map – from the period. The year 1874 is selected based on the availability of location-specific assessment data for that year. Table 4 takes a slightly different approach, basing its characterizations of improvement locations on data from that 1886 Sanborn map. Unfortunately, the high level of detail in the Sanborn map makes it prohibitively large to include as an image in this paper.)

As shown in Figure 5, street and sewer assessments in 1874 were generally concentrated in areas of central New Haven, particularly along upper Chapel Street; immediately east of the Green; east of State Street in the Wooster Square neighborhood; and along the major streets of East Rock, including stretches of Whitney, Orange, State, and Canner. These locations can be compared to Osterweis’ survey of New Haven’s most fashionable and wealthy streets as of 1861:

The northern side of the public square [i.e., the Green] enjoyed during the mid-century period the name of ‘Quality Row.’ The upper block from College to Temple contained some lovely 18th-century houses and the fine 1830 residence of Ralph Isaacs Ingersoll at the corner of Temple; but it was the lower block, from Temple to Church, which gave the street its reputation...In addition to ‘Quality Row’ the city of 1861 possessed another street of aristocratic character, the impressive Hillhouse Avenue. From its start at Grove Street...to the Greek Revival manor house of the Sachem’s son on the hill of Sachem’s Wood, this
avenue could claim an ever increasing number of magnificent private homes. Other neighborhoods of the day which contained substantial dwellings included the Wooster Square section, parts of Water Street, and parts of Orange. The old Third Ward, bounded by Davenport Avenue, George Street, and the harbor, presented a humbler scene: here lived large numbers of the Irish and German immigrants, particularly around Congress Avenue and Lafayette Street. Some of the newcomers had also settled out Grand Avenue, and others were moving into Fair Haven.

While the correspondence is not precise – no doubt due in part to the inevitable changes in city neighborhoods between 1861 and 1874 – there are some notable correlations. Wooster Square, Orange Street, and the block of Elm between Temple and Church all make appearances in both sets; the lower-income eastern sections of Grand Avenue and the historically African-American Dixwell neighborhood do not appear to have been targeted for assessment-funded improvements, although there are isolated improvements in the Third Ward.

The data from 1886 suggests that the geographic range of assessment-funded improvements expanded in the decade following 1874. While there was still a concentration of improvements in the wealthier areas of East Rock – for example, along Whitney Avenue and Canner Street – there were also significant improvements in Dixwell, as well as in the Third Ward neighborhood south of Oak Street, in close proximity to tenements and small-lot houses. One stretch of sewer was laid on Olive Street, in the Wooster Square area; notably, however, it was located in a modest section of the neighborhood, adjacent to a large carriage manufacturing complex and several tenement buildings.

Both of these comparisons are rough and approximate, and as with the revenues from special assessments, wide year-to-year variations make it difficult to identify clear trends based

\footnote{OSTERWEIS, supra note 17, at 315-16.}
Figure 5: Sewer and Street Paving Assessment Locations, 1874
<table>
<thead>
<tr>
<th>Location</th>
<th>Neighborhood Character</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For Pavement Assessments</strong></td>
<td></td>
</tr>
<tr>
<td>Whitney avenue - Sachem street to City line</td>
<td>East Rock; upscale large-lot homes.</td>
</tr>
<tr>
<td><strong>Sewer assessments</strong></td>
<td></td>
</tr>
<tr>
<td>Broad street - Palmer street to Cedar street</td>
<td>South of Oak Street; close to tenement buildings.</td>
</tr>
<tr>
<td>Canner street - Whitney avenue westerly</td>
<td>East Rock; upscale large-lot homes</td>
</tr>
<tr>
<td>Foster street - Lawrence street to Edwards street</td>
<td>Eastern sector of East Rock; relatively small lots, numerous vacant lots.</td>
</tr>
<tr>
<td>Gregory street - Canal street to Dixwell avenue</td>
<td>Dixwell; very small houses, historically minority/ low-income.</td>
</tr>
<tr>
<td>Lafayette place - Minor street to Derby RR</td>
<td>Southeast of Oak Street; fairly large lots and low density.</td>
</tr>
<tr>
<td>Lafayette street - Minor street to Columbus avenue</td>
<td>Southeast of Oak Street; fairly large lots and low density.</td>
</tr>
<tr>
<td>Minor street - Lafayette street to Lafayette place</td>
<td>Southeast of Oak Street; fairly large lots and low density.</td>
</tr>
<tr>
<td>Olive street - State street to RR</td>
<td>East Rock / Wooster Sq. Quasi-industrial area; adjacent to carriage manufacturing complex. Tenement buildings nearby.</td>
</tr>
<tr>
<td>Palmer street - Broad street to Rose street</td>
<td>South of Oak Street; close to tenement buildings.</td>
</tr>
<tr>
<td>Wallace Street - Locust street to Myrtle street</td>
<td>East of State; relatively large lots, with one boarding house and tenements along Myrtle.</td>
</tr>
<tr>
<td>Webster street - Ashmun street, westerly</td>
<td>Dixwell; very small houses, historically minority/ low-income.</td>
</tr>
</tbody>
</table>

Source: Report of the City Engineer (maps provided for the Board of Compensation), New Haven Municipal Yearbook (1886); 1886 Sanborn Map.
on only a few data points. Nonetheless, the mapping data does appear to provide general support for the proposition that special assessments were, at least in the early years of their use in New Haven, frequently focused in higher-income neighborhoods. Even in the 1870s, however, the presence of a few assessment-funded improvements in lower-income areas suggests that this distribution did not imply a systemic policy of exclusion. Rather, it is more accurately read as a reflection of expressed and imputed local preferences – constrained preferences, perhaps, but, given the unattractive alternative of general taxation and the limited extent of New Haven’s infrastructure, not necessarily unfairly imposed ones. In addition, the wider and less income-correlated distribution of improvements ten years later suggests that, for whatever reason – assessment abatement policies, general income growth, increasing acceptance of sewer and paving technology as a high-value basic need – the potential inequities of New Haven’s program of assessment-funded infrastructure may have become less pronounced over time.

In keeping with the efficiency-promoting functions of benefit charges, partial taxpayer responsibility for the cost of infrastructure could also act as a powerful check on unnecessary public improvements. As noted, concerns about property owners’ ability to pay assessments during the 1870s resulted in a scaling back of large infrastructure projects during that period. In the absence of such concerns and potential taxpayer resistance, however, checks on municipal spending appear to have been less effective. In 1874, the mayor noted that the advent of naptha street lamps had resulted in “urgent” public requests for lamps and complained that the Board of Aldermen had “endeavored to satisfy the public demand, and...have, I fear...not used in all

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170 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 777 (1910) (Corporation Counsel opinion stating that extending the payment deadline of an assessment owed by a developer was unlawful because the abatement provisions applied only to those unable to pay due to poverty).
cases the care that should have been exercised. . .so as to best meet the actual necessities of the people, many lamps having been set in streets with hardly a resident upon them, instead of being placed in more thickly populated localities.” The mayor went on to recommend that the Committee on Lamps investigate whether some lamps might be moved to more effective locations.171

While a variety of factors likely contributed to this incident, it stands in marked contrast to the mayor’s intention to reduce assessment-based public works during the same period. The difference suggests that the absence of direct assessments on street lamps may have reduced the city’s ability to receive and interpret feedback about the genuine need for street lighting, as well as the “disciplining” effect of charging citizens for the infrastructure they requested. Without the obligation to pay for the lamps they requested, property owners had no incentive to limit their petitions to efficient levels. Contemporary legal scholar Laurie Reynolds notes that dues-based models of municipal financing (including special assessments) may help avoid inefficiencies of the type described in New Haven: “If the cost of a service is directly related to usage, the government can reasonably expect to see greater self-imposed limits on consumption than would occur if the service were financed through general revenues and provided ‘free of charge’ to the public.”172 Obviously, there are reasons – broader public safety concerns, for one – that New Haven might not have wished to rely entirely on taxpayers’ willingness to pay as a measure of its

171 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 35-36 (1874). For a related example, see CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 313 (1887) (noting that adjacent property owners were not assessed for street hardening, as distinct from paving, and that “the result has been that the demand for street hardening has been great” – at correspondingly great cost to the City).

172 Laurie Reynolds, Taxes, Fees, Dues, and the “Get What You Pay For” Model of Local Government, 56 FLA. L. REV. 373, 389 (2004). See also FISCHER, supra note 160, at 94-95 (arguing that special taxing districts have a decentralizing effect, forcing decisionmakers to account for “both sides of the financial scale” and leading to more efficient distribution of facilities).
need for street lighting. Indeed, among the public works that were financed through assessments, the fact that the city paid a share of costs reflects its recognition of infrastructure benefits beyond those for which taxpayers could be expected to pay. Still, the mayor’s complaint implied that, if willingness to pay was not part of the equation, municipal leaders should be particularly wary of judging needs based on residents’ requests.

Special assessments increased the city’s ability to trust that property owners’ participation in infrastructure decisions would generally reflect the true value they placed on improvements, while also providing a flexible revenue source that could be racheted up and down according to economic conditions and service preferences. The mechanism thus facilitated efficiency and enhanced the responsiveness of local government to local concerns – an important characteristic in a period during which municipal government played an ever-increasing role in its constituents’ lives. At the same time, however, New Haven’s example highlights the limitations of “willingness to pay” as an accurate measure of preference and necessity in a world of unequal incomes. The circumstances of nineteenth- and early twentieth-century New Haven – in particular, the political unpopularity of redistributionist schemes and the lack of extensive paving and sewer infrastructure – arguably made those limitations unavoidable and, to some extent, justifiable. Future benefit charges, however, should be designed with Robin Einhorn’s concerns in mind; where a public good constitutes “basic physical infrastructure” or a necessary service by contemporary standards, governments should consider financing it through general taxation or, if benefit charges are used, using subsidies or waivers to price it appropriately and ensure that fundamental rights to safety are not contingent on income level. In this sense, New
Haven’s experience stands as much for its anticipation of vertical equity concerns as it does for its demonstration of the efficiency promoted by special assessments.

C. Patterns of Infrastructure Development

The rise of the service city was accompanied by a growing interest in urban planning and recognition of the potential role government might take in coordinating development. In 1907, for instance, prominent New Haven citizen George Dudley Seymour wrote an open letter advocating the adoption of a city plan, arguing that “[t]he laying out of every street and the placing of every public building should proceed on a definite and controlling idea, there should be a dominant principle of design. . .an effort to weld all into one balanced composition.”¹⁷³ Three years later, New Haven’s 1910 “Report of the Civic Improvement Committee” ambitiously envisioned continued growth of the city at rates sufficiently high to bring the population to 400,000 by 1950. In Doug Rae’s characterization of the report, “New Haven was a great city, growing greater by the day. It would need new avenues aping Hausmann’s Paris, new parks on Olmstead’s standard in New York. . .public constructions modeled after those of Washington, Budapest, and Baltimore.”¹⁷⁴ Such grandiose plans and aspirations toward “dominant” design principles required extensive government control of the process of laying out streets and other public spaces. Even several decades prior to the publication of Olmstead’s report, the special assessment process was one channel through which city government in New Haven attempted to control and rationalize infrastructure construction from the top down, while

¹⁷³ GEORGE DUDLEY SEYMOUR, NEW HAVEN 16–49 (1942), quoted in RAE, supra note 71, at 80.
¹⁷⁴ RAE 69.
still taking advantage of a bottom-up petitioning process and the availability of private capital to finance such construction.

In the early years of the study period, the petition system drew complaints about its lack of organization; the mayor’s 1870 address noted,

> [o]ne of our greatest faults is lack of system in our public improvements – that is, the order in which different works should be undertaken. Heretofore, those who urged their petitions the strongest were the first served, so that each particular work was undertaken almost independently of every other and without sufficient reference to other surroundings.\textsuperscript{175}

Total private responsibility for street sprinkling proved equally unsatisfactory. While too little watering of pavement surfaces could lead to erosion, too much watering resulted in muddy streets. It was difficult to ensure consistent maintenance without some kind of top-down coordination; as the City Engineer observed, “[t]he opinions and practices of people differ so widely on the matter of street watering, that it will be difficult to obtain the desired results, without an ordinance placing the watering. . .under the control of the City, and prohibiting other watering of these pavements.”\textsuperscript{176}

In each of these cases, special assessments allowed New Haven to retain the benefits of private financial responsibility for infrastructure improvements and – in the somewhat unique case of street sprinkling – maintenance. At the same time, the administrative structure of assessments (in particular the process of review by government committees), along with the promise of partial public funding, brought those improvements within government control for purposes of coordination and planning. Assessments were, of course, only one element in a

\textsuperscript{175} CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 24 (1870).

\textsuperscript{176} CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 102 (1883).
broader set of policy changes that included long-term planning studies (such as Olmstead’s report and an earlier report on the state of the city’s sewers commissioned from the City of Chicago’s chief engineer177) and an ever-evolving system of commissions and committees to provide greater oversight of various aspects of the city’s development. From a financing perspective, however, special assessments were an essential mechanism for generating benefit-based revenues without ceding complete decision-making control to private funders.

Special assessments also influenced the pace of infrastructure improvements by providing funding that would not have been available through general revenues alone. Richard Ely and his coauthors described this phenomenon in their *Outlines of Economics*, first published in 1900:

[I]f the only way the group of individuals can secure [a] service is by expenditure of the common funds, the government or legislature often delays the expenditure unduly for fear of criticism or because of unwise parsimony. Thus in cities where the method of special assessment is not used, it often happens that the opening of a street is delayed long after the time when it would be desirable for the citizens most interested, although perhaps the latter would be willing to defray the cost from their own pockets were this permitted. . .The special assessment . . .permits public improvements to go ahead at a pace which would be impossible if [general] taxation were the only fund for defraying the cost . . . 178

Special assessments thus allowed city government to “mobilize capital for improvements”179 in order to keep up with the demands of their growing cities; by relying on private sources to produce a large portion of that capital, municipal leaders were able to minimize opposition to overspending or increased general taxation. Although the steady increases in sewer and paved street mileage displayed in Figure 4 were likely attributable to a combination of factors,

177 CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 34 (1872). Production of the report was apparently delayed after all the maps and documents that had been forwarded to the engineer were destroyed in the Great Chicago Fire.


179 EINHORN, supra note 43, at 143.
including debt financing and partial general revenue funding, New Haven’s ability to maintain such steady growth was in part a function of this characteristic of special assessments.

**IV. Conclusion**

Special assessments declined by the middle of the twentieth century and have not yet regained their original popularity. Still, many of the original causes of special assessments’ decline have doubtless decreased in importance over time – as, for instance, the association between assessments and the 1920s municipal bond collapse has faded from popular memory – restoring assessments as a viable financing option. In recent years, assessments and assessment-like mechanisms have become increasingly widespread, as cash-strapped municipalities again seek new funding sources and communities look for ways to express and implement their service preferences. Business Improvement Districts, or BIDs, which levy assessments on business owners to fund neighborhood amenities such as landscaping and added security services, are perhaps the most common of these. Special purpose governments, particularly special districts responsible for such services as fire protection or wastewater treatment, may fund some or all of their operations through special assessments.\(^{180}\) City- and neighborhood-level special assessment districts may also be used to finance, for example, landscaping, street lighting, or park maintenance\(^ {181}\); these are especially popular in areas where state law restricts property tax


\(^{181}\) See, *e.g.*, Reynolds, *supra* note 172, at 399.
growth and reduces revenues available for such services.\textsuperscript{182} Over time, the legal and political constraints on special assessments have been significantly relaxed: for example, it is no longer uncommon for assessments to be charged, like property taxes, on the basis of property value rather than more specific benefit formulas.\textsuperscript{183}

Independent of the resurgence of special assessments themselves, the issues that historically surrounded special assessments remain relevant to the evolution of local governance and finance. The integration of private benefits into public finance, and the public participation requirements that came with it, anticipated increasingly privatized forms of local financial and decision-making control such as BIDs and homeowners’ associations.\textsuperscript{184} The movement of infrastructure development toward a more holistic, top-down model has been facilitated by the growth of centralized state and federal funding sources; at the same time, local, bottom-up input into infrastructure decisions has continued to play an important, if at times uneasy, role in the process of city-building. And the efficiency advantages of benefit charges have found expression not only in special assessments but in a range of user fees and special consumption taxes, as well as in efforts to quantify willingness to pay as a means of valuing and allocating public goods (such as open space or parks) where they are provided free of charge.\textsuperscript{185}

\textsuperscript{182} See, e.g., Vladimir Kogan & Mathew D. McCubbins, \textit{The Problem of Being Special: Special Assessment Districts and the Financing of Infrastructure in California} 4-5 (USC Keston Institute for Public Finance and Infrastructure Policy, 2008), available at http://weblaw.usc.edu/centers/cslp/assets/docs/cslp-wp-059.pdf (discussing the role of California’s Proposition 13 in spurring the growth of special districts and special improvement areas); Reynolds 401 (noting local governments’ ongoing efforts to fund improvements “without running afoul of tax limitations”).

\textsuperscript{183} See Reynolds 400.


As communities work through these modern applications of special assessments and related benefit charges, the case of New Haven may prove instructive. The city’s special assessment process, consciously or not, was designed to respond to some of the central challenges of effective benefit taxation: the need for balance between administrative efficiency and accurate evaluation of benefits; the potential for underproduction of socially beneficial goods in the absence of public subsidies; the importance of providing opportunities for public feedback on pricing in order to determine the highest-value uses of resources. For the most part, New Haven’s solutions to these challenges – from frontage-based assessment to the city’s extensive hearings and appeal procedures – appear to have been effective from a practical perspective, resulting in a system that ran smoothly, produced efficiently allocated infrastructure at a steady rate, and faced decreasing legal challenges over time.

Perhaps more importantly, an examination of New Haven’s experience with special assessments highlights important normative issues relating to benefit taxation. Equity concerns are inherent to a system in which preferences are expressed – and allocation decisions made – based on citizens’ willingness to pay for goods and services; the very features that make benefit charges excellent tools for generating data and promoting efficiency, in other words, also threaten to result in unequal allocations based on income. I have argued that the historical use of special assessments in New Haven, and the resulting distribution of infrastructure, were justifiable in spite of potential inequities, given the unattractive alternative of general taxation and the limited extent of sewer and street paving at the time. But this conclusion is highly context-specific. If anything, its contingent nature serves to underscore the necessity of carefully evaluating benefit charge schemes to ensure that they are appropriate for the public good in
question and that their regressivity is mitigated to the extent possible through waivers and subsidies. This will not always be an easy evaluation; the types of services or infrastructure that are considered “basic” and widespread can change rapidly, and the relative appeal of funding services through general taxation will depend on the perceived equity and redistributive goals of the tax system overall. This paper does not attempt to provide a specific recommendation regarding how these factors are to be evaluated. By analyzing the history of special assessments in one city, however, I do hope to have shed light on the origins, merits, and ongoing challenges of a financing mechanism that may still have much to offer.
Appendix A: Supplementary Tables and Figures
Table 1a
Municipal Revenue for the Fiscal Year 1891

<table>
<thead>
<tr>
<th>Cities</th>
<th>Census Population, 1890</th>
<th>Receipts from all Sources</th>
<th>Receipts from Current Taxes</th>
<th>Receipts from Special Assessments</th>
<th>Assessments as Percent of Current Taxes</th>
<th>Assessments per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>15,155,301</td>
<td>$86,838,344</td>
<td>$30,733,819</td>
<td>$2,541,856</td>
<td>8.3%</td>
<td>$0.17</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>1,046,964</td>
<td>$23,400,496</td>
<td>$12,137,058</td>
<td>$1,063,332</td>
<td>8.8%</td>
<td>$0.12</td>
</tr>
<tr>
<td>Brooklyn</td>
<td>806,343</td>
<td>$23,061,699</td>
<td>$9,405,663</td>
<td>$284,217</td>
<td>3.0%</td>
<td>$0.35</td>
</tr>
<tr>
<td>Boston (1)</td>
<td>448,477</td>
<td>$24,650,173</td>
<td>$9,653,073</td>
<td>$38,648</td>
<td>0.4%</td>
<td>$0.09</td>
</tr>
<tr>
<td>Baltimore</td>
<td>434,439</td>
<td>$10,273,399</td>
<td>$3,125,768</td>
<td>$142,167</td>
<td>4.5%</td>
<td>$0.33</td>
</tr>
<tr>
<td>Washington</td>
<td>230,392</td>
<td>$6,293,523</td>
<td>$2,290,537</td>
<td>$134,065</td>
<td>5.9%</td>
<td>$0.58</td>
</tr>
<tr>
<td>Newark</td>
<td>181,830</td>
<td>$5,286,851</td>
<td>$1,819,376</td>
<td>$716,339</td>
<td>9.7%</td>
<td>$0.97</td>
</tr>
<tr>
<td>Jersey City</td>
<td>163,003</td>
<td>$3,536,657</td>
<td>$967,694</td>
<td>$295,695</td>
<td>30.6%</td>
<td>$1.81</td>
</tr>
<tr>
<td>Providence</td>
<td>132,146</td>
<td>$7,473,888</td>
<td>$2,097,479</td>
<td>$47,744</td>
<td>2.3%</td>
<td>$0.36</td>
</tr>
<tr>
<td>Rochester</td>
<td>133,896</td>
<td>$3,878,976</td>
<td>$1,676,814</td>
<td>$461,505</td>
<td>27.5%</td>
<td>$3.45</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>238,617</td>
<td>$4,650,876</td>
<td>$2,711,431</td>
<td>$87,803</td>
<td>3.2%</td>
<td>$0.37</td>
</tr>
<tr>
<td>Allegheny</td>
<td>105,287</td>
<td>$1,630,230</td>
<td>$617,546</td>
<td>$75,225</td>
<td>12.2%</td>
<td>$0.71</td>
</tr>
<tr>
<td>Chicago</td>
<td>1,099,850</td>
<td>$30,247,317</td>
<td>$9,199,796</td>
<td>$6,407,394</td>
<td>69.6%</td>
<td>$5.83</td>
</tr>
<tr>
<td>St. Louis</td>
<td>451,770</td>
<td>$10,014,607</td>
<td>$3,405,198</td>
<td>$339,010</td>
<td>10.0%</td>
<td>$0.75</td>
</tr>
<tr>
<td>San Francisco</td>
<td>298,997</td>
<td>$5,317,099</td>
<td>$2,517,504</td>
<td>$1,348,877</td>
<td>53.6%</td>
<td>$4.51</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>296,908</td>
<td>$7,082,356</td>
<td>$2,825,692</td>
<td>$519,679</td>
<td>18.4%</td>
<td>$1.75</td>
</tr>
<tr>
<td>Cleveland</td>
<td>261,353</td>
<td>$4,539,023</td>
<td>$1,412,850</td>
<td>$499,363</td>
<td>35.3%</td>
<td>$1.91</td>
</tr>
<tr>
<td>Detroit</td>
<td>205,876</td>
<td>$3,642,130</td>
<td>$2,481,475</td>
<td>$223,826</td>
<td>9.0%</td>
<td>$1.09</td>
</tr>
<tr>
<td>Milwaukee</td>
<td>204,468</td>
<td>$7,987,286</td>
<td>$1,963,955</td>
<td>$455,087</td>
<td>23.2%</td>
<td>$2.23</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>164,738</td>
<td>$4,583,432</td>
<td>$1,305,801</td>
<td>$669,168</td>
<td>51.2%</td>
<td>$4.06</td>
</tr>
<tr>
<td>Omaha</td>
<td>140,452</td>
<td>$1,194,479</td>
<td>$761,196</td>
<td>$461,795</td>
<td>60.7%</td>
<td>$3.29</td>
</tr>
<tr>
<td>St. Paul</td>
<td>133,156</td>
<td>$5,598,655</td>
<td>$1,103,795</td>
<td>$561,887</td>
<td>50.9%</td>
<td>$4.22</td>
</tr>
<tr>
<td>Denver</td>
<td>106,713</td>
<td>$1,566,478</td>
<td>$731,133</td>
<td>$191,794</td>
<td>26.2%</td>
<td>$1.80</td>
</tr>
<tr>
<td>Indianapolis</td>
<td>105,436</td>
<td>$1,181,788</td>
<td>$525,323</td>
<td>$306,777</td>
<td>58.4%</td>
<td>$2.91</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>24.3%</strong></td>
<td><strong>$1.86</strong></td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>15.3%</strong></td>
<td><strong>$1.42</strong></td>
</tr>
</tbody>
</table>

(1) Nine months only.
(2) New Haven population from http://www.library.yale.edu/thecitycourse/Census_PDFs/1900/Population_by_ward_and_town_New_Haven_County_1900_1890.pdf.

Source: Victor Rosewater, Special Assessments: A Study in Municipal Finance (1898).
## Table 2a
Assessments Levied 1891, Classified According to Purpose

<table>
<thead>
<tr>
<th>Cities</th>
<th>Total Assessment</th>
<th>Street Improvements</th>
<th>Street Opening</th>
<th>Sewerage &amp; Drainage</th>
<th>Water Pipes</th>
<th>Street Sprinkling</th>
<th>Sidewalks and Footways</th>
<th>Lamp Posts</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>$2,126,881</td>
<td>$1,275,234</td>
<td>$851,647</td>
<td>60%</td>
<td>$479,352</td>
<td>$217,547</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Chicago</td>
<td>$8,790,443</td>
<td>$4,868,151</td>
<td>$428,118</td>
<td>55%</td>
<td>$2,363,200</td>
<td>$479,352</td>
<td>5%</td>
<td>$562,761</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>$1,063,332</td>
<td>$553,373</td>
<td>$10,000</td>
<td>52%</td>
<td>$259,658</td>
<td>$2,363,200</td>
<td>7%</td>
<td>$88,861</td>
</tr>
<tr>
<td>Brooklyn</td>
<td>$284,217</td>
<td>$190,583</td>
<td>$4,600</td>
<td>67%</td>
<td>$66,639</td>
<td>27%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Louis</td>
<td>$339,010</td>
<td>-</td>
<td>$177,245</td>
<td>52%</td>
<td>-</td>
<td>27%</td>
<td></td>
<td>$161,765</td>
</tr>
<tr>
<td>Boston</td>
<td>$38,648</td>
<td>-</td>
<td>$26,922</td>
<td>70%</td>
<td>-</td>
<td>5%</td>
<td></td>
<td>$11,819</td>
</tr>
<tr>
<td>Baltimore</td>
<td>$142,167</td>
<td>-</td>
<td>$142,167</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cincinnati</td>
<td>$519,679</td>
<td>$464,701</td>
<td>89%</td>
<td>-</td>
<td>$55,769</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buffalo</td>
<td>$3,378,141</td>
<td>$2,285,648</td>
<td>$98,646</td>
<td>68%</td>
<td>$909,657</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detroit</td>
<td>$223,826</td>
<td>$164,132</td>
<td>$14,865</td>
<td>73%</td>
<td>$42,027</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milwaukee</td>
<td>$455,087</td>
<td>$212,360</td>
<td>$32,350</td>
<td>73%</td>
<td>$96,364</td>
<td>19%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newark</td>
<td>$176,334</td>
<td>$47,122</td>
<td>$9,847</td>
<td>27%</td>
<td>$86,898</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minneapolis</td>
<td>$669,168</td>
<td>$315,596</td>
<td>47%</td>
<td>-</td>
<td>$93,369</td>
<td>14%</td>
<td>$80,394</td>
<td></td>
</tr>
<tr>
<td>Omaha</td>
<td>$461,795</td>
<td>$360,545</td>
<td>78%</td>
<td>-</td>
<td>$57,354</td>
<td>12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Paul</td>
<td>$561,887</td>
<td>$312,146</td>
<td>56%</td>
<td>-</td>
<td>$102,781</td>
<td>18%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Providence</td>
<td>$477,743</td>
<td>$4,439</td>
<td>9%</td>
<td>-</td>
<td>$28,972</td>
<td>61%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indianapolis</td>
<td>$388,851</td>
<td>$365,325</td>
<td>94%</td>
<td>-</td>
<td>$1,673</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allegheny</td>
<td>$98,947</td>
<td>$72,051</td>
<td>73%</td>
<td>-</td>
<td>$2,270</td>
<td>25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Haven</td>
<td>$82,269</td>
<td>$414</td>
<td>1%</td>
<td>-</td>
<td>$81,855</td>
<td>99%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Victor Rosewater, Special Assessments: A Study in Municipal Finance (1898).
## Table 3a
Special Assessment Receipts, 1908

<table>
<thead>
<tr>
<th>City</th>
<th>Est. 1908 Population</th>
<th>Total Area (Acres) (includes land and water)</th>
<th>Total Receipts from Special Assessments</th>
<th>Assessments per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>4,338,322</td>
<td>209,218</td>
<td>$9,855,230</td>
<td>$2.27</td>
</tr>
<tr>
<td>Chicago</td>
<td>2,166,055</td>
<td>122,008</td>
<td>$4,633,426</td>
<td>$2.14</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>1,491,082</td>
<td>84,933</td>
<td>$833,746</td>
<td>$0.56</td>
</tr>
<tr>
<td>St. Louis</td>
<td>674,012</td>
<td>39,277</td>
<td>$2,578,709</td>
<td>$3.83</td>
</tr>
<tr>
<td>Boston</td>
<td>616,072</td>
<td>26,250</td>
<td>$277,294</td>
<td>$0.45</td>
</tr>
<tr>
<td>Baltimore</td>
<td>568,571</td>
<td>19,290</td>
<td>$69,589</td>
<td>$0.12</td>
</tr>
<tr>
<td>Pittsburg</td>
<td>547,523</td>
<td>26,034</td>
<td>$1,451,593</td>
<td>$2.65</td>
</tr>
<tr>
<td>Cleveland</td>
<td>491,401</td>
<td>26,349</td>
<td>$1,065,570</td>
<td>$2.17</td>
</tr>
<tr>
<td>Buffalo</td>
<td>391,629</td>
<td>26,884</td>
<td>$533,281</td>
<td>$1.36</td>
</tr>
<tr>
<td>San Francisco (1)</td>
<td>342,782</td>
<td>81,280</td>
<td>$943,257</td>
<td>$2.75</td>
</tr>
<tr>
<td>Detroit</td>
<td>376,174</td>
<td>25,423</td>
<td>$761,792</td>
<td>$2.03</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>349,316</td>
<td>27,872</td>
<td>$417,320</td>
<td>$1.19</td>
</tr>
<tr>
<td>Milwaukee</td>
<td>327,873</td>
<td>14,460</td>
<td>$610,879</td>
<td>$1.86</td>
</tr>
<tr>
<td>New Orleans</td>
<td>323,157</td>
<td>120,960</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington, DC</td>
<td>317,380</td>
<td>44,317</td>
<td>$316,794</td>
<td>$1.00</td>
</tr>
<tr>
<td>Newark</td>
<td>302,324</td>
<td>14,976</td>
<td>$691,806</td>
<td>$2.29</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>297,527</td>
<td>34,106</td>
<td>$724,223</td>
<td>$2.43</td>
</tr>
<tr>
<td>Jersey City</td>
<td>248,458</td>
<td>12,288</td>
<td>$215,612</td>
<td>$0.87</td>
</tr>
<tr>
<td>Indianapolis</td>
<td>234,774</td>
<td>20,944</td>
<td>$1,715,844</td>
<td>$7.31</td>
</tr>
<tr>
<td>Louisville</td>
<td>233,069</td>
<td>15,647</td>
<td>$263,147</td>
<td>$1.13</td>
</tr>
<tr>
<td>St. Paul</td>
<td>217,397</td>
<td>35,482</td>
<td>$408,438</td>
<td>$1.88</td>
</tr>
<tr>
<td>Providence</td>
<td>212,457</td>
<td>11,701</td>
<td>$34,330</td>
<td>$0.16</td>
</tr>
<tr>
<td>Rochester</td>
<td>193,111</td>
<td>12,723</td>
<td>$819,271</td>
<td>$4.24</td>
</tr>
<tr>
<td>Kansas City</td>
<td>188,582</td>
<td>16,768</td>
<td>$1,036,303</td>
<td>$5.50</td>
</tr>
<tr>
<td>Toledo</td>
<td>169,366</td>
<td>18,285</td>
<td>$501,734</td>
<td>$2.96</td>
</tr>
<tr>
<td>Denver</td>
<td>155,124</td>
<td>37,920</td>
<td>$552,042</td>
<td>$3.56</td>
</tr>
<tr>
<td>Columbus</td>
<td>152,031</td>
<td>10,400</td>
<td>$364,313</td>
<td>$2.40</td>
</tr>
<tr>
<td>Los Angeles (1)</td>
<td>102,479</td>
<td>39,473</td>
<td>$2,102,746</td>
<td>$20.52</td>
</tr>
<tr>
<td>Worcester</td>
<td>133,963</td>
<td>24,586</td>
<td>$84,350</td>
<td>$0.63</td>
</tr>
<tr>
<td>Seattle (1)</td>
<td>80,671</td>
<td>54,062</td>
<td>$3,175,401</td>
<td>$39.36</td>
</tr>
<tr>
<td>Memphis</td>
<td>132,581</td>
<td>9,822</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omaha</td>
<td>131,370</td>
<td>15,680</td>
<td>$369,811</td>
<td>$2.82</td>
</tr>
<tr>
<td><strong>New Haven</strong></td>
<td><strong>125,627</strong></td>
<td><strong>14,340</strong></td>
<td><strong>$43,700</strong></td>
<td><strong>$0.35</strong></td>
</tr>
<tr>
<td>Scranton</td>
<td>123,959</td>
<td>12,509</td>
<td>$203,851</td>
<td>$1.64</td>
</tr>
<tr>
<td>Syracuse</td>
<td>123,607</td>
<td>11,520</td>
<td>$339,906</td>
<td>$2.75</td>
</tr>
<tr>
<td>St. Joseph (MO)</td>
<td>123,004</td>
<td>6,198</td>
<td>$290,211</td>
<td>$2.36</td>
</tr>
<tr>
<td>Portland</td>
<td>116,630</td>
<td>28,136</td>
<td>$920,529</td>
<td>$7.89</td>
</tr>
<tr>
<td>Paterson (NJ)</td>
<td>115,343</td>
<td>5,357</td>
<td>$104,445</td>
<td>$0.91</td>
</tr>
<tr>
<td>Atlanta</td>
<td>109,545</td>
<td>7,680</td>
<td>$271,633</td>
<td>$2.48</td>
</tr>
<tr>
<td>Richmond</td>
<td>107,844</td>
<td>6,373</td>
<td>$25,613</td>
<td>$0.24</td>
</tr>
<tr>
<td>Dayton</td>
<td>106,897</td>
<td>7,661</td>
<td>$162,759</td>
<td>$1.52</td>
</tr>
<tr>
<td>Fall River (MA)</td>
<td>106,301</td>
<td>26,156</td>
<td>$7,224</td>
<td>$0.07</td>
</tr>
<tr>
<td>Nashville</td>
<td>105,877</td>
<td>11,142</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Rapids</td>
<td>103,871</td>
<td>11,040</td>
<td>$332,522</td>
<td>$3.20</td>
</tr>
<tr>
<td>Hartford</td>
<td>101,146</td>
<td>11,066</td>
<td>$39,016</td>
<td>$0.39</td>
</tr>
<tr>
<td>Cambridge</td>
<td>100,762</td>
<td>4,182</td>
<td>$53,102</td>
<td>$0.53</td>
</tr>
</tbody>
</table>

(1) 1900 Census population figure (1908 estimate not available).

Figure 1a: New Haven Budget Data, 1870-1920, 3-year Moving Averages (constant 1860 dollars)

Figure 2a: New Haven Special Assessment Data, 1870 - 1920, 3-year Moving Averages (constant 1860 dollars)

Appendix B: Methodological Notes
While I hesitate to undermine the credibility of my core data source, some caveats are in order with regard to New Haven fiscal data during the study period. The greatest challenge of working with this type of limited, time-series data lies in reconciling inconsistent labeling practices. New Haven’s budget categories shifted over time, and the Year Books rarely provide explanations or information to aid in relating new categories to their earlier equivalents. For example, assessments in the early decades of the study period appear in what is designated an “Assessments for Improvements” category; a separate line item for assessments in the City Sewerage Account implies that the “Improvements” category includes only street assessments, but it is impossible to confirm this. (For purposes of displaying data trends, I have assumed that the “Improvements” line item covers only street assessments.)

Similarly, the assessment figures in some years include related liens and interest, while those in other years list these charges separately (and in combination with liens and interest on other taxes, making it difficult to isolate those relating solely to assessments). Because these related revenues are typically negligible – and because attempting to quantify them would amount to a kind of false precision given the general ambiguities of the data – I have chosen to use whatever assessment figure is provided in the budget in a given year, regardless of whether it includes liens and interest. In addition, it is important to note that special assessments were typically recorded as they were collected – that is, the assessment revenue figure for any given year might include amounts that were assessed in prior years but went uncollected in those years.1 As a result, the pattern of special assessment revenues may not directly track the

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1 Ensuring prompt collection of special assessments (as well as other taxes) was a recurring challenge for New Haven. See, e.g., City of New Haven, New Haven Municipal Yearbook 72 (1879) (“As the law now stands, a lien is placed upon the property of parties neglecting to pay their assessments. . .which lien draws 6 per cent. interest only. . .The effect of this is that owing to the low rate of interest, it is found to be wiser financial policy to allow liens to remain upon property than to pay the same. Some definite action should be taken whereby these unpaid assessments in the hands of [the tax collectors] can be collected, and the city derive the benefit of money now
infrastructure improvements for which assessments were levied. Occasionally, the data also appears to include minor computational errors; my approach has been to use my own calculations in such cases, on the assumption that the benefits of Excel give the twenty-first-century analyst certain advantages over her counterparts in earlier centuries. Certainly, it is possible to observe interesting and important trends in spite of these data uncertainties, but the limitations of the data do necessitate clear assumptions and warn against drawing conclusions without careful analysis.

due.”). Uncollected assessments for that year totaled approximately $106,000. Id. at 32. The situation does appear to have improved slightly in the years immediately following this recommendation; in 1884, the total unpaid assessments amounted to $55,500. CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 26 (1884). In 1906, however, assets due from assessments were listed at nearly $182,000. CITY OF NEW HAVEN, NEW HAVEN MUNICIPAL YEARBOOK 192 (1906).