HOW CITIES FAIL: SERVICE DELIVERY INSOLVENCY AND MUNICIPAL BANKRUPTCY

Clayton P. Gillette[*]

2019 MICH. ST. L. REV. 1211

TABLE OF CONTENTS

INTRODUCTION.....1211
I. "SERVICE DELIVERY INSOLVENCY" AND ITS JUSTIFICATION 1218
II. THE LIMITED UTILITY OF SERVICE DELIVERY INSOLVENCY 1224
A. Reductions in Service Levels as a Measure of Service Delivery Insolvency.....1227
B. Measuring Service Delivery Insolvency as an Incentive Device.....1231
III. ALTERNATIVE OR COMPLEMENTARY MEASURES OF INSOLVENCY 1237
CONCLUSION.....1248

INTRODUCTION

The criteria for municipalities to utilize a process of debt adjustment has caused controversy from the time of the first proposals to include municipal debtors within federal bankruptcy law.[1] Much of the current puzzle arises from the requirement that a municipality must be "insolvent" to be eligible to enter the federal bankruptcy process.[2] The definition of insolvency for these purposes varies from that which applies elsewhere under the Bankruptcy Code. Under most of bankruptcy law, a debtor is "insolvent" if its liabilities exceed its

---

∗ Max E. Greenberg Professor of Contract Law, NYU School of Law. My thanks to participants at a lecture at Michigan State University College of Law, to David Blankfein-Tabachnick, Patrick Rose, Eric Scorsone for their very helpful comments, and to William Coughlin for excellent research assistance and conversation.

1. *See* Clayton P. Gillette & David A. Skeel, *Governance Reform and the Judicial Role in Municipal Bankruptcy*, 125 YALE L.J. 1150, 1167–84 (2016) (providing a history of municipal debt adjustment under federal bankruptcy law).

2. *See* 11 U.S.C. § 109(c)(3) (2018).

assets, a standard balance sheet test.[3] That is not, however, the test in the case of municipalities. For Chapter 9 purposes, an insolvent municipality is one that is in such a financial condition that it is generally not paying its debts as they become due, which essentially involves a cash flow test, or is unable to pay its debts as they become due, which has been broadly interpreted as a prospective inability to pay test.[4]

These tests have created a series of issues. A municipality that is "generally" not paying its debts is not necessarily deferring payment on all its obligations. Failure to pay some debts will not qualify, especially if those debts comprise a small portion of the debtor municipality's budgeted expenditures.[5]

The second test of "prospective" non-payment has proven more problematic. It requires some conception of how far into the future one must look to determine prospectivity. The court in the Bridgeport bankruptcy case concluded that to be found insolvent, a debtor municipality must prove that it will be unable to pay its debts as they become due in its current fiscal year or, based on an adopted budget, in its next fiscal year.[6] Prospective evaluations also require some conception of what localities are required to do in the interim to avoid nonpayment. In theory, localities can raise taxes or other service charges in an effort to generate the cash necessary to pay creditors, at least up to the amount of any tax limitation to which the locality is subject. The court in the Detroit bankruptcy, for example, concluded that the city could not legally increase taxes.[7] Within the domain of

---

3. *See* 11 U.S.C. § 101(32)(A) (2018). The insolvency test has been in place since prior to 1988. However, even prior to that time, the balance sheet test made little sense as applied to municipalities because municipal assets would not be available to creditors in the event of bankruptcy. Thus, the value of assets exceeding liabilities would not be an indicator of fiscal capacity to satisfy debts. *See generally* Nicolas B. Malito, *Municipal Bankruptcy: An Overview of Chapter 9 and a Critique of the "Specifically Authorized" and "Insolvent" Eligibility Requirements of 11 U.S.C.A. § 109(c)*, 17 J. BANKR. L. & PRAC. 517 (2008) (arguing that municipalities should be allowed to file after reaching a "zone of insolvency").

4. *See* § 101(32)(C); *see also, e.g.*, *In re* Town of Westlake, 211 B.R. 860, 865 (Bankr. N.D. Tex. 1997) (discussing the prospective aspect of the test); *In re* City of Bridgeport, 129 B.R. 332, 336–38 (Bankr. D. Conn. 1991).

5. *See In re* Boise Cty., 465 B.R. 156, 171 (Bankr. D. Idaho 2011) (finding that nonpayment of some debts did not amount to general nonpayment of debts).

6. *See City of Bridgeport*, 129 B.R. at 338 (concluding that estimates of a city's position beyond a fiscal year are unreliable).

7. *See In re* City of Detroit, 504 B.R. 97, 121 (Bankr. E.D. Mich. 2013); *see also In re* Pierce Cty. Hous. Auth., 414 B.R. 702, 711–12 (Bankr. W.D. Wash. 2009)

what is legally available, courts have disagreed about the scope of a locality's discretion to exercise revenue raising authority.[8] In *In re Boise County*, the court concluded that the county could issue warrants to meet emergency expenditures not anticipated in the annual budget, and those emergency expenditures included payment of the judgment that had caused the county to file for Chapter 9 protection.[9] In *In re Sullivan County Regional Refuse Disposal District*, however, the court refused to require a debtor to increase assessments in an effort to pay its debts and avoid insolvency.[10] The court concluded that the failure to increase assessments was relevant to the issue of conducting negotiations in ''good faith'' with creditors, but not to the question of insolvency.[11]

But it is not clear that tax increases, even if legally available and politically plausible, will necessarily generate additional revenues. Tax increases may motivate those who bear the relevant burden to exit, triggering a downward spiral of property values that causes net revenues actually to decline. The popularized version of a "Laffer Curve"[12] has been more rigorously demonstrated through models of municipal budgets that reveal how increases in taxes generate proportional losses of city jobs and residents, with the consequence that net revenues decrease.[13] The court in *Bridgeport* may have implicitly been endorsing a revenue hill test when it concluded that the city's assertion of insolvency depended in part on the claim that "anything more than a modest tax increase would be counterproductive."[14] The court in the case of *In re Corcoran Irrigation District* was more explicit in concluding that a debtor had reached "tax saturation" where increases in rates were legally

(concluding that the debtor was not authorized to increase rents or sell property to raise revenues).

8. *See generally* Kevin Kordana, *Tax Increases in Municipal Bankruptcies*, 83 VA. L. REV. 1035 (1997) (discussing numerous court decisions on the subject).

9. *See* 465 B.R. at 172–73, 178–80.

10. *See* 165 B.R. 60, 75–76 (Bankr. D.N.H. 1994).

11. *Id.* at 76.

12. John Patrick Hunt, *Taxes and Ability to Pay in Municipal Bankruptcy*, 91 WASH. L. REV. 515, 534–35, 570 (2016) (noting the "Laffer Curve" implies that, at some point, a taxation rate will raise less revenue than a lower rate of taxation).

13. *See* Andrew Haughwout et al., *Local Revenue Hills: Evidence from Four U.S. Cities*, 86 REV. ECON. & STAT. 570, 570 (2004).

14. *In re* City of Bridgeport, 129 B.R. 332, 335 (Bankr. D. Conn. 1991).

permissible but would have created a situation in which the "taxpayer or toll payer" could not pay.[15]

Embrace of a theoretically sound test of the revenue generating possibility of tax increases, however, does not translate into a readily available means of measuring insolvency. Certainly, courts are not well positioned to calculate the proximity of a locality's financial position to the top of its revenue hill, and efforts to deploy more econometrically sophisticated analyses are likely to invite a battle of experts rather than a reliable quantification of taxing capacity. Courts are likely left with more broadly based, back-of-the-envelope calculations of debt-paying capacity, often without a guideline for satisfaction of the insolvency requirement. As Vincent Buccola notes, financial distress is a conclusion extracted from a probabilistic evaluation of future events; hence, "one observer's insolvency is another's mere illiquidity."[16] Nor is insolvency a necessary predicate for the kind of debt overhang that precipitates distress, since the inhibition of investments that accompanies excessive debt but that is necessary for the municipality to recover from fiscal distress can occur even without formal insolvency.[17]

Moreover, the insolvency tests appear to reflect a desire for mathematical precision disembodied from the ostensible objective that underlies them. Insolvency inquiries are directed at the issue of whether a locality occupies a fiscal situation sufficiently dire to warrant adjustment of outstanding debts. Debt reduction, after all, is what Chapter 9 is all about—as evidenced by its formal, if overlooked, title in the Bankruptcy Code, "Adjustment of Debts of a Municipality."[18] Given that creditors have relied on promises of payment sufficiently great to warrant constitutional protection through the Contracts Clause, and that failure to pay debts in full is likely to increase future borrowing costs for the defaulting municipality, the process of debt adjustment should not be undertaken lightly.

---

15. 27 F. Supp. 322, 326–27 (S.D. Cal. 1939), *aff'd sub nom.* Newhouse v. Corcoran Irrigation Dist., 114 F.2d 690 (9th Cir. 1940).

16. Vincent Buccola, *The Logic and Limits of Municipal Bankruptcy Law*, 86 U. CHI. L. REV. 817, 839–40 n.91 (2019).

17. *See id.* at 842 n.101.

18. *See In re* City of Detroit, 504 B.R. 97, 138 (Bankr. E.D. Mich. 2013) ("It long has been understood that bankruptcy law entails impairment of contracts." (quoting *In re* City of Stockton, 478 B.R. 8, 15 (Bankr. E.D. Cal. 2012))). *See generally* Gillette & Skeel, *supra* note 1 (contending that the scope of Chapter 9 should be read more robustly specifically to encompass reorganization of municipal governance structures, but that hopeful objective is in service of reducing the need for municipal debt adjustment in the future).

Notwithstanding that a city's financial position at the time it files under Chapter 9 may reveal "heartbreaking" evidence of the breakdown of basic municipal functions,[19] there must be some mechanism to balance the fiscal and physical distress suffered by municipal residents against the moral hazard that accompanies any effort to offload obligations to nonresidents and future residents, and the losses that will be suffered by creditors who have relied on payment in making their initial investments to fund municipal services.[20] That might particularly be the case where a municipality's creditors comprise nonresidents or pensioners who are unlikely to receive future benefits from a financial recovery facilitated by compromise of debts. Arguably, the insolvency requirement plays that balancing function.

That is not to say that the municipality is solely responsible for its fiscal distress and thus should not have ready access to mitigation of the debts it has incurred. Reductions in federal and state aid to cities may come as exogenous shocks that disrupt local budgets.[21] A political decision at the state level to impose limitations on a municipality's ability to raise revenue through taxation can greatly limit local fiscal flexibility.[22] In California, the imposition of Proposition 13 led to a 44% reduction in the available tax base for localities nearly two decades after its passing.[23] Debts may be incurred for projects that, *ex ante*, have a significant probability of success but that, *ex post*, look like bad investments given the drain that the related debt service has on local budgets. For example, in events that precipitated the

---

19. Christine Sgarlata Chung, *Municipal Bankruptcy, Essential Municipal Services, and Taxpayers' Voice*, 24 WIDENER L.J. 43, 71 (2015) (describing the state of affairs in pre-bankruptcy Detroit).

20. *See* Austin Murphy, *Bond Pricing in the Biggest City Bankruptcy in History: The Effects of State Emergency Management Laws on Default Risk*, 54 INT'L REV. OF L. & ECON. 106, 106 (2018) (noting as an example that while the Detroit Emergency Financial Manager successfully increased the expected returns to current bondholders, the long-run value of Detroit bonds was negatively impacted in the following years, which would impair capital-raising efforts in the future).

21. *See* Mike Maciag & J.B. Wogan, *With Less State Aid, Localities Look for Ways to Cope*, GOVERNING (Feb. 2017), https://www.governing.com/topics/finance/gov-state-aid-revenue-sharing-intergovernmental-revenue.html [https://perma.cc/579M-R7WQ].

22. *See* PEW CHARITABLE TR., THE LOCAL SQUEEZE: FALLING REVENUES AND GROWING DEMAND FOR SERVICES CHALLENGE CITIES, COUNTIES, AND SCHOOL DISTRICTS 3 (2012) (discussing the effects of Michigan and California's property tax reform on municipal funding).

23. LINCOLN INST. OF LAND POLICY, EROSION OF THE PROPERTY TAX BASE: TRENDS, CAUSES, AND CONSEQUENCES 7 (Nancy Y. Augustine et al. eds., 2009).

bankruptcy of Jefferson County, both underwriters and corrupt state officials misrepresented the economic viability of a massive municipal sewer project.[24] Broader economic shocks may reduce property valuations or the capacity of residents to pay property taxes, leading to significant shortfalls in municipal revenues. In the year following the financial crisis of 2008, state and local government revenues were reduced by nearly 22%, while expenditures increased by 4%, forcing many municipalities to turn to debt financing to meet service obligations.[25] The bankruptcy process may take those causes into account when formulating and confirming a plan for adjustment of the locality's debts. In the *Detroit* case, for example, the State of Michigan contributed $194.8 million to the plan to settle claims that it had underfunded Detroit pensions.[26]

Moreover, if one believes that fiscal distress is often the consequence of a failure to monitor municipal fiscal performance, one might conclude that the solution is to place greater risk on those who have superior monitoring capacity. I have argued in the past that creditors may better satisfy that role than residents.[27] If that is the case, then one might be more willing to adjust debts in order to induce creditors to exercise their superior monitoring capacity.

Nevertheless, the eligibility decision to which the insolvency requirement is relevant serves as an odd entry point for analysis of the causes of fiscal distress. Instead, in determining whether the bankruptcy process is to be invoked, the financial position of the debtor locality is best taken as given. How the locality reached its position may be an important factor in creating a plan that both resolves an existing debt crisis and inhibits its reemergence. A locality that enters bankruptcy because changes in state funding policies have starved its municipalities of anticipated funding may benefit from a plan that restores state funding. But in attempting to determine whether the locality is suffering from fiscal distress sufficiently significant to consider impairing obligations to creditors—that is, whether the bankruptcy process should be invoked at all—the manner

---

24. *See In re* Jefferson Cty., 491 B.R. 277, 281 (Bankr. N.D. Ala. 2013).

25. Christine Sgarlata Chung, *Government Budgets as the Hunger Games: The Brutal Competition for State and Local Government Resources Given Municipal Securities Debt, Pension and OBEP Obligations, and Taxpayer Needs*, 33 REV. BANKING & FIN. L. 663, 695 (2014).

26. *In re* City of Detroit, 524 B.R. 147, 170–73 (Bankr. E.D. Mich. 2014).

27. *See* Clayton P. Gillette, *Bondholders and Financially Stressed Municipalities*, 39 FORDHAM URB. L.J. 639, 664, 670 (2012) (addressing the use of "[c]reditors as [s]ubstitute [m]onitors" as "[s]urrogates for [b]ondholders").

in which the locality arrived at its position seems less germane. Nevertheless, the ambiguity inherent in the insolvency requirement renders it a blunt instrument for any effort to define whether conditions warrant the considerations of debt adjustment that Chapter 9 contemplates.

These difficulties have led to various recommendations to modify the insolvency requirement. Vincent Buccola suggests that the requirement is too restrictive, if not unnecessary, because destructive underinvestment can precede the actual or prospective appearance of a cash flow crisis.[28] Laura Coordes suggests elimination of the requirement, arguing that it provides little information about the municipality and prevents distressed municipalities from seeking the relief that they might obtain from readjustment of debts.[29] She suggests that any inquiry into insolvency instead be made at the confirmation stage.[30]

These recommendations seize on the defects of the insolvency requirement but do not necessarily solve the problem of defining when municipalities should be entitled to judicial consideration of debt adjustment. Facilitating entry into bankruptcy through postponement or elimination of the insolvency inquiry will, indeed, foster more efforts to reduce municipal debt. Many distressed localities certainly need some mechanism for offloading debt if they are to function as well-operating entities, and it is not clear that those municipalities will satisfy even the flexible notions of insolvency. But the absence of an upfront gatekeeper could generate overuse or strategic use of the bankruptcy process rather than an optimal level of debt adjustment.[31] The mixed motives of local officials, both to preserve the fiscal reputation of the city and to favor residents at the expense of nonresident creditors, suggest that the decision to petition for relief

---

28. *See* Buccola, *supra* note 16, at 833.

29. *See generally* Laura N. Coordes, *Gatekeepers Gone Wrong: Reforming the Chapter 9 Eligibility Rules*, 94 WASH. L. REV. 1191 (2017) ("[M]unicipalities in fiscal distress should be able to access bankruptcy when they demonstrate a need for the primary types of assistance that bankruptcy can best provide . . . ."). *See also* Malito, *supra* note 3, at 1004 (making an argument similar to Coordes's position).

30. *See* Coordes, *supra* note 29, at 1233.

31. *See generally* Clayton P. Gillette, *Fiscal Federalism, Political Will, and Strategic Use of Municipal Bankruptcy*, 79 U. CHI. L. REV. 281 (2012) [hereinafter *Fiscal Federalism*] (addressing the role of bankruptcy courts in neutralizing strategic behavior and, in turn, encouraging localities to internalize costs). *See also* Buccola, *supra* note 16, at 865 (suggesting that Chapter 9 is underutilized and would remain underutilized in the absence of an insolvency requirement because multiple parties would still be able to veto its use).

under Chapter 9, which only the municipality itself is currently permitted to undertake,[32] could be skewed in favor of too much delay or in favor of too quick of an effort to cancel obligations. Local officials whose time horizon is bounded by the next election are likely to underweight adverse future consequences of bankruptcies, such as the possibility that current debt adjustments will frustrate future efforts to enter the debt markets or will generate higher borrowing costs. Alternatively, local officials of distressed localities may deploy the threat of bankruptcy to obtain leverage in negotiations with state officials who fear that bankruptcy by one political subdivision could result in contagion effects rippling through other state borrowers.[33]

That is not to say that the insolvency requirement is a perfect solution to strategic bankruptcy filings. Indeed, the insolvency definition may facilitate strategic behavior by providing a municipality a discrete definition of what it must do in order to qualify for Chapter 9. Objectors to Stockton, California's bankruptcy petition alleged precisely that the City's insolvency was engineered to comply with statutory requirements.[34] To the extent that bankruptcy is used strategically, it is the *ex ante* threat of entering the process, rather than the propriety of confirming a specific plan for adjustment that is doing much of the work. The result is that an insolvency gatekeeper may be logically desirable, but too uncertain in its current incarnation to provide a reliable basis for concluding that debt adjustment is appropriate.

I. "SERVICE DELIVERY INSOLVENCY" AND ITS JUSTIFICATION

Perhaps in reaction to the misfit between the need for debt adjustment and the ambiguous definition of "insolvency," a few courts have resorted to a more radical interpretation of the insolvency requirement. Essentially, they have appended to it a judicial emendation that looks less at the inputs of the municipal budget—that is, the available revenues—than to the consequences of fiscal distress. The result has been what several courts have denominated a "service delivery insolvency" test, typically defined in terms of a significant reduction in the availability of city services. In *In re City of Stockton*, for example, the court concluded that the city could satisfy the insolvency requirement if its financial situation substantially

32. *See* 11 U.S.C. § 901 (2018).
33. *See Fiscal Federalism*, *supra* note 31, at 302.
34. *See In re* City of Stockton, 493 B.R. 772, 789 (Bankr. E.D. Cal. 2013).

interfered with the "ability to pay for all the costs of providing services at the level and quality that are required for the health, safety, and welfare of the community."[35] The court that adjudicated Detroit's bankruptcy concluded that the city's service delivery insolvency was evidenced by "deplorable" conditions in policing, inoperable streetlights, large numbers of blighted buildings, antiquated equipment, and closures of public parks.[36] Similarly, the court that considered the bankruptcy of Vallejo, California, noted that the city's petition under Chapter 9 proceeded only after it had reduced employee rolls and municipal services to the point that further cuts would threaten the city's ability to provide for the basic needs of its citizens.[37] The more recent example of San Bernardino's bankruptcy proceedings focused on the city's inability to provide both adequate police protection to stem rising crime rates and necessary funding for infrastructure maintenance and repair.[38] A qualitative description of a petitioner's municipal services as significantly reduced compared to the level of the services that would be expected of a well-operating municipality, in effect, serves as a proxy for the more quantitative cash flow analysis that has proven to be elusive. Indeed, while the court in the *Detroit* case considered that the financial status of the city—that is, "the City's tumbling credit rating, its utter lack of liquidity and the disastrous [derivatives transaction]"—provided persuasive evidence that the technical statutory definition of insolvency had been satisfied, Judge Rhodes also concluded that the city's service delivery insolvency was "most strikingly disturbing."[39]

"Service delivery insolvency," however, poses less than an ideal solution to the lack of fit between financial insolvency and the propriety of debt adjustment.[40] Most obviously, the term lacks precision. The courts' reference to services that would ensure "the health, safety, and welfare of the community" leaves open multiple issues about whose health, what degree of safety, and how much welfare a city is expected or obligated to guarantee.[41] Michelle

35. *Id.*

36. *See In re* City of Detroit, 504 B.R. 97, 169 (Bankr. E.D. Mich. 2013).

37. *See In re* City of Vallejo, 408 B.R. 280, 294 (B.A.P. 9th Cir. 2009).

38. *See In re* City of San Bernardino, 566 B.R. 46, 60 (Bankr. C.D. Cal. 2017).

39. *City of Detroit*, 504 B.R. at 263–64.

40. *In re* City of Stockton, 493 B.R. 772, 781 (Bankr. E.D. Cal. 2013).

41. *Id.*; *see also In re* City of Detroit, 524 B.R. 147, 261 (Bankr. E.D. Mich. 2014) (describing how "service delivery insolvency" means that "the City is unable to provide basic municipal services such as police, fire and emergency medical services to protect the health and safety of the people here").

Anderson asks the relevant questions concerning the unavailability of a standard metric for the proper level of services and questions the ability of courts to rely on concepts such as "underfunding": "'underfunded' relative to what?"[42] But more than the definitional issue, the concept of service delivery insolvency assumes some baseline level of services that localities are expected to provide to at least a subset of residents, and further assumes that creditors, rather than residents, plausibly bear the risk that the locality will fail to satisfy that baseline.

Nevertheless, focus on a municipality's failure to deliver services certainly serves as a plausible proxy for fiscal health. After all, providing services is what municipalities do. Localities are responsible for delivering to residents local public goods, that is, goods and services that confer benefits within a relatively narrow geographic range but that market mechanisms are unlikely to generate at an efficient level. Local governments hold out the promise of solving the collective action problems that underlie the mismatch between residents' preferences for goods and services and the market's capacity to offer them.[43] The problem might arise because potential beneficiaries of a local public good can benefit from its provision, even if they fail to contribute to its production. That counterintuitive result flows from the possibility that potential consumers of a service could not be excluded from receiving its benefits, as long as some other beneficiary makes the necessary contribution. If all abutters on my bumpy roadway desire to pave our street, but none has the capacity to require contributions from the others, there is a possibility that all will hold out in an effort to free ride on the contributions of others. Thus, the standard market mechanism of contracting will fail to provide for the desired street paving, since potential free riders will refrain from agreeing to a contractual obligation to make payments. Local government provides the solution to the provision of local public goods by creating (1) a mechanism (elections) through which residents register their preferences for a basket of goods and services, and (2) a mechanism by which to enforce payment obligations (taxation), which residents should be willing to pay since they are getting preferred services in return, as long as all other beneficiaries similarly make payments.

---

42. Michelle Wilde Anderson, *The New Minimal Cities*, 123 YALE L.J. 1118, 1192–94 (2014).

43. *See* LYNN A. BAKER ET AL., LOCAL GOVERNMENT LAW 38–50 (5th ed. 2015).

Alternatively, a public good may be undersupplied because its nonrival nature means that multiple people can use it simultaneously, at least up to the point of congestion, undermining the efficiency of the price mechanism to control access. Think, for example, of concerts in Central Park in New York City; profit-seeking providers of concerts will not be able to capture all the benefits enjoyed by listeners and thus will refrain from arranging the concerts in the first instance. But if the market won't supply the service, then some entity unconcerned with profit, such as a local government, must undertake the task.

Alternatively, local governments provide a solution where goods and services will otherwise be undersupplied because they have the characteristics of natural monopolies. Under those circumstances, the initial capital costs of providing a service may be very high, while marginal costs are low. A private entity may be concerned that its initial high-capital investment will not be recoverable if competitors are permitted subsequent entry and competitive pricing is driven down to reflect only marginal costs. Local governments can solve the problem by providing the service as a monopolist (or privatizing the service to a private monopolist), albeit a publicly interested one that does not charge monopoly prices. Common examples include utilities such as municipal waterworks or municipal electrical companies.

The common theme that unites these goods and services is that local government provision addresses a market failure that would otherwise leave a void in service provision, notwithstanding significant demand. Local government intervention becomes all the more important given that many of the services that have the characteristics of public goods are crucial to a high quality of life. These include security (police and fire), transportation (street maintenance), and health (sewer and water). The concept of service delivery insolvency is implicitly predicated on the understanding that if localities fail to provide these services in an adequate manner, residents with insufficient mobility will be unable to obtain them from any alternative source, given their undersupply in the private market. Local government incapacity to provide these services, therefore, constitutes an abrogation of the very functions for which the locality was created. Arguably, the essential role in providing services that would otherwise be undersupplied by market forces, combined with the limited mobility of residents who desire but cannot obtain services that a locality holds itself out as offering, underlies legal doctrines that bind localities to principles of non-discrimination and equal service provision, which mandates that all residents of a locality have access

to similar levels of service.[44] But the same result of undersupply occurs when a municipality fails to deliver promised services through fiscal incapacity rather than through discrimination. Thus, even those commentators who view the value of municipalities from a perspective other than an economic one appear to agree that municipalities are created in large part to provide public goods and services not available in the market and that the absence of such services is the hallmark of fiscal distress.[45]

One might predict that local officials, aware of the significance of the services within their control, would be attentive to their efficient and effective provision. After all, in theory at least, local governments compete for residents and firms by offering a bundle of goods and services at a tax price that residents are willing to pay. Different localities will offer different bundles, so that individuals and firms are attracted to those localities that offer the bundle that they find most hospitable. In an idealized conception of local government competition, first embodied in the classic work of Charles Tiebout, each locality within an infinite set attracts an optimal population of residents who attain their preferred service at the preferred tax price.[46] Of course, the assumptions of perfect mobility, reliance on dividend income, lack of externalities, and infinite supply of municipalities underlying the Tieboutian model of local government competition are too strong to reflect real world practices (as Tiebout himself recognized).[47] In addition, David Schleicher has demonstrated how local government policies themselves, such as land use laws and occupational licensing, inhibit the mobility that would be necessary to a full realization of residents' preferences.[48] Finally, localities that attract a cluster of residents who benefit from each other's proximity may be able to discourage exit by those residents, even if they do not

44. *See* Clayton P. Gillette, *Equality and Variety in the Delivery of Municipal Services*, 100 HARV. L. REV. 946, 947 (1987) (reviewing CHARLES M. HAAR AND DANIEL W. FESSLER, THE WRONG SIDE OF THE TRACKS: A REVOLUTIONARY REDISCOVERY OF THE COMMON LAW TRADITION OF FAIRNESS IN THE STRUGGLE AGAINST INEQUALITY (1986)).

45. *See* Anderson, *supra* note 42, at 1195–204; *see also* Gerald E. Frug, *City Services*, 73 N.Y.U. L. REV. 23, 33 (1998).

46. *See* Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416, 418 (1956).

47. *Id.* at 419.

48. *See* David Schleicher, *Stuck: The Law and Economics of Residential Stagnation*, 127 YALE. L.J. 78, 78 (2017).

otherwise obtain their preferred level of public goods.[49] That said, there is little doubt that localities vary significantly in the goods and services that they offer. Nor is there much doubt that, to the extent that individuals and firms are mobile and knowledgeable, they have incentives to gravitate to localities that offer goods and services that approximate their ideal bundle.[50]

Local officials, therefore, should strive to maintain the level of goods and services preferred by residents, since it is on that basis that residents presumably will determine the electoral fate of those officials. As the price of services are capitalized into home values, homeowning voters determine whether the tax prices they pay to reside in a particular locality are worth the service levels they receive. Those voters are likely to reward or penalize officials who provide those services accordingly.[51] Indeed, in the Tieboutian world of perfect mobility, local officials should be attentive to residents' preferences even in the absence of a competitive political market. In that world, residential decisions are made by individuals who act out of self-interest in an atomized manner without attention to or concern for the decisions of others. If an individual or firm can costlessly move to a more hospitable jurisdiction, then there is no need to engage in the costly process of coalescing with others in an effort to alter the existing bundle of goods and services in one's current jurisdiction. Outside that rarified environment, however, local politics typically consist of efforts to achieve compromises or to make choices among competing bundles of goods and services. Thus, local politics are likely to revolve around municipal performance in the delivery of goods and services: housing, garbage collection, schools, street conditions, and the taxes levied to pay for them.[52]

The result is that residents' connections to their locality are largely defined by service delivery. A locality is unlikely to defer provision of desired services unless it is unable to afford them. Service delivery below a baseline, therefore, is a plausible proxy for fiscal

---

49. *See* CLAYTON P. GILLETTE, LOCAL REDISTRIBUTION AND LOCAL DEMOCRACY 96–102 (2011) [hereinafter LOCAL REDISTRIBUTION].

50. There have been numerous efforts to test the Tiebout hypothesis empirically. Although complicated by issues such as the residential choice being influenced by income level or non-service characteristics of a jurisdiction, these studies tend to show at least some support for jurisdictions that are homogeneous with respect to service demand. *See, e.g.*, Lee Hachadoorian, *Homogeneity Tests of Tiebout Sorting: A Case Study at the Interface of City and Suburb*, 53 URB. STUD. 1000, 1000–01 (2016).

51. *See* WILLIAM A. FISCHEL, THE HOMEVOTER HYPOTHESIS 87–89 (2001).

52. *See id.*

distress. If (1) mobile residents migrate to specific localities in order to obtain a particular basket of goods and services, and (2) local officials have electoral incentives to provide the preferred level of goods and services, then the absence of that level of goods and services is likely to be a consequence of fiscal incapacity to provide it, rather than the consequence of some other function. Similarly, absent some alternative explanation based on changes in preferences of residents, or a desire of officials to underserve their current residents, a reduction in service levels which is likely to induce exit by the most mobile residents is likely a consequence of fiscal incapacity.[53] Thus, if courts need a proxy for a degree of fiscal distress that warrants debt adjustment, service delivery shortfalls may be the best option.

II. THE LIMITED UTILITY OF SERVICE DELIVERY INSOLVENCY

Even if we recognize the theoretical utility of service delivery insolvency as a test for the need to adjust debts, its value depends on judicial capacity to detect that services have fallen to a level that places the "health, safety, and welfare of the community" at risk.[54] The few courts that have considered service delivery insolvency have referred to statistics that concern the delivery of specific services or made bleak qualitative statements that have a *res ipsa loquitur* quality. The court in *Detroit*, for example, noted that "about 40% of the approximately 88,000 streetlights operated and maintained by the City's Public Lighting Department were not working."[55] The court further relied on testimony by the Chief of Police that conditions in local police precincts were "deplorable," that "crime is extremely high, morale is low, [and there existed an] . . . absence of leadership."[56] The court's conclusion was that city services "do not function properly due to inadequate funding. The City has an extraordinarily high crime rate; too many street lights do not function; EMS does not timely respond; the City's parks are neglected and disappearing; and the equipment for police, EMS and fire services are outdated and inadequate."[57]

53. There are instances in which local officials deliberately underserve some residents and favor others. The latter are likely within the officials' political base, while the former are not. In those instances, under-provision is likely a function of political strategy rather than fiscal incapacity. *See* Edward L. Glaeser & Andrei Shleifer, *The Curley Effect: The Economics of Shaping the Electorate*, 21 J.L. ECON. & ORG. 1, 13 (2005).

54. *In re* City of Detroit, 504 B.R. 97, 168 (Bankr. E.D. Mich. 2013)

55. *Id.* at 120.

56. *Id.* at 169.

57. *Id.* at 189.

Similarly, the court in *Stockton* observed that "[p]olice often respond only to crimes-in-progress."[58]

Of course, a locality could always spend more on services, though at some point residents may resist tax payments necessary to increase service quality or quantity. And it would be the rare chief of police or other department head who did not prefer more resources. Thus, absolute statements of inadequacy seem insufficient. Perhaps the best metric is a comparative one. Given the absence of any single metric for striking the balance between taxes and services, the degree to which service levels in one locality approach inadequacy may depend on what similarly situated localities provide. Some courts have taken such an approach to assess the adequacy of services in the debtor locality. The comparison may be with services provided in the same locality during a prior period, or it may be with service levels offered by other localities. The court in *Stockton* used comparative data of a rough sort to conclude that service delivery insolvency existed.[59] The city's workforce had decreased by 25% from 2008 to 2011, and the police department had about 1.10 officers per one thousand residents, compared to a national standard of 2.7 per one thousand residents.[60] The court concluded that Stockton presented the "paradigm example" in which service delivery served as a proxy for cash insolvency because police services had been "decimated," with the consequence that "crime rate has soared. Homicides are at record levels. The City has among the ten highest rates in the nation of aggravated assaults with a firearm."[61] The court in the Detroit bankruptcy concluded that the city's violent crime rate was five times the national average and that its case clearance rate for violent crimes and for all crimes were "substantially below those of comparable municipalities nationally and surrounding local municipalities."[62] Although the court in the Bridgeport bankruptcy case did not explicitly adopt a service delivery insolvency test, it did focus on declines in services as indicative of insolvency.[63] The court noted, for example, that the Chief of Police testified that the department employed only 341 police officers of the 430 necessary to provide adequate service.[64] Similarly, the Emergency Financial Manager for Detroit took a comparative approach in an

58. *In re* City of Stockton, 493 B.R. 772, 790 (Bankr. E.D. Cal. 2013).
59. *See id.* at 780.
60. *See id.* at 780–81.
61. *Id.* at 789–90.
62. *City of Detroit*, 504 B.R. at 120.
63. *See In re* City of Bridgeport, 129 B.R. 332, 335 (Bankr. D. Conn. 1991).
64. *See id.*

effort to convince creditors of a need to adjust debts prior to the time that the city filed for bankruptcy.[65] The Proposal for Creditors that the Emergency Financial Manager circulated, for example, compared Detroit's tax burden ($1,207 per capita) to that of surrounding municipalities that would be most likely to attract population and firms considering exit from Detroit (which taxed no more than $930 per capita).[66] The analysis also compared crime statistics, crime clearance rates, and other municipal services offered by multiple Midwestern cities.[67] The Proposal revealed that Detroit fared significantly below Pittsburgh, Milwaukee, and St. Louis, and somewhat below Cleveland on crime statistics, and well below comparable cities with respect to functioning street lights.[68]

Each of these comparative strategies is rational. Again, reductions in service levels within a locality seem inconsistent with the model of local governments as competitors for residents, at least if expenditures do not appear to exceed residents' willingness to be taxed. Once localities attract residents on the basis of a specific basket of services, one would anticipate that officials will seek to maintain those services. Interlocal differences in service levels theoretically reflect different constituent preferences, different fiscal capacities, or different standards of living. Nevertheless, radical disparities in levels of certain services that one would anticipate are widely preferred at some minimal level may betoken something other than variations in residents' preferences. In her account of municipal reactions to fiscal distress, Michelle Anderson notes that different cities spend at significantly different rates for basic services such as policing, which one might think are a basic function of virtually every sizeable locality, and that relatively poor localities spend at significantly lower rates.[69] The result is that poor localities with relatively high crime rates have staffing ratios about the same as those of wealthy cities with relatively low crimes rates. Marginal dollars spent on crime in the

---

65. *See generally* CITY OF DETROIT, PROPOSAL FOR CREDITORS (2013) (outlining the Emergency Manager's plan for debt adjustment in Detroit).

66. *Id.* at 5.

67. *See id.* at 9–12.

68. *See id.*

69. *See* Anderson, *supra* note 42, at 1161–62 (discussing Aaron Chalfin & Justin McCrary, *The Effect of Police on Crime: New Evidence from U.S. Cities, 1960-2010*, at tbl.10 (Nat'l Bureau of Econ. Research, Working Paper No. 18815, 2013)). *See generally* Aaron Chalfin & Justin McCrary, *Are U.S. Cities Underpoliced? Theory and Evidence*, 100 REV. ECON. & STAT. 167 (2018) (documenting the extent to which measurement errors related to municipal police activities impact the law enforcement's ability to combat crime).

former would produce much greater benefits than marginal dollars spent in the latter. One might infer that the spending rate reflects something other than preferences to live in a crime-ridden area.

That finding is consistent with judicial focus on crime statistics in making comparative judgments, as evidenced by the cases mentioned above. The focus on crime makes sense because crime rates tend to be a salient factor in firm and individual locational decisions, and low crime rates are correlated with urban revival.[70] To the extent that the service delivery insolvency question purports to represent a proxy for fiscal distress, relatively high crime rates associated with diluted policing services can deter in-migration by taxpaying individuals and firms, and thus are likely to signal local incapacity to attract new tax revenues necessary to emerge from economic difficulties. Disparities in crime spending among otherwise similarly situated localities, therefore, may be both attributable to low fiscal capacity and indicative of a financial condition that warrants debt adjustment in order to facilitate financial recovery.

A. Reductions in Service Levels as a Measure of Service Delivery Insolvency

At the same time, using temporal or interlocal comparative service levels as a measure of fiscal insolvency poses difficulties. This is not simply because the sorting model of local government implies variation in the level of publicly provided services among municipalities. For my purposes, the more relevant difficulties emerge from the assumed connection between low levels of particular services and the propriety of designating a locality to be eligible for the process of debt adjustment.

While reductions in services are easy to quantify, their consequences (and their causes) are not. Extreme cases such as Detroit, where services appear to have declined in quantity and quality across the board, are difficult to explain as a consequence of anything

---

70. *See generally* PATRICK SHARKEY, UNEASY PEACE (W.W. Norton & Co., 1st ed. 2018) (attributing urban revival to declines in crime rates); Paul D. Gottlieb, *Residential Amenities, Firm Location and Economic Development*, 32 URB. STUD. 1413 (1995) (identifying an increased focus on where employees would like to live in firms deciding to relocate); Janet Kelly et al., *Placemaking as an Economic Development Strategy for Small and Midsized Cities*, 53 URB. AFF. REV. 435 (2017) (finding that the relationship between quality of place (QOP) variables—QOP variables are associated with stronger human capital outcomes in large- to mid-sized cities—and development outcomes was relatively weak in small cities).

other than severe fiscal distress. But counterintuitively, decreases in municipal services may be a sign of municipal recovery. That could be the case if one of the causes of municipal distress was overspending on services relative to taxpayers' willingness to pay, a condition that could have induced exit by taxpayers who were not receiving benefits equal to or in excess of the tax costs they were required to bear. In short, if municipal service levels had previously been greater than optimal, then oversupply may have been at least partially responsible for the fiscal distress that placed the locality at risk of bankruptcy. In that situation, reductions in services may be a signal that the locality is adjusting its spending in a manner that could make offloading debts less necessary.

Tieboutian and political competition explanations of prospective residents' capacity to sort among local governments according to service packages essentially deny that service oversupply could exist. Those happy stories rely on a process in which residents register preferences for service levels through either mobility or an electoral system, and responsive local officials comply with the residents' demands. Local officials serve as faithful agents of their constituents, as failure to comply with residents' preferences generates costless exit by dissatisfied residents or, where transactions costs impede exit, electoral redress in which unfaithful officials are replaced.

Return, however, to the objections to the Tieboutian model. The critique of Tiebout's assumptions is frequently deployed to demonstrate that an untrammeled market for residents will not lead to an optimal delivery of municipal services.[71] But that same critique indicates that the deficiencies that characterize economic markets may also affect political markets. The result is that imperfect democratic politics do not guarantee ideal service delivery any more than does imperfect mobility. For example, the electorate does not vote on a service-by-service basis, but rather casts a binary vote on the bundle offered by the locality, as represented through candidates for office who take positions on specific services. A voter who is content with the current level of policing, park services, and schools may vote for an incumbent, even though that resident would prefer a level of spending on waste collection that deviates from the status quo. But the victorious candidate will be unable to disaggregate which policies commanded constituent support and which ones were the subject of

71. *See, e.g.*, Lee Anne Fennell, *Homes Rule*, 112 YALE L.J. 617, 617 (2002); Frug, *supra* note 45, at 33.

disagreement.[72] As a result, the signal that even faithful officials receive from the electoral process is likely to be opaque with respect to the desired level of any particular service.

In addition, much as local government may be a solution to a collective action problem that interferes with the provision of local public goods, local government itself creates a collective action problem. If you participate in the function of governing, I have less incentive to do so, as long as I believe that your interests are sufficiently aligned with mine that I receive no net gain from incurring the costs related to governance. As a result, those who participate in governance by running for office, lobbying, or voting are likely to receive idiosyncratic, somewhat non-representative benefits from those activities that justify incurring the related costs.[73] Again, if mobility or politics worked perfectly, those with non-representative interests would suffer significant obstacles to enacting their agenda. Representative residents would be induced to exit, taking their tax dollars with them, or to register opposing votes. But where mobility is constrained or political activity is reduced because collective action problems deter members of the majority from coalescing, those who have sufficient interests to participate in governance are more likely to seek the benefit of their non-representative positions.

That is even more likely to be the case where immobility results from network or agglomeration effects within a locality. Those effects are related to the benefits that individuals or firms receive from being located within a network of other individuals or firms. Agglomeration effects induce taxpayers (firms or individuals) to remain within a locality because they are dependent on other taxpayers who similarly reside within the locality. If agglomeration benefits exceed the loss that some taxpayers incur by receiving a lower-than-preferred level of services, then local officials may decide to provide a level of service that is dispreferred by those taxpayers in order to provide a preferred level of service to a constituency that is electorally important and that is relatively mobile; officials will have less concern that the former group will exit because they are geographically locked into their local network. Those efforts, however, may ultimately lay the groundwork for fiscal distress if agglomeration benefits decline, perhaps because

---

72. *See* LOCAL REDISTRIBUTION, *supra* note 49, at 15–28 (explaining problems with the binary nature of voting in which voters cast ballots for candidates rather than for positions on issues).

73. *See generally* Clayton P. Gillette, *Who Puts the Public in the Public Good?*, 71 MARQ. L. REV. 534 (1988) (discussing the roles those who participate in governance play in market intervention).

at least some of the members of the network exit, or because aggregate spending exceeds the value of agglomeration benefits for mobile firms. Where that occurs, subsequent reductions of service levels may signal that the locality is attempting to correct a previous situation of service oversupply rather than a need to adjust debts.

Consider, for example, the position of New York City just prior to its brush with bankruptcy in the 1970s. Martin Shefter calculated that in 1975 New York had 45.5 municipal employees per 1,000 residents with labor costs averaging $19,543 per employee.[74] By comparison, Chicago had 15.4 employees per 1,000 residents at an average cost of $15,102.[75] Detroit had higher labor costs per employee of $23,424, but only had 14.8 employees per 1,000 residents.[76] New York's per capita operating expenditures of $1,330 also exceeded that of any of the twelve largest U.S. cities other than Washington, D.C., in 1974–75.[77] The next highest figure was $823 per capita for Baltimore.[78] It is at least plausible that high public employee levels in New York City indicated that the city was oversupplying municipal services relative to demand, perhaps as a function of entreaties by special interest groups such as public service unions and organized clients of municipal departments.[79] If that was the case, then reductions in service levels could constitute efforts to reduce costs to an affordable level rather than cause for alarm.

This is not to deny that subsequent reductions in service levels will have real and tragic effects on service recipients or providers. Kim Phillips-Fein's account of the consequences on New York City's efforts to reduce costs through service reductions provides a picture as bleak as the one that courts have used to illustrate the existence of service delivery insolvency. As negotiations for state aid to the city stalled, the city laid off more than 5,000 police officers and detectives,[80] firehouses and municipal daycare centers closed, the City University of New York was required to charge tuition for the first time in its history, sanitation workers were dismissed, and public

---

74. MARTIN SHEFTER, POLITICAL CRISIS/FISCAL CRISIS: THE COLLAPSE AND REVIVAL OF NEW YORK CITY 119 (1985).

75. *Id.*

76. *Id.*

77. *Id.* at 120.

78. *Id.*

79. *See id.* at 121; CHARLES R. MORRIS, THE COST OF GOOD INTENTIONS 34–35 (1980).

80. KIM PHILLIPS-FEIN, FEAR CITY 131–43 (2017).

transportation fares increased 43%.[81] One might conclude from such statistics that service delivery had declined into service delivery insolvency and thus warranted debt adjustment. But in the case of New York City, the reduction may be considered an unfortunate but realistic reaction to oversupply that had itself contributed to a condition of fiscal distress.

Of course, courts that have considered service reductions as evidence of insolvency have not looked at those reductions in isolation. They have also reviewed issues such as legacy costs (debt and pension obligations) that limit the amount of dollars available for services and increasing crime rates that follow service reductions and that might indicate a suboptimal level of service provision. But those issues are not easily disaggregated from the possibility of previous oversupply. Thus, my claim is not that service reductions are necessarily a positive indication that a municipality is engaged in efforts to reverse a fiscally dangerous situation without debt adjustment. Rather, my point is simply a cautionary one that reductions in service do not necessarily indicate the propriety of offloading risk related to debt rather than realignment of a limited budget.

B. Measuring Service Delivery Insolvency as an Incentive Device

Municipalities, I have suggested, exist primarily to provide local public goods. General purpose municipalities, as opposed to special districts, provide multiple services. A moment's reflection indicates the variety of services from which localities are likely to choose: policing, firefighting, education, sewer and water, waste disposal, electricity, street paving, street lighting. Localities may also legitimately engage in activities that don't easily fall within the realm of public goods, such as redistribution of wealth.[82] Localities may not elect to provide each of these services or to provide them to all eligible residents, as many can be provided at sufficient levels by private markets (e.g., electricity) or by more centralized levels of government (e.g., redistribution). But it would be a rare local government that was not involved in a significant number of these services.[83]

---

81. *Id.* at 132–44.

82. *See generally* LOCAL REDISTRIBUTION, *supra* note 49 (discussing the orthodoxy of predicting that local governments will not engage in wealth redistribution).

83. Some localities, however, are formed for the very purpose of avoiding the provision of local public goods. That does not mean that residents do not have

The few courts that have invoked the concept of service delivery insolvency, however, have not done so by conducting a thorough review of the service package that the debtor municipality purports to provide. Rather, courts have looked selectively at specific services and at limited statistics that purport to serve as a measure of the overall quality of municipal services. Indeed, as I have indicated above, the courts that have considered service delivery insolvency have concentrated on police services. The court in *Stockton* looked at that measure to conclude that services in that city constituted "a paradigm example of service delivery insolvency."[84] The court in *Detroit* also considered firefighting services, streetlights, and blight, but seemed primarily concerned with policing services. It noted, for example, that "[i]n 2012, the average priority one response time for the police department was 30 minutes. [Then, i]n 2013, it was 58 minutes. The national average is 11 minutes."[85] Further, it noted that staffing in the police department had been reduced by approximately 40% over the prior ten years.[86] The court in the San Bernardino bankruptcy justified payments by the city of only a small proportion of outstanding claims on the grounds that "the City's high violent crime rates exceed state and national averages."[87] As I have noted above, the court in the Bridgeport bankruptcy noted the decline in police services, even though it did not formally adopt a service delivery insolvency test.[88]

A focus on policing and crime rates as measures of service delivery generally makes a great deal of sense. I have noted above the salience of crime and the relationship between low crime rates and the capacity of localities to attract new residents. Nevertheless, there is reason to be wary that statistical measures of particular services can serve as reliable proxies for insolvency that warrants debt adjustment. In the first instance, the salience of crime creates the risk of a lamppost effect. The very importance of crime statistics means that they will be collected and thus are readily obtainable by courts and commentators.

---

access to goods and services. Rather, it means that the primary function of the locality is to contract out with other public or private providers for the service. A proposed locality that purports to fulfill its functions in this manner, however, may be denied incorporation as a municipal corporation. *See generally, e.g.*, Citizens of Rising Sun v. Rising Sun City Dev. Comm., 528 N.W.2d 597 (Iowa 1995) (offering an example of the aforementioned outcome).

84. *In re* City of Stockton, 493 B.R. 772, 790 (Bankr. E.D. Cal. 2013).

85. *In re* City of Detroit, 504 B.R. 97, 120 (Bankr. E.D. Mich. 2013).

86. *Id.*

87. *In re* City of San Bernardino, 566 B.R. 46, 60–61 (Bankr. C.D. Cal. 2017).

88. *See In re* City of Bridgeport, 129 B.R. 332, 335 (Bankr. D. Conn. 1991).

Metrics for other services may either be difficult to obtain or require long-term calculations less reflective of a locality's current financial condition. For example, while expenditures on schools may be salient and may be reflected in short-term and measurable units, such as student-teacher ratios, the measurement of school performance may be more opaque or more difficult to calculate in the short term. Even significant reductions in expenditures may not have immediate effects on measures of performance such as graduation rates or test scores. It may take longer for reduced funding to reflect declines in either of those measures, and the extent to which they reflect quality has long been a matter of debate.[89] While inputs, such as body counts within municipal departments and agencies, may be susceptible to measurement, outputs, such as park cleanliness or waste disposal efficiency, may be less so than the number of reported crimes. The result is that services for which there are readily available measurable outcomes may receive disproportionate attention in the insolvency analysis, even if the related service levels are not representative of the locality's service package generally.

Of course, the importance of crime reduction to municipal financial performance suggests that some disproportionate attention to that service is appropriate. And if specific services are susceptible to measurement, one might think that those services will tend to be provided at a level higher than the average, since local officials can tout those statistics as indicators of high-quality performance. Thus, statistics that indicate measurable services are underprovided may flash serious warning signals. But the availability of crime statistics and the tendency of courts to focus on those metrics that are readily available may actually create perverse incentives to undersupply those services. Once courts adopt service delivery insolvency as a measure of eligibility for Chapter 9 and announce the kinds of service deficiencies that satisfy eligibility standards, local officials who see net benefits in adjusting debts have incentives to shift scarce resources

---

89. *See* Thomas Downes, *School Finance Reform and School Quality: Lessons from Vermont*, *in* HELPING CHILDREN LEFT BEHIND: STATE AID AND THE PURSUIT OF EDUCATIONAL EQUITY 283, 283 (John Yinger ed., 2004); David A. Card & A. Abigail Payne, *School Finance Reform, the Distribution of School Spending, and the Distribution of Student Test Scores*, 83 J. PUB. ECON. 49, 49 (2002); Michael Heise, *The Courts, Education Policy, and Unintended Consequences*, 11 CORNELL J.L. & PUB. POL'Y 633, 656 n.148 (2002) (collecting sources that debate whether money matters to the performance measurements); William S. Koski & Rob Reich, *When "Adequate" Isn't: The Retreat from Equity in Education Law and Policy and Why It Matters*, 56 EMORY L.J. 545, 549 (2006) (contending that relative educational quality may matter more than absolute educational quality).

in ways that satisfy the criteria that courts have adopted.[90] Officials who desire to demonstrate the existence of service delivery insolvency can reduce service levels for those services that are susceptible to measurement and that courts have used to determine bankruptcy eligibility, notwithstanding that residents would prefer that those services be maintained at relatively high levels. Officials who wanted to demonstrate insolvency might not withhold funds that could otherwise be deployed to provide services, since retaining cash would demonstrate that the locality did not satisfy the cash flow test. But local officials could spend available resources in suboptimal ways in order to strengthen the case for shifting a greater share of the costs of fiscal distress from residents to creditors by adjusting debts.

The risk of suboptimal spending is an example of a more generalizable phenomenon of strategic budgeting. When the quality of an activity is multidimensional, some dimensions of which can be monitored or observed at low cost and some of which can only be monitored or observed at high cost, qualitative judgments about the activity may be based only on the low-cost dimensions. A potential consequence is that actors whose performance is being evaluated will tend to distort behavior towards those dimensions that are likely to be evaluated. In some cases, the effect may be to raise the level of performance with respect to the measured dimension because the actor anticipates a reward from achieving a high level. But the same incentive may produce a low level of performance with respect to the measured dimension because the actor anticipates a subsidy (e.g., debt adjustment) if performance falls below a certain level.[91] In either case, the result may be to provide suboptimal quality, since those dimensions that are readily measurable, and thus provided at a high or low level of quality, are imperfect proxies for the quality of the entire activity being evaluated.

Think, for example, of the debate concerning whether evaluating teachers by reference to students' test scores fosters a culture of "teaching to the test" that may distort incentives of teachers to generate more creative thinking that may be better educationally but that is less susceptible to measurement. Alternatively, consider that tort law measures negligence by reference to the exercise of care on a specific occasion, which is susceptible to monitoring (at least *ex post*), while activity levels, which will also affect accident rates but is less

90. *See Fiscal Federalism*, *supra* note 31, at 319–24 (noting the discussion of why local officials may see benefits in filing petitions under Chapter 9).

91. *See id.* at 300.

susceptible to monitoring, are not considered in the negligence calculus.[92] Analogously, Russell Korobkin suggests that courts should focus on non-salient contract terms when evaluating the inherently multidimensional nature of unconscionability, because market forces (including consumers and firms) are likely to focus only on salient terms in appraising the desirability of a contract.[93]

The existence of a perverse incentive to undersupply preferred services may seem inconsistent with the self-interest of local officials. After all, I have postulated above that local officials have incentives to act in a manner that maximizes opportunities for re-election, and that objective is not well served by the suboptimal provision of salient services, such as policing. In addition, to the extent that defined interests can distort the budgetary decisions of local officials, one might imagine that organized public sector employees would constitute an effective group against the artificial reduction of the services that they provide. But the desire to offload debt to ultimately have additional resources to provide needed services to residents may serve as a powerful counter to those forces, as evidenced by the willingness of local officials to enter Chapter 9, notwithstanding the inevitable risks that doing so pose for discrete interests that include subgroups of residents such as pensioners or public sector employees.[94] Indeed, to the extent that courts have tended to favor local pensioners or employees over nonresident bondholders, as in *Detroit*, local officials may be able to convince residents such as employees that short-term costs they suffer from fiscal distress can be offset by long-term benefits available only through bankruptcy eligibility.

Ultimately, the issue of whether the presence of both observable and unobservable measures of quality for a multidimensional activity perversely distorts decision-making is an empirical one. But studies of analogous decisions by municipal officials provide at least some evidence for the claim that local officials prioritize expenditures strategically. Figlio and O'Sullivan, for example, found that local officials whose budgets are subject to tax caps with electoral overrides

---

92. *See* Steven Shavell, *Strict Liability Versus Negligence*, 9 J. LEGAL STUD. 1, 17–18 (1980).

93. *See* Russell Korobkin, *Bounded Rationality, Standard Form Contracts, and Unconscionability*, 70 U. CHI. L. REV. 1203, 1207 (2003).

94. *See* Hillary Russ, *Bankruptcy Saves Tiny Rhode Island City, but Leaves Scars*, REUTERS (Sept. 3, 2012, 8:10 PM), https://www.reuters.com/article/us-usa-rhodeisland-centralfalls-bankrupt/bankruptcy-saves-tiny-rhode-island-city-but-leaves-scars-idUSBRE88300220120904 [https://perma.cc/3CCF-QHBC].

allow services that are salient to constituents to deteriorate, while funding for less salient administrative services remains at relatively constant levels.[95] That finding is consistent with a prediction that local officials will make decisions that increase the likelihood that voters will approve a tax cap override. In their study, Figlio and O'Sullivan found that the ratio of uniformed police officers to police administration and the ratio of teachers to school administrators increased after imposition of a tax limit in no-override jurisdictions. But those ratios decreased in jurisdictions that allowed electoral overrides.[96]

In separate studies, Figlio concluded that schools subject to tax limitations reduce instructional budgets more than administrative budgets.[97] Phuong Nguyen-Hoang concluded that small city school districts in New York that held budget referendums tended to reduce instructional spending and increase student-teacher ratios while preserving administrative spending.[98]

Contrary evidence does exist. Dye and McGuire concluded that tax limitations in Illinois reduced total operating expenditures by school districts, but did not reduce instructional spending.[99] But the existence of some evidence of budget manipulation belies the assumption that rational local officials, who presumably have re-election as a primary objective function, would not reduce salient services that jeopardize the likelihood of electoral success.

Certainly, pervasive low levels of services, reductions in basic services, increases in crime rates, or deterioration of infrastructure are indicia of an inability to balance a municipal budget, and thus evidence of insolvency that is remediable through debt adjustment. It is not clear, however, that service delivery insolvency can serve as a valid proxy for a locality's fiscal capacity when conclusions about that

---

95. *See, e.g.*, David N. Figlio & Arthur O'Sullivan, *The Local Response to Tax Limitation Measures: Do Local Governments Manipulate Voters to Increase Revenues?*, 44 J. L. & ECON. 233, 233–35 (2001).

96. *See id.* at 252–53.

97. *See, e.g.*, David N. Figlio, *Short-Term Effects of a 1990s-Era Property Tax Limit: Panel Evidence on Oregon's Measure*, 51 NAT'L TAX J. 55, 55–57, 67 (1998); David N. Figlio, *Did the "Tax Revolt" Reduce School Performance?*, 65 J. PUB. ECON. 245, 246–48 (1997).

98. *See, e.g.*, Phuong Nguyen-Hoang, *Fiscal Effects of Budget Referendums: Evidence from New York School Districts*, 150 PUB. CHOICE 77, 77–78 (2012).

99. Richard F. Dye & Therese J. McGuire, *The Effect of Property Tax Limitation Measures on Local Government Fiscal Behavior*, 66 J. PUB. ECON. 469, 485 (1997).

condition are predicated on selective evidence, especially evidence that may be non-representative or vulnerable to manipulation.

III. ALTERNATIVE OR COMPLEMENTARY MEASURES OF INSOLVENCY

I have suggested that service delivery insolvency, albeit theoretically rational as a basis for bankruptcy, suffers from measurement difficulties, potentially weak causal relationships between service reductions and the need for debt adjustment, and incentives it creates for strategic reductions in service.[100] Even if I am correct, the response would not necessarily be to abandon the concept of service delivery insolvency as a measure of the need for debt adjustment. Again, local service delivery defines the nature and objective of local governments, so failure to provide local public goods is certainly relevant to the question of a need to enter the bankruptcy process.[101] Is there, then, some means by which to refine or supplement the concept of service delivery insolvency when determining eligibility for Chapter 9? I conclude with observations about two potential measures that may serve as alternative or complementary proxies for the need to adjust municipal debt.

One common characteristic of distressed cities is population decline. Significant exit may be the proverbial canary in the coal mine. That conclusion follows from the assumption above that localities attract taxpayers by offering a basket of goods and services at a tax price that potential residents find attractive. The implication is that a city that charges tax prices but fails to provide desired services at a level commensurate with those prices, perhaps because too many tax dollars are spent servicing legacy debt, are likely to lose mobile residents. Moreover, since bankruptcy involves adjustment of outstanding debt, shrinking population may be a valid measure of eligibility, since population declines imply that the per capita debt of the municipality is increasing, and plausibly doing so in a manner that induces additional exit.

Certainly, population declines seem to have some relationship with insolvency. The court in the Detroit bankruptcy classified the city's 63% decline in population between 1950 and 2012 as one of the causes of fiscal distress.[102] Indeed, Detroit's population decreased by 25% from 2000 to 2010 and has continued to decline from 714,000 in

---

100. *See* discussion *supra* pp. 1227–37.
101. *See* discussion *supra* pp. 1220–28.
102. *In re* City of Detroit, 504 B.R. 97, 119 (Bankr. E.D. Mich. 2013).

2010 to approximately 673,000.[103] New York City's population declined from 7.9 million in 1970 to under 7.1 million in 1980, a decade of fiscal crisis and economic decline.[104] Anderson documents other cases in which cities lose significant portions of their population, including a dramatic decline in East St. Louis from 82,000 to 27,000 over a fifty-year period.[105]

Population declines, however, may overdetermine fiscal distress. We tend to think of population increases as the norm and thus identify population declines with the presence of a pathology. But some cities adapt to population declines and either thrive or at least avoid severe fiscal distress. Pittsburgh is often held up as a model of a city that has survived transition from a manufacturing economy, even though its population has declined from 370,000 in 1990 to a current population of under 302,000.[106] Philadelphia's current population of approximately 1.58 million matches its population in 1990, even though it had dipped to 1.44 million in 1998.[107] In short, some cities are able to respond to population declines in a manner that avoids debt adjustment. Nevertheless, there are barriers to adjusting to a reduced population, not the least of which is that fixed cost of legacy debt means that those who remain within a municipality are likely to bear a higher per capita cost to pay for expenditures from which no new benefit can be expected. As municipal budgets are subject to constraints, high legacy costs leave less discretion for municipal officials to pay for additional goods and services that might stabilize or augment current delivery levels. For example, the court in *Detroit* concluded that "[d]uring 2012, 38.6% of the City's revenue was consumed servicing legacy liabilities. The forecasts for subsequent years, assuming no restructuring, are 42.5% for 2013, 54.3% for 2014,

---

103. *QuickFacts: Detroit City, Michigan*, U.S. CENSUS BUREAU, https://www.census.gov/quickfacts/fact/table/detroitcitymichigan,US/PST045218 [https://perma.cc/GVZ5-5EG2] (last visited Jan. 20, 2020).

104. *NYC Population by Borough*, N.Y.C. OPEN DATA, https://data.cityofnewyork.us/City-Government/New-York-City-Population-by-Borough-1950-2040/xywu-7bv9/data [https://perma.cc/WJY5-9EAR] (last visited Jan. 20, 2020).

105. Anderson, *supra* note 42, at 1137–38.

106. *Pittsburgh, Pennsylvania Population 2019*, WORLD POPULATION REV. (Oct. 29, 2019), http://worldpopulationreview.com/us-cities/pittsburgh-population/ [https://perma.cc/4UKE-TZBE].

107. U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES 40 (2000) (reporting figures from 1990 and 1998); *QuickFacts: Philadelphia County, Pennsylvania*, U.S. CENSUS BUREAU, https://www.census.gov/quickfacts/philadelphiacountypennsylvania [https://perma.cc/3GM5-TXW2] (last visited Jan. 20, 2020).

59.5% for 2015, 63% for 2016, and 64.5% for 2017."[108] Since the alleviation of debt burdens is a primary objective of bankruptcy proceedings, declining population may signal the propriety of using Chapter 9.

Population declines may also underdetermine fiscal distress. The population of Vallejo remained relatively static during its period of insolvency, increasing slightly from 116,600 in 2000 to over 120,000 in 2014.[109] Stockton's population increased from approximately 292,000 to just under 305,000 between 2010 and 2015.[110] San Bernardino's population remained relatively stable during that same period.[111] This phenomenon seems inconsistent with Tieboutian sorting, which predicts significant exit from localities that offer few of the services that residents prefer. But it is consistent with findings that mobility among Americans has declined generally and particularly within areas that have suffered significant job losses—findings on which David Schleicher relies to study the effects of local government policies on inhibiting exit.[112] To the extent that unemployed or underemployed workers fail to migrate to areas where jobs exist, thus entrenching low employment rates in distressed cities, it is population stability, rather than population decline, that may foreshadow a need to offload debt.

That brings me to my final point about the utility of service delivery insolvency as a measure of the need for municipal debt adjustment. Population changes may be relevant to the inquiry to the extent that one recognizes that population statistics entail more than just numbers. The importance of significant exit for the insolvency determination may depend on *who* exits. If those who exit consumed more services than they paid for, then exit will not necessarily betoken fiscal distress. I am not suggesting that those who are subsidized are necessarily the relatively poor. The relatively wealthy may enjoy benefits from services like police and fire protection disproportionate to their payments simply because they have more property that is

---

108. *In re* City of Detroit, 504 B.R. 97, 115 (Bankr. E.D. Mich. 2013).

109. *Population of Vallejo, CA*, POPULATION.US, https://population.us/ca/vallejo/ [https://perma.cc/X375-YNZ2] (last visited Jan. 20, 2020).

110. *Population of Stockton, CA*, POPULATION.US, https://population.us/ca/stockton/ [https://perma.cc/NE29-XE62] (last visited Jan. 20, 2020).

111. *See Population of San Bernardino, CA*, POPULATION.US, https://population.us/ca/san-bernardino/ [https://perma.cc/3X9R-6Z2P] (last visited Jan. 20, 2020) (showing that the population of San Bernardino increased by less than 4,000 people between 2010 and 2015).

112. *See* Schleicher, *supra* note 48, at 81–83 (describing the various reasons for the decline in mobility).

being protected or because some of their costs are offset by abatements.

But if those who exit tend to be net payers, i.e., those who pay more in taxes than they receive in services, then their departure leaves fewer residents to support increased per capita expenditures, thus creating the "death spiral" noted by some courts and commentators.[113] An equally disruptive reaction by relatively wealthy residents who prefer not to exit would be to vote for a reduction of public services for which they can find substitutes in the private market. Think, for example, of individuals and firms who substitute private security guards for policing, private garbage pickup for public sanitation, private schools for public ones, or country clubs for public parks. The consequence is that some public services could deteriorate significantly, notwithstanding population stability, as mobile residents remain, but substitute privately supplied goods for publicly provided ones, and immobile residents remain, but suffer service reductions. I am not recommending such a course of action, given its inevitable distributive effects. I am, however, observing that even stable populations in cities with significant income inequality may suffer from a deterioration of publicly provided services that may cry out for remedy, including the possibility of debt adjustment.

Relatedly, even where exit occurs, it is unlikely to be evenly distributed throughout a municipality. Where those who exit are either tenants or homeowners who have surrendered their homes due to inability to pay carrying costs, and who are not replaced by new residents, there is a risk that exit creates deserted pockets even within otherwise robust areas of cities. Michelle Anderson documents that "[i]n San Bernardino, California, for instance, 876 units became unoccupied in just three years (2006-2009), and many of those vacancies were spatially concentrated in particular neighborhoods."[114] Detroit may be the poster child for such effects. The bankruptcy court concluded that the city contained 78,000 abandoned and blighted buildings that had to be demolished at an average cost of $8,500 per structure.[115]

The externalities of vacant pockets on a neighborhood are well documented. Blighted or vacant land affects perceptions of safety, and for good reason, since those same areas are associated with higher

113. *See, e.g.*, *In re* City of Colorado Springs Spring Creek Gen. Improvement Dist., 177 B.R. 684, 690 (Bankr. D. Colo. 1995); *In re* Sullivan Cty. Reg'l. Refuse Disposal Dist., 165 B.R. 60, 66 (Bankr. D.N.H. 1994); Hunt, *supra* note 12, at 556.

114. Anderson, *supra* note 42, at 1138.

115. *In re* City of Detroit, 504 B.R. 97, 120 (Bankr. E.D. Mich. 2013).

rates of crime, violence, and nuisance.[116] But the relevant point for insolvency relates back to the prior discussion concerning what allows cities to thrive in the first instance. I noted above that the Tieboutian model of sorting through highly atomized, apolitical individuals is disrupted by the presence of agglomeration benefits.[117] There is a significant literature that reveals that agglomeration effects increase the productivity of a locality.[118] Those benefits arise from different forms of agglomeration, but their common characteristic is that they involve interactions among different individuals or firms within small geographic spaces. The interactions may be among competitors who share ideas and develop jointly what neither would develop individually.[119] Or it may involve different firms that cooperate as suppliers, buyers, transporters, or advisors.[120] Think of the desire of a firm to reduce transactions costs by locating nearby its customers on both the buyer and seller side, its transportation network, its bank, and its attorneys. Or it may involve interactions among individuals from different cultures who use similar products for different purposes, a phenomenon that may be as simple as people who make different foods from the same products, or who use playing fields for different games, in each case allowing more efficient use of the commonly used resource. Agglomeration benefits of this nature typically take the form of knowledge spillovers from one group of individuals to another. John Quigley's demonstration of a relationship between diversity and economic growth relies explicitly on such sharing of resources and information.[121] Agglomeration of firms can also reduce spatial mismatches between jobs and place of residence, a phenomenon that

---

116. *See* Charles C. Branas et al., *Citywide Cluster Randomized Trial to Restore Blighted Vacant Land and Its Effects on Violence, Crime, and Fear*, PNAS (Mar. 20, 2018), https://www.pnas.org/content/115/12/2946 [https://perma.cc/6RFX-TFHP].

117. *See* discussion *supra* pp. 1231–37.

118. *See* EDWARD L. GLAESER, CITIES, AGGLOMERATION AND SPATIAL EQUILIBRIUM 116–64 (2008). *See generally* W. Walker Hanlon & Antonio Miscio, *Agglomeration: A Long-Run Panel Data Approach*, 99 J. URB. ECON. 1 (2017) (addressing some of the "sources of agglomeration economies in cities").

119. *See, e.g.*, ANNALEE SAXENIAN, REGIONAL ADVANTAGE (1996) (explaining differences between the different paths of high technology in Silicon Valley and the Route 128 area of Boston in terms of cooperation among competing firms).

120. *See* David Schleicher, *The City as a Law and Economic Subject*, 2010 U. ILL. L. REV. 1507, 1509–10 (2010).

121. *See* John M. Quigley, *Urban Diversity and Economic Growth*, 12 J. ECON. PERSP. 127, 130–32 (1998).

researchers suggest especially adversely affects black workers.[122] Neighborhood effects, in which institutions necessary to the development of social capital are created and supported, increase economic outcomes by providing references that may enhance job opportunities.[123] The positive benefits of agglomeration are sufficiently great that some commentators have celebrated the recent withdrawal of Amazon from New York City as a location for its HQ2 as creating the prospect that the firm will form smaller clusters of employees in other locations, thus generating more agglomeration effects in localities more needful of them.[124]

As I have noted above, agglomeration may distort decision-making by prompting residents to remain when they might otherwise emigrate because they would lose network benefits in excess of the gains they would obtain from exit. A firm that receives benefits from proximity to other firms is unlikely to exit, notwithstanding that the municipality charges for services that the firm does not utilize, as long as those charges do not exceed the value of its current locational benefits. Those same benefits may be essential to the economic growth of cities, largely because they allow the formation of clusters, each member of which has incentives to remain, even if those same members would exit under the conditions that underlie Tieboutian sorting. Agglomeration benefits, however, require the density that characterizes urban areas, and the repeat play among community members that characterizes successful urban areas. There is at least some evidence that agglomeration benefits dissipate rapidly beyond short geographical distances.[125] Thus, those who wish to take advantage of these benefits cannot readily migrate far from the cluster that generates them; instead, they must stay in a relatively concentrated geographic area.

In short, maybe Jane Jacobs was right after all. While she did not speak in the economic jargon of agglomeration, her appeal that cities serve as a focal point for "all kinds of diversity, intricately mingled in

---

122. *See* Giorgio Topa & Yves Zenou, *Neighborhood and Network Effects*, *in* 5A HANDBOOK OF REGIONAL AND URBAN ECONOMICS 561, 599–600, 608–13 (2015); Yves Zenou, *Spatial Versus Social Mismatch*, 74 J. URB. ECON. 113, 113 (2013).

123. *See, e.g.*, Topa & Zenou, *supra* note 122, at 611; Patrick Bayer et al., *Place of Work and Place of Residence: Informal Hiring Networks and Labor Market Outcomes*, 116 J. POL. ECON. 1150, 1150–96 (2008).

124. *See, e.g.*, Christopher Mims, *Amazon's About-Face Is Good for the Rest of America*, WALL STREET J., Feb. 16, 2019, at B1.

125. *See, e.g.*, Stuart S. Rosenthal & William C. Strange, *Geography, Industrial Organization, and Agglomeration*, 85 REV. ECON. & STAT. 377, 377 (2003).

mutual support," amounts to a description of agglomeration benefits. It was on this basis that Jacobs advocated the mixed uses of neighborhoods, the need to "hamper excess duplications at one place, and divert them instead to other places in which they will not be excess duplications, but healthy additions," and the "convenience of being very close to one another."[126]

But understanding the potential of agglomeration for the economic development of localities also reveals the converse. At some point, the costs imposed on firms and residents for services from which they do not benefit may become so great as to outweigh the agglomeration benefits associated with residing within a municipality. At that point, mobile residents and firms have incentives to exit rather than to remain and perhaps to induce similarly situated residents also to exit and to form a new cluster elsewhere. To the extent that agglomeration is responsible for retaining interdependent residents and generating economic value for the municipality, exit by members of the network implicates the potential for additional residents to exit, since each individual departure reduces the agglomeration benefits available to those that remain.

That does not mean that agglomeration affects all residents or all residents to the same degree. Some industries may not be very concentrated or connected with other local firms, so that the loss of a firm from the locality does not necessarily signal significant loss of agglomeration benefits.[127] Other industries, however, may be sufficiently concentrated that departure by multiple members could be associated with a loss of agglomeration benefits sufficiently great to cause fiscal distress that could not easily be redressed without some form of intervention. The exit of insurance companies from Hartford may be more problematic than the exit of other firms of equal size, simply because it signals a potential breakdown of an existing cluster. Agglomeration effects could also be affected by city size or by the role of a particular firm within the local network. For example, Hanlon and Miscio conclude that the presence of local suppliers is crucial to city growth.[128] Loss of local suppliers, one might argue, is therefore a stronger signal of continuing fiscal distress without intervention than

---

126. JANE JACOBS, THE DEATH AND LIFE OF GREAT AMERICAN CITIES 241, 250, 252 (1961) (noting that firms enjoyed the convenience that, in order to achieve personal convenience, had economic power to create stagnating duplication).

127. *See* GLAESER, *supra* note 118, at 128–30.

128. *See* Hanlon & Miscio, *supra* note 118, at 8 (finding that a one standard deviation increase in the presence of local suppliers increases city-industry growth by 14.4%).

the loss of other firms. Similarly, they find that within-industry agglomeration effects are less than across-industry effects for purposes of city growth.[129] Thus—and perhaps contrary to my example of Hartford above—exit by a firm in an industry that remains well represented in the city may be less important than loss of a firm that is not otherwise represented.[130] Other researchers similarly find that the character of firms affects the extent to which they generate agglomeration benefits within a locality. Rosenthal and Strange, for example, find that agglomeration economies that arise from spatial concentration in a given industry dissipate rapidly if a firm is located within five miles of same-industry firms.[131] In short, even if exit and population decline do not necessarily signal fiscal distress, the identity of *who* exits may matter.

Theoretically, therefore, an understanding of the sources and consequences of agglomeration could tell us a great deal about the fiscal prospects of distressed localities and about specific measures that localities might take to enhance fiscal stability.[132] Combes and Gobillon note the potential of measuring agglomeration economies:

> Generally speaking, an accurate estimation of the magnitude of agglomeration economies is required when one tries to evaluate the need for larger or smaller cities. If one were to conclude that the current city size distribution is not optimal, such an evaluation [would be] necessary for the design of policies (such as taxes or regulation) that should be implemented to influence agents' location choices toward the social optimum.[133]

More to the point, demonstrable declines in agglomeration benefits could, more than population declines or rough measures of service delivery insolvency alone, inform judgments about the potential sources of fiscal distress and the likelihood that debt adjustment would be appropriate. If population decline is largely attributable to exit by firms that tend to generate local agglomeration benefits, then continued and declining fiscal distress is more likely to occur without

---

129. *See id.* at 13.

130. Perhaps the contrary conclusions can be reconciled. The first insurance firm to leave Hartford may not have a significant effect on the agglomeration benefits that remain, but subsequent losses of other insurance firms may generate a dramatic loss of such benefits.

131. *See, e.g.*, Rosenthal & Strange, *supra* note 125, at 387.

132. *See generally*, Pierre-Philippe Combes & Laurent Gobillon, *The Empirics of Agglomeration Economies*, *in* 5 HANDBOOK OF REGIONAL & URBAN ECONOMICS 247 (Gilles Duranton et al. eds., 2015) (proposing an integrated framework for addressing the local determinants of effects from agglomeration).

133. *Id.* at 249.

intervention than if population decline results from exit that creates less of a reduction of those benefits.

Analyzing the consequences of depopulation in this manner, however, requires measurements of agglomeration with a degree of reliability and consistency that has thus far eluded researchers. Even prominent researchers in the field conclude that "the empirical quest to accurately measure such economies has proven to be quite difficult."[134] The initial inquiry into the existence of agglomeration benefits is relatively straightforward. Take, for example, the initial issue of whether firms or employees in a region are clustered enough to suggest that agglomeration effects might be a factor.[135] To measure how specialized a region is, one can either focus on the physical location of plants or look at relative employment within a particular industry in a region.[136] The physical location of an industry's plants determines the concentration of a particular industry's plants in a region relative to the concentration of plant locations for all other industries within that region.[137] The resulting "dissimilarity measurements" will have a value of zero if the relative spatial distribution of an industry in a region is comparable to the distribution of all other industries.[138] To examine labor pooling, one can measure the share of employment in a particular industry within a region relative to all other occupations of employment within the region.[139] A dense metropolitan hub might have both spatial concentrations of offices and many people employed within a particular industry. One of the better-known examples of this phenomenon would be California's Silicon Valley and its focus on technology.

Once agglomeration is established, however, the scope and value of the subsequent benefits is more difficult to calculate. The significant literature that discusses measurement of agglomeration

---

134. Edward L. Glaeser & Joshua D. Gottlieb, *The Wealth of Cities: Agglomeration Economies and Spatial Equilibrium in the United States*, 47 J. ECON. LITERATURE 983, 1001 (2009); *see also* Stuart S. Rosenthal & William C. Strange, *Evidence on the Nature and Sources of Agglomeration Economies*, *in* 4 HANDBOOK OF REGIONAL & URBAN ECONOMICS 2119, 2126–32 (J. Vernon Henderson & Jacques-François Thisse eds., 2004).

135. *See generally* Ryohei Nakamura & Catherine J. Morrison Paul, *Measuring Agglomeration*, *in* THE HANDBOOK OF REGIONAL GROWTH & DEVELOPMENT THEORIES 305, 307 (Roberta Capello et al. eds., 2009) (focusing on the measurement of economic agglomeration in the context of clustering).

136. *See id.*

137. *See id.*

138. *See id.* at 307.

139. *See id.* at 308.

effects reveals significant variation in both methodology and results. For example, different studies use employment, population, density, or production as the relevant variable to measure local economy size.[140] To some extent, the variations reflect the different sources of agglomeration benefits, each of which is susceptible to different units of measurement. Those benefits may arise as a consequence of reduced transportation costs, as when suppliers and buyers locate near each other; or from the exchange of ideas where density facilitates frequent interactions among individuals and firms; or because dense labor markets permit more efficient matching of jobs and skills.[141] Thus, a full understanding of a firm's contributions to the agglomeration economies within an area would have to determine how best to measure each of those possibilities.

But even researchers who focus on a single source of agglomeration benefits may not agree on how best to determine their scope. Debates exist in the literature, for example, over issues such as whether and how to measure the effects of industrial diversity within a locality,[142] whether productivity—if used as an indicator of agglomeration effects—should be measured by total factor production or wages,[143] and the point at which congestion among firms within a locality could actually negatively affect local productivity.[144] Data problems affect the reliability of many studies and methodological approaches.[145] Endogeneity issues may complicate the effort to disaggregate agglomeration benefits from other factors that affect productivity, as when a variable missing from the calculation influences both local outcomes and local characteristics, or when

140. *See, e.g.*, Combes & Gobillon, *supra* note 132, at 271.

141. *See* Glaeser & Gottlieb, *supra* note 134, at 1001–14.

142. *See, e.g.*, Gilles Duranton & Diego Puga, *Micro-Foundations of Urban Agglomeration Economies*, *in* 4 HANDBOOK OF REGIONAL AND URBAN ECONOMICS 2063, 2064 (J. Vernon Henderson & Jacques-François Thisse eds., 2004); Combes & Gobillon, *supra* note 132, at 276–77. *See generally* Rosenthal & Strange, *supra* note 125 (discussing broadly "how the organization of economic activity . . . affects the value of agglomeration").

143. *See* Combes & Gobillon, *supra* note 132, at 282–84.

144. *See, e.g.*, Pierre-Philipp Combes & Miren Lafourcade, *Competition, Market Access and Economic Geography: Structural Estimation and Predictions for France*, 41 REGIONAL SCI. & URB. ECON. 508, 510 (2011) (acknowledging the overcrowding issue).

145. *See, e.g.*, Combes & Gobillon, *supra* note 132, at 247, 268 (discussing issues with study variables and suggestions for resolving them); Hanlon & Miscio, *supra* note 118, at 2 (discussing historical issues with data availability).

workers make location decisions based on individual characteristics for which there has not been any control in the specification.[146]

Nevertheless, it is not clear that the imprecision inherent in measurements of agglomeration benefits undermines their utility as a gauge of the need for debt adjustment. That is true for two reasons. First, the task of the court is not to measure the loss of agglomeration benefits with exactitude. Even rough measures of agglomeration reductions may be sufficient to send the signal for which a court is looking, that is, that there is sufficient evidence of irreversible fiscal distress to foresee a downward spiraling local economy without some form of fiscal intervention.

Second, even if one acknowledges that agglomeration benefits are crucial to the economic success of a municipality, there may be proxies for the loss of those benefits that are more amenable to judicial interpretation than economic studies. A municipality presumably seeks residents who can generate aggregation benefits because those effects increase productivity within the locality. Increased productivity should be capitalized into land values, so that increases in agglomeration effects should be reflected in higher property values within the municipality.[147] Conversely, a reduction in local agglomeration benefits should be accompanied by a reduction in local property values. While property valuation procedures may be opaque, reductions in property values over time should be observable by courts, by looking, for instance, at residential and commercial sale and rental statistics over time or from property tax calculations based on metrics that have been applied consistently over time. Of course, reduced property values could reflect many factors other than a decline in agglomeration benefits. And population declines will typically be accompanied by reductions in property values in the short term, simply because those declines imply that the existing housing stock faces reduced demand. But that does not mean that declines in population, property values, and agglomeration are similarly correlated in all cases. Again, the objective of the judicial inquiry is not to establish with scientific certainty that agglomeration benefits have declined to a given extent. Rather, the objective is to determine whether that decline is sufficiently severe to warrant debt adjustment as a means of allowing a municipality to recover from fiscal distress.

---

146. *See* Combes & Gobillon, *supra* note 132, at 3.

147. *See, e.g.*, Matthew Drennan & Hugh F. Kelley, *Measuring Urban Agglomeration Economies with Office Rents*, 11 J. ECON. GEOGRAPHY 481, 481–82 (2011) (measuring agglomeration economies by examining changes in office rents in urban areas).

Thus, some direct, albeit imprecise, measures that reveal a decline in agglomeration benefits, in tandem with more precise evidence that property values in the distressed municipality have declined by a greater extent than can be accounted for by lower demand alone, may be at least useful evidence for satisfying the statutory requirement of insolvency.

CONCLUSION

Courts and commentators who have sought an appropriate metric to balance the need for municipal debt relief and the expectations of creditors have rightly focused on the inadequacies of current legal measures. Service delivery insolvency provides a certain degree of promise insofar as it reflects both the failure of a locality to supply the public goods for which the municipality has been created and the low prospects of recovery without some degree of fiscal intervention. In practice, however, the use of service delivery failure as a proxy for insolvency suffers from its own inadequacies of susceptibility to mismeasurement, non-representativeness of one service for the entire bundle of municipal services, and the possibility that it will be vulnerable to strategic manipulation. Other potential stand-alone proxies, such as population declines, are at best indicative of fiscal distress, but provide insufficient evidence of the need for debt adjustment. The developing inquiry, if not science, of measuring the agglomeration economies that are the defining characteristic of dense urban areas may offer some promise for an evaluation of a locality's current fiscal condition and future fiscal prospects. To the extent that inquiry into the loss of agglomeration benefits, either alone or combined with other measures, can be harnessed with some reliability, courts may be able to make better predictions of the need for and desirability of using the bankruptcy process to balance municipal service needs and creditor expectations.