

Reflections on Measuring Urban Fiscal Health

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This paper considers several distinct but related aspects of what we are doing when we attempt to measure and evaluate the fiscal health of cities: How is the fiscal health of cities defined in the literature? How is this concept related to fiscal sustainability? How may fiscal health be measured in practice? To what extent may fiscal health indicators be interpreted as representing local fiscal effort or performance?

In Canada, as in the world more generally, governments, organizations, and researchers have been increasingly attempting to measure urban fiscal health in a number of ways and for a variety of purposes. This paper considers several distinct but related aspects of what we are doing when we attempt to measure and evaluate the fiscal health of cities: How is the fiscal health of cities defined in the literature? How is this concept related to fiscal sustainability? How may fiscal health be measured in practice? And to what extent may fiscal health indicators be interpreted as representing local effort or the performance of particular local governments? After reviewing briefly some recent literature on local fiscal health, the discussion focuses on three questions: Why is the fiscal health or fiscal sustainability of cities of interest? How can urban fiscal health be measured? And, finally, what can we learn from such exercises?

DEFINING FISCAL HEALTH

Much of the current interest in measuring urban fiscal health arises from concern with urban fiscal stress. The recent financial and economic crises in many countries have given rise to urban financial problems that have

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become an increasing focus of attention even at the international level. Recently, for example, the World Bank has issued documents with titles such as “The Great Recession and the Future of Cities” (Dethier and Merrill, 2012) and *Until Debt Do Us Part* (Canuto and Liu, 2013), and the Organisation for Economic Co-operation and Development (OECD) has put out a publication on subnational finances with the evocative subtitle “Walking on Thin Ice” (Vermalle and Hulbert, 2013). For especially gloomy views of fiscal health and fiscal sustainability—appraisals of, respectively, the current state of government finance and its long-run prospects¹—the “go-to” international organization has long been the International Monetary Fund (IMF), so it is not surprising that the IMF has also in recent years been paying increasing attention to such problems at the subnational level.² All in all, the fiscal news for cities has seldom been good in recent years.

As times have become harder, the fiscal performance, solvency, and sustainability of cities and other local governments have been attracting more attention in many countries around the world, developed and developing alike.³ Interest in this subject in the United States, which pioneered in many respects in the analysis of local fiscal health, has also been stimulated by recent events, producing both interesting empirical analyses of such questions as “The Impact of the Great Recession and the Housing Crisis on the Financing of America’s Largest Cities”⁴ and the first book-length treatment of the conceptual and measurement issues of local fiscal health (Levine, Justice, and Scorsone, 2013) for decades. Although the Canadian literature is, as usual, much thinner than that south of the border, a number of studies of urban fiscal health viewed from different perspectives have also been produced in Canada in recent years.⁵

In particular, concern has recently been expressed about the fiscal health of Toronto and other large Canadian cities. At first glance, such concern seems

¹ Presumably any useful indicator of fiscal health should be forward looking in some sense. As discussed briefly below, “fiscal sustainability” is sometimes used narrowly as a synonym for “debt sustainability.” However, both these terms are used here a bit more loosely.

² See, for instance, IMF (2011), Baldacci et al. (2011), Schaechter et al. (2012), Baunsgaard et al. (2012), and Tanner (2013); see also World Bank (2012).

³ For some examples, see Padovani, Rossi, and Orelli (2010) and Rossi (2011) on Italy, Vigari (2010) on Hungary, Drezgic, Klimovsky, and Pinteric (2011) on Slovakia, Slovenia and Croatia, Bandyopadhyay and Rao (2009) on India, and Schoeman (2011) on South Africa.

⁴ Chernick, Langley, and Reschovsky (2011a); see also Ebel, Peterson, and Vu (2013).

⁵ See, for example, Kitchen (2000), Vander Ploeg (2001), Bird and Slack (2004), Conference Board of Canada (2005), Halifax Regional Municipality (2009), Auditor General of Nova Scotia (2010), Wolters (2011), and, from a somewhat different perspective, Dachis and Robson (2011, 2014).

a bit puzzling because most of the available evidence suggests that Canadian municipalities as a whole are fiscally healthy. In Ontario, for example, no cities have run deficits in their operating budgets, which is not surprising because they are not allowed to do so. In addition, however, no city has borrowed excessively to pay for capital expenditures, none has raised property taxes significantly, and none has run up large tax arrears. At the same time, all cities have become less reliant on provincial grants—although this was not necessarily a result of their choosing. Perhaps the real cause for concern is that the prudence evident in most municipal fiscal accounts may have been achieved in part at the expense of the overall health of cities.

The fundamental fiscal health of a city has less to do with balancing its budget than with the quantity and quality of services provided and the state of municipal infrastructure. In the Greater Toronto Area (GTA), for example, there is evidence of continuing and perhaps even increased problems in terms of poverty and homelessness as well as increasing awareness that investment in the infrastructure needed to support continued economic growth—transit, roads, water, and sewers, for example—falls short of what seems to be required.⁶

For many reasons, much has been said recently in many countries about urban fiscal stress, fiscal health, and fiscal sustainability. In fact, however, there is no uniquely correct concept of the financial condition of local governments and, hence, no one way to measure fiscal health. Indeed, as a useful recent survey notes: “Financial condition is less a state of being than a dynamic and fluid process” (Jacob and Hendrick, 2013, p. 35). This point is illustrated in Table 1, which distinguishes four concepts, all of which are sometimes labeled “solvency,” although it seems more useful to think of them as different ways of characterizing the ability of local governments to achieve (to some extent over different time periods) balance between what they want to do (or are required to do) and what they are able to do.

Perhaps the most common single measure used to assess the fiscal health of a government is the size of its net operating surplus—current revenues less current expenditures. More precisely, the preferred measure is usually the so-called “primary surplus”—a measure that ignores not only annual capital expenditures (investment) and capital revenues (borrowing less debt repayment) but also interest payments (current debt service). The reason is because it is this measure that most clearly indicates that a government is capable of covering its debt and is thus operating within what economists call its “intertemporal budgetary constraint” (Tanner, 2013). Leaving aside issues that may arise from the kind of incomplete accrual accounting common in most municipal systems, such a measure

⁶ See, for example, Metroland (2014) on infrastructure and Poverty Watch Ontario (2008) and James (2012) on poverty.

Table 1: Assessing the Financial Condition of Local Governments			
Solvency Concept	Definition	Objective	Determinants
Cash	Cash flow solvency	Pay the bills	<ul style="list-style-type: none">• Fiscal shocks• Fiscal slack (unused capacity)
Budgetary	Balance in fiscal year	Meet financial obligations	<ul style="list-style-type: none">• Extent and nature of risk• Extent of fiscal slack
Service level	Balance between near-term obligations, actual spending, and revenues collected	Provide adequate services to meet “needs” (or requirements)	<ul style="list-style-type: none">• Legal mandates• Political constraints• Vulnerability to shocks
Long-run	Balance in long run between available revenues and spending needs	Meet all obligations, both financial and in terms of service level	<ul style="list-style-type: none">• Economic conditions• Institutional constraints• Long-term liabilities, assets• Risk, uncertainty
Source: Based largely on Jacob and Hendrick (2013) and Justice and Scorsone (2013). These concepts may be traced back at least to Groves, Godsey, and Shulman (1981).			

is certainly conceptually useful, at least when cities are allowed to run current surpluses or deficits (which in general is not the case in Canada).⁷ However, the primary surplus standard is far from perfect, for example, because it tends to understate capital costs by ignoring the differences between economic depreciation and debt service and can be manipulated to understate costs further by reducing outlays for maintenance. Moreover, even if capital costs are perfectly measured, judging the “fiscal health” of cities against this standard rests on a number of inherently implausible assumptions: for example, that the present urban capital stock as well as the level of services currently provided and the current revenue system are all optimal. In reality, because neither the primary surplus nor any other single measure of fiscal health encompasses all the dimensions mentioned in Table 1, perhaps the main conclusion that emerges to this point is that separate measures are likely needed for each key dimension.

⁷ Dachis and Robson (2011, 2014) argue strongly for fuller, consistent, and comprehensive municipal accrual accounting. However, as Municipal Finance Officers Association (MFOA; 2011, 2014) argues in response, although substantial movement in this direction is certainly desirable (and has already been mandated in Ontario), it is not clear that all municipal financial budgets and accounts can or should meet this demand.

Such measures may be obtained in a number of ways. One way is to analyze trends in various indicators in order to compare present (or expected future) performance with past experience. (Nollenberger, Groves, and Valente, 2003) An alternative approach, more popular with economists, is to make comparisons within certain groups by establishing the average performance of some relevant comparator group, for example by regression analysis (Ladd and Yinger, 1989) or, less commonly, by a “representative” approach (ACIR, 1988), as the relevant norm or standard against which to assess the performance of any particular government. Or performance may be evaluated through a broader “benchmarking” exercise (Sohl et al., 2009). In practice, benchmarking often combines elements of the two approaches just mentioned as well as some external reference norm.⁸ Sometimes, although one should be properly skeptical both about how meaningful any linear combination of such indicators is likely to be (Jacob and Hendrick, 2013) and also about the arbitrariness of most such exercises (Slack, Tassonyi, and Grad, forthcoming), different measures for different dimensions are grouped, scaled, and aggregated in some way or other to obtain a more comprehensive “index” of financial condition.

A recent survey of the extensive U.S. literature concludes that because local fiscal health is “multidimensional, often context specific, and its causal factors operate in nonlinear ways,” it is better “to embrace this complexity as opposed to trying to simplify it into a few core components” (Jacob and Hendrick, 2013, p. 36). Nonetheless, a companion paper in the same volume suggests some guidelines with respect to measuring the “complex, normative . . . and . . . to some degree audience specific” concept of fiscal health, noting that, as already suggested, although no one measure will serve all needs, some approaches are clearly better than others for certain purposes (Justice and Scorsone, 2013, p. 43). Useful indices may, for example, readily be constructed from available financial data to assess the simpler concepts of cash and budgetary solvency set out in Table 1. However, the other two concepts in Table 1—those related to service levels and the long run—are more difficult to summarize and evaluate in any simple way “given the very large array of environmental and organizational uncertainties and contingencies that can influence governments’ fiscal health and adaptation over time” (Justice and Scorsone, 2013, p. 67). In other words, although financial indicators may provide useful signals with respect to actual or potential “health” concerns for certain cities, no system of indicators can replace detailed analysis of specific cases when it comes to longer-term concerns about fiscal sustainability.

⁸ An example is the Indian study cited above, which employs normative service standards derived from an earlier study as a standard for assessing city performance (Bandyopadhyay and Rao, 2009).

Table 2: The Public Service Accounting Board Approach		
Concept	Definition	Possible Indicators
Sustainability	Ability to maintain existing programs and services and meet financial obligations without increasing debt or taxes.	<ul style="list-style-type: none"> • Ratio of outstanding debt to annual revenue • Ratio of financial assets to liabilities
Flexibility	Ability to increase debt or taxes	<ul style="list-style-type: none"> • Ratio of debt service cost to revenues • Ratio of debt to assessment • Ratio of own-source revenues to assessment • Effective tax rate
Vulnerability	Risks (transfers, external shocks)	<ul style="list-style-type: none"> • Ratio of transfers to total revenues • Proportion of population on general welfare

A somewhat different approach to measuring financial performance was suggested some years ago in Canada by the Public Sector Accounting Board (PSAB, 2007), as summarized in Table 2.⁹ The framework suggested is broadly complementary to that in Table 1 in attempting to establish measures of a city’s financial condition that will not only assess how well it is doing but also provide a basis for considering how its policy and operational decisions might be affected by its financial health, and vice versa. In addition to suggesting some specific indicators related to levels of taxation, indebtedness, and transfers and stressing such concerns as the reliability, robustness, and coverage of the accounts the PSAB (2007) approach summarized in Table 2 is useful because it focuses not so much on “solvency” concepts as such but rather on three different but interrelated characteristics of the fiscal condition of governments—sustainability, flexibility, and vulnerability.

⁹ The PSAB was a board of the Canadian Institute of Chartered Accountants (CICA), which has recently been replaced by the Chartered Professional Accountants Canada (<http://cpacanada.ca/>). The indicators set out in PSAB (2007) are not mandatory for local or other governments but have been used in such official reports as that of the Auditor General of Nova Scotia (2010) and are currently embodied in the CICA Public Sector Accounting Handbook, available at <http://www.castore.ca/product/cica-public-sector-accounting-handbook/10>. PSAB (2012), although focusing on federal and provincial governments, presents an interesting recent perspective on how the asset-liability approach adopted by the PSAB compares to the revenue-expense approach preferred by the equivalent U.S. standard-setter for state and local government accounting, the Government Standards Accounting Board (GASB), as well as to a possible new “hybrid” approach set out in PSAB (2012). Many of the complex issues involved in public sector accounting are far from resolved. Moreover, not all governments necessarily follow all the recommendations of such bodies.

Sustainability focuses on the degree to which a government is able to maintain its existing programs and services and to meet its current financial obligations without increasing its debt or raising taxes. This concept in a sense falls between the “budgetary” and “service-level” concepts in Table 1, depending on the extent to which existing service levels are considered adequate. Continual operating deficits—or, in the more refined approach mentioned above, primary deficits—may, like an upswing in the share of debt charges in current revenues, suggest an unsustainable fiscal condition. For local governments in Canada, which must balance their operating accounts and for which measures equivalent to GDP are not available, perhaps the best available measure along these lines may be the *ratio of outstanding debt to annual revenue*, which provides an indication of the extent to which future revenue is encumbered by the need to finance past spending. However, a low debt ratio may perhaps signal not so much good municipal behavior in the sense of not borrowing excessively as the simple fact that, perhaps for very good reasons, no one is willing to lend to this municipality. A related measure, if data are available and comparable, might be the *ratio of financial assets to liabilities*, which, if less than one, indicates the extent to which future revenues are going to have to pay for past events.

In contrast, *flexibility* (which is sometimes characterized simply as revenue capacity) measures the degree to which a government can increase its debt or taxes in response to changing conditions. This concept in a sense combines the long-run and service-level concepts in Table 1. From another perspective, it focuses on one aspect of what Jacob and Hendrick (2013) call “fiscal slack,” a more general term that also takes into account not only the extent to which revenues may be increased but also the extent to which spending commitments (e.g., wages, pensions, infrastructure costs) may be reduced. As Hanniman (forthcoming) discusses, credit rating agencies similarly focus on “modifiable” budgetary items: for example, investment spending is easier to postpone than wages. Given the difficulty of obtaining easily quantifiable measures of the extent of “give” on the expenditure side, however, the indicators listed in Table 2 relate solely to the revenue side.

The choice of whether to borrow or to increase local taxation depends on such institutional constraints as borrowing or tax rate limits as well as the inherent constraint of local economic circumstances that determine the capacity of the tax base. The *ratio of debt service cost to revenues* shows the extent to which past borrowing decisions may constrain a government’s ability to meet its current commitments. For local governments in Canada with relatively limited access to own-source revenues, the relative impact of financing a given type of expenditure may perhaps be better measured relative to own-source revenues rather than current expenditures

in order to exclude the impact of transfer payments. Flexibility in this sense is captured by *the debt to assessment ratio*: a rise in this ratio implies impairment of municipal fiscal capacity either because the tax base has decreased or the demand for expenditure to service debt has increased. Given the overwhelming predominance of property taxation as the local source of revenue in Canada, perhaps the most frequently used measure of revenue capacity is the *ratio of own-source revenues to taxable assessment*. If taxes are used as a measure of own-source revenues, this measure reduces to the *effective tax rate*.¹⁰ Neither wealth nor household income data are readily available at the local level, so taxable assessment may be viewed as a rough proxy measure of wealth and therefore ability to pay, but this argument is less important than the fact that assessment is the principal (often the only) local tax base.

Another indicator suggested by PSAB (2007) is the net book value of tangible capital assets to the cost of such assets. Although this information is often not available, even a crude measure along these lines would be useful as an indicator of the extent to which maintenance costs and asset replacement have been deferred.¹¹ Because one frequently cited recent report put the municipal “infrastructure gap” in Ontario at over \$100 billion, this is not a minor matter.¹²

Finally, a city’s *vulnerability* may be a function of either transfer dependency or the risks created by exogenous shocks that affect its tax base. This concept is thus roughly equivalent to the risks or shocks mentioned in Table 1. Dependency is usually measured by the *ratio of transfers to total revenues*.¹³ Sometimes, in the absence of good data on all transfers, some other measure such as *the proportion of the population receiving general welfare assistance* may be used either as a proxy of transfer dependence or as an indicator of an area’s potential vulnerability to shocks.

Summing up, the approaches to assessing the fiscal health of local governments depicted in Tables 1 and 2 attempt to capture aspects of the extent to which cities may face “fiscal stress” in terms of the balance (or imbalance) between the risks and uncertainties that they face and their

¹⁰ Given the divergence between the treatment of residential and nonresidential property tax in Ontario (Bird, Slack, and Tassonyi, 2012), both of the indicators just mentioned should probably be weighted appropriately to reflect the composition of the local tax base.

¹¹ Data on the net book value of tangible capital assets are now available in Ontario for the last few years, however (Slack, Tassonyi, and Grad, forthcoming).

¹² This important issue is not further discussed here. For a recent review of an important segment of municipal infrastructure, see Canadian Infrastructure Report (2012); the figure cited in the text comes from <http://www.metroland.com/page/Infrastructure>.

¹³ However, as Hanniman (forthcoming) suggests, questions may be raised about the common assumption that greater transfer dependency is a symptom of greater vulnerability.

institutional, economic, and political ability or resiliency to cope with such shocks over different time perspectives. All the measures mentioned in Table 2 are usually interpreted as being positively associated with “ill health” so that the higher the figure, the worse off the city. Specific indicators that may provide a quantitative indication of the scope of potential problems are suggested.¹⁴ Different measures may be relevant in different contexts and for different purposes. Inevitably, however, the manner in which changes in such measures are interpreted will depend on the agenda of whoever is doing the interpretation as well as on the specific context (and time frame) within which it is being done.

As Anderson (2012, p. 1008) recently noted with respect to state tax rankings in the United States: “Every index has an implicit policy agenda and the wise policy maker will understand that agenda when attempting to rely on the state ranking generated by that index.” Equally, the wise analyst will also understand that every policymaker will read whatever numbers are generated from any analysis in light of his or her own policy agenda. For example, the relation between the level of services and taxation is perhaps the most important political choice facing a municipality. One city may choose high service levels and high taxes and another may choose low taxes and low service levels, but both may be equally fiscally healthy from their own perspective. However, a higher level of government viewing measures of urban fiscal health with its own objective in mind—whether that objective is to maximize social welfare or, more likely, to meet some less formal goal such as reducing local demands for provincial funds or, alternatively, lowering local taxes on voters—may reach a different conclusion. Cities may measure their fiscal health to see how they are doing in terms of their objectives, but others may be interested in such measures mainly to reinforce the case for more disciplined and credible local policies that will achieve their own objectives.

The local fiscal system in the United States—like that in Canada (Tassonyi, 2011)—was largely created in the 1930s in response to the Great Depression. In a recent review, Ebel, Peterson, and Vu (2013) suggest that the question now facing American local governments is whether the Great Recession that began in 2007 will similarly result in the establishment of an urban fiscal structure with the capacity to respond adequately to the risks it seems likely to face in the future. Since the recession, cities in the United States have faced increasing fiscal problems as a result of declining growth rates and even sharper declines both in their own revenues and often

¹⁴ As Table 3 below shows, many other variables may also serve as possible measures (or proxies) for the potential revenue capacity of property taxes in different local jurisdictions.

also in transfers, although the latter effect was—as in Canada—offset to some extent by federal stimulus funding. These risks were largely beyond the control of cities, and even the extent and manner in which different cities responded to these problems was also to some extent beyond their control, given institutional constraints on their ability to alter revenues and expenditures as well as to borrow. How and how well cities responded also reflected their institutional and organizational capacity to mobilize support from other governments and especially from their residents to enable them to do what has to be done. The common response of cutting capital expenditures relatively heavily, for example, may be both politically easier and more acceptable to lenders than restructuring current services. But this response is also likely to increase infrastructure maintenance and replacement costs and, hence, exacerbate future fiscal pressures.

The fiscal stress placed on Canadian cities by the recent crisis has been considerably less than in the United States.¹⁵ Still, it is clear that cities in both countries need to build up their capacity not only to deal with fiscal shocks but also to establish a stronger fiscal and institutional base to cope with the longer-term demographic and economic problems that seem likely in the years to come. Improving understanding of the current fiscal health of cities and, more importantly, of how and to what extent their present fiscal structure is likely to prove sustainable in the face of future pressures and shocks is an essential step in this direction. Ebel, Petersen, and Vu (2013) in the United States, like Dollery (2009) in a wide-ranging review of studies of local government finance around the world, suggest that one key missing ingredient needed to sustain urban fiscal health in most contexts is that few higher-level governments have decentralized revenue-raising powers sufficiently to permit—even force—cities to do the best they can to solve their own problems.¹⁶

FISCAL HEALTH AND FISCAL SUSTAINABILITY

Fiscal health and fiscal sustainability sound like good things, and policymakers or analysts often suggest policies intended to achieve them. The search for fiscal indicators to provide a shorthand, and preferably

¹⁵ However, different cities even in the same province have been affected, and have responded, in different ways.

¹⁶ Bird and Slack (2007) reach a similar conclusion with respect to financing metropolitan areas around the world as do Bird and Slack (2006) with respect to Canadian cities. There are also, of course, well-known theoretical arguments for increasing local fiscal accountability by increasing local fiscal authority (e.g., Weingast, 2006) as well as some empirical evidence tending to support this proposition (e.g., Borge, Brueckner, and Ratto, 2013).

quantitative, picture of the size, direction, and nature of the health or sustainability problem as well as guidance in designing policy to improve outcomes seems never-ending. One reason is because fiscal health and fiscal sustainability are terms more of art than science, with the meanings attached to them depending largely on the interests and objectives of those doing the defining. However these concepts are defined, how they are measured also depends largely on the information available. Both concepts are usually assessed in terms of financial performance criteria like those mentioned in Table 2. But they may also be assessed in terms of such structural factors as laws and institutions. Or both structural and performance factors may be considered. Some factors taken into account may be quantifiable, others may be descriptive, and still others may reflect subjective judgment. No matter how “scientifically” any or all of these concepts are measured and assessed, however, in the end how the information is used in policy analysis inevitably depends largely on political judgments at both the local and higher levels of government.

Cities are often said to be in crisis because their fiscal “needs,” which are usually assumed to be driven largely by demographic factors, exceed their revenue “prospects”—a concept that in the Canadian context essentially reduces to the potential yield of the real property tax (Vander Ploeg, 2001). An obvious, if narrow, interpretation of fiscal sustainability at the local level is similar: a city might be considered to be fiscally sustainable over time if it covers its expenditures out of its own revenues—reducing, for example, its dependence on transfers. An even narrower approach might focus simply on the extent to which current spending is covered out of current revenue, leaving any capital funding needed for infrastructure investment to higher levels of government. More broadly, as Kitchen (2000) notes, fiscal sustainability at the local level is affected by a variety of factors, including:

- The cyclical sensitivity of municipal funding responsibilities: Do expenditure programs vary with changing economic growth rates? How sensitive are local expenditures to changes in the relative numbers of seniors and children or to changes in the level of poverty or homelessness?
- The capacity of the local revenue base to keep pace with expenditures: Are revenues sufficiently elastic to rise and fall with expenditure requirements?
- The ability of municipalities to control their own destiny: Do municipalities have sufficient control over their expenditure responsibilities and revenue sources to meet changing circumstances? Can they make more use of user fees? Are they allowed to raise tax rates? To borrow?

In Canada, municipal freedom to change either revenues or expenditures is generally severely constrained by provincial regulations, many of which date back to the 1930s, when some municipalities went bankrupt and had to be bailed out by the provinces (Tassonyi, 2011).

Sustainability has three distinct quantifiable aspects: the level of revenues, the level of expenditures, and the difference between the two (the deficit or surplus), with the main relevant indicator of performance usually considered to be the last of these, which reflects the behavior of the two primary determinants. A more explicitly forward-looking approach is to compare expected future current revenues to the anticipated costs of meeting existing financial obligations and sustaining services at existing levels.¹⁷ The extensive credit rating literature, which has its own definitions and history (Petersen and Ciccarone, 2012), focuses more narrowly on assessing the likelihood that local governments will be able to meet their financial obligations, using both trend analysis and, in recent years, computer-based empirical models.

One way in which the fiscal sustainability of municipalities is often assessed is by reference to some set of fiscal indicators. Bond-rating agencies use such indicators as the level and trend of expenditures and revenues, the extent of borrowing, dependence on provincial grants, and tax arrears as part of the process by which they attempt to assess the fiscal health of a municipality for the purpose of assigning it a bond rating.¹⁸ Credit ratings do not attempt to assess urban fiscal health but, rather, the likelihood that local debts will be paid on time and in full. Creditworthiness in this sense may be an important factor in fiscal health, especially when municipal investment is financed through credit markets, and the simple quantitative indicators noted above are in any case helpful in providing some indication of the current and historical financial situation of municipalities. However, they do not necessarily give a reliable indication of fiscal sustainability in the future, and they say even less about the overall health of a city. Even if one focuses only on the question of whether current (non-capital) revenues are likely to exceed current revenues sufficiently in the future to be able to service loans obtained from financial markets, the key concern of most financial analysis of local finance is the likelihood of a bailout in case of difficulties. The prospect of a bailout, however, rests less on the value of particular ratios than on the structure

¹⁷ For instance, Bird and Slack (2004) employ a variant of this approach when they use the “business-as-usual” base case as a standard of comparison in exploring various fiscal possibilities for the GTA.

¹⁸ For further discussion of municipal credit rating and fiscal health, see Hanniman (forthcoming) and Merk and Hulbert (forthcoming).

and nature of intergovernmental fiscal relations and the political and other factors underlying those relations.

Defining fiscal sustainability is complex partly because neither side of the expenditure-revenue relation has a clear fixed meaning: at what level, over what period, and how comprehensively is the comparison being made? Big cities are not identical to small rural municipalities, and there may be considerable variation in their degree of transfer dependence. Moreover, municipalities of all sizes (and all levels of transfer dependence) may behave well or badly, depending on such hard-to-assess factors as how strongly their residents value such features as the equal provision of local services and fiscal probity. In the end, what happens is often determined by what may be called “budgetary culture.” Fiscal puritans may consider austerity and discipline in response to fiscal difficulties to be not only an obvious way back to balance but also good for the soul. However, few residents in afflicted areas are likely to agree. As a European politician once remarked: “We all know what to do, but we don’t know how to get re-elected once we have done it.”¹⁹

MEASURING URBAN FISCAL HEALTH

National fiscal problems are often first felt at the subnational level when local roads deteriorate, fees for local services rise, and “frills” such as art and athletics are squeezed from school calendars. City mayors and councils are not the only ones who worry about city budgets. In many countries, the recent economic crisis has led to new concern about the ability of the present financial structure of urban areas to sustain the costs of maintaining their present levels of infrastructure and public service provision, let alone the greater expenditure burdens that many—perhaps especially the larger metropolitan regions—seem likely to face in the near future. As mentioned above, both national governments and international organizations like the OECD have become increasingly concerned with the level and sustainability of city “fiscal health” as cities have increasingly come to be seen as central driving forces behind national competitiveness and growth.

The increased attention to urban fiscal indicators is part of a more general trend toward formally benchmarking how well public sector institutions do by measuring how key performance indicators change. Benchmarking, a concept that emerged from management literature, is essentially a systematic process for identifying and measuring “performance gaps”

¹⁹ Jean-Claude Juncker, prime minister of Luxembourg, as quoted in *The Economist* (March 15, 2007) and cited in Buti et al. (2008, p. 2).

between the efficiency and effectiveness with which an entity such as a city employs inputs to deliver outputs and affect outcomes, as compared either to other cities or to some hypothetical “ideal” performance. One argument for this approach is that by measuring performance and identifying such gaps, one can begin to understand why gaps exist and perhaps also how they may be reduced. Even incomplete and partial benchmarking may often be useful in achieving such important (though usually implicit) objectives as encouraging cities (and those concerned with their fiscal performance, such as higher-level governments) to collect and analyze data that they need in order to know what they are doing and how well they are doing it. Current performance may be benchmarked against past performance, or a standard based on the performance of a comparable group, or a purely normative reference standard. Such measures may provide a useful starting point both for assessing the relative efficiency and effectiveness of local government operations and in considering the desirability and effects of possible changes in expenditure assignments, revenue-raising powers, and intergovernmental transfers. They may also, of course, be used as a means of actually allocating such transfers.²⁰

As already suggested, however, even with the simplest approach to benchmarking, two distinct dimensions need to be considered: the static dimension—the relation of levels—and the dynamic dimension—the relation of growth rates.²¹ Suppose, for example, that the elasticity of public expenditures is unity, so that a 1% increase in GDP is accompanied by a 1% increase in expenditures. If the budget were initially in deficit, fiscal sustainability would then require an elasticity of revenues that is greater than unity. But if revenues depend upon a tax like the property tax, whose elasticity is unlikely to exceed unity over any prolonged period of time, the only way to remove the initial deficit and achieve sustainability in even the narrowest sense may seem to be by reducing the size of the local public sector or by expanding the revenues available to local governments, whether by raising existing taxes and fees or by securing increased revenue-raising powers or, more likely, increased transfers from other levels of government.

Another way to approach the measurement issue is by focusing on the extent to which a particular performance criterion, such as a given deficit target, is achieved. Some of the factors taken into account in such an analysis may be quantifiable, others may be descriptive, and still others may

²⁰ For two examples in Ontario, see Ontario (2008) and Ontario (2013), as discussed further in Slack, Tassonyi, and Grad (forthcoming).

²¹ This is a very simplified example; for a formal analysis of assessing debt sustainability, see Tanner (2013).

inevitably reflect subjective judgment to an appreciable extent. A variant common in the literature on public debt is to compare the actual deficit with the estimated sustainable deficit that would maintain a constant debt-to-gross domestic product ratio (within a range of potential rates of growth, real interest, and inflation). How such quantitative results are interpreted, however, depends to a significant extent on assumptions and judgments that are inherently arguable. Indeed, it is difficult to read much of the literature on assessing creditworthiness (sustainability) without concluding that (more or less) informed judgment often appears to outweigh simple numerical measures when it comes to assessing the borrowing potential of cities.

Perhaps, however, this is the right way to do it. Focusing on simple, quantifiable budgetary measures is an appealing approach to assessing fiscal health and sustainability, but it is unlikely to prove fully satisfactory, for several reasons. First, the numbers available are unlikely to be either the right ones or the best ones; they may not be comprehensive or they may not be comparable over time or across jurisdictions. Such problems are serious with respect to national data despite many efforts over the last 50 years to resolve them.²² They are even more serious with respect to local finance data, which are often not easily comparable within countries, let alone between them.²³ Moreover, numbers can never tell the whole story—and sometimes do not tell the correct story—because they may reflect largely fortuitous external events and because similar changes in outcome measures may mean very different things for cities in different circumstances in countries with different institutions.

For example, differences in levels of income and wealth are obviously relevant in assessing fiscal performance. It takes more effort for a poor city to increase revenues by a given percentage than it does for a rich one. However, increasing the rate of revenue growth may be easier for a city with below-average growth performance than for one with above-average performance. Another illustration relates to investor perceptions. With respect to investment, as in politics, perception is often reality. If investors see investment in a city as risky—for instance, because of increased crime or cuts in fiscal transfers—the city will receive less investment than it otherwise would and will pay more for what it gets, and its measured fiscal performance will reflect these realities.

²² See, for example, the illuminating discussion of the basic accounting problems involved in assembling comparable national public finance data in Irwin (2012).

²³ See, for example, the recent attempts to assemble comparable data for large metropolitan cities in a number of federal countries reported in Slack and Chattopadhyay (2013), as well as the approach taken by Chernick, Langley, and Reschovsky (2011b) in comparing large U.S. cities.

Table 3: Factors Taken into Account in Assessing Revenue Performance of Municipalities in the Greater Toronto Area	
Explanatory Variables	Rationale
Employment rate	Indicator of economic activity (income)
Migrants as share of population	Indicator of income and demand for spending
Population under 19	Indicator of demand for spending
Crime rate	Indicator of demand for spending
Equalized assessment	Measure of tax base (residential and nonresidential separated)
Effective tax rates	Indicator of pressure on tax base (residential/nonresidential)
School board expenditure	Indicator of spending trend (not determined by local government)
Transfers received	Indicator of availability of non-tax revenue
Mortgage lending rate	Indicator of demand for housing
Prime business lending rate	Indicator of demand for nonresidential construction
Housing completions	Indicator of supply of housing
Nonresidential building permits	Indicator of supply of nonresidential structures
Amalgamation	Dummy for major change in governmental structure in 1998
Reassessment	Dummy for structural change in assessment system in 1998
Source: Bird, Slack, and Tassonyi (2012).	

The policy choices cities make and the effects of those choices thus depend to a considerable extent upon where they start—their initial conditions. A growing city with a broad tax base and few unfunded mandates is in a very different position than one that has little access to revenue bases and is hampered by extensive directive interference from above. In principle, a broad range of such contextual or environmental factors should be taken into account in assessing the efforts made and the success achieved by local governments. Both “effort” and “success” are inherently relative concepts in the sense that both must be assessed in light of the scope and scale of the problems facing the government in question. As an illustration, Table 3 lists some of the factors taken into account in a recent attempt to assess the revenue performance of the municipalities in the Greater Toronto Area (GTA). Different sets of indicators at different levels of detail may be appropriate for different localities, depending upon such factors as their size, their governmental structure, the scope for independent action that they possess, and their level of institutional development.

Perhaps the single most meaningful measure of tax effort is the change in tax revenues compared with the change in output or tax base over the same period (tax buoyancy). Cities usually have some discretion with regard to the factors affecting buoyancy; not only can they often alter tax

rates (at least to some extent), but they are sometimes able to phase in changes in assessed values and can usually exert more or less effort to collect taxes and fees. In Canada, however, cities almost never have much say with respect to what they tax and how they tax it. A more refined measure of revenue effort might also encompass some measure of revenue stability, such as the coefficient of variation of the annual buoyancy measure. An additional measure useful in assessing the predictability and reliability of budgets is to compare actual revenue outcomes with the amounts initially budgeted (Dachis and Robson, 2011, 2014). Similar comparisons of the accuracy of budgeting may also be calculated for the expenditure side. Although raising taxes is undoubtedly hard, spending sensibly seems to be at least as difficult. As in the case of taxes, a well-grounded appraisal of fiscal sustainability therefore has to extend well beyond simple numbers to a thorough understanding of the sustainability of the institutional framework underlying the numbers.

Choices and effects are also influenced by important qualitative factors. For example, does a city have a coherent development strategy in place and the capacity to react quickly to changes affecting the implementation of that strategy? Different strategies may make sense for different cities. However, without a clear plan and adequate adaptive capacity, attempts to alter policies to cope with changing conditions are unlikely to prove either coherent or successful. Although how well a city is “structured” in this sense can often be assessed only after the fact in terms of what is done—or not done—one piece of important evidence (especially, of course, in larger cities) may be the existence (or creation) of an identifiable segment of governmental structure concerned with such problems. For example, does the city have in place good public financial management policies and the capacity to implement them? Table 4 illustrates a recent approach to assessing municipal financial performance that focuses on such questions.

Like Table 3, Table 4 is not intended to imply that the items listed are necessarily the best or most important factors that should be taken into account. Indeed, in the case of the study on which Table 4 is based, some of the municipalities thus rated took exception to the “arbitrary and narrow criteria” employed, to some of the data used for particular municipalities, and, more importantly, to the notion that matters such as those covered in this study have much to do with the question of long-term financial sustainability (MFOA, 2011).²⁴ Nonetheless, these two tables illustrate the

²⁴ Perhaps in part in response to such comments, a later analysis (Dachis and Robson, 2014) considered a shorter list of budgetary features and replaced the grading system by a three-fold classification indicating whether a particular municipality met all, some, or none of the specifications considered. Again, however, the effort was not well received by those most directly affected (MFOA, 2014).

Table 4: Assessing Municipal Fiscal Management: An Example	
Feature	Rationale
Budget and financial reports on same basis	Accrual accounting is better; financial reports are now on accrual basis, but most budgets are still on cash basis ^a
Combined operating and capital budget	Better because separate budgets neglect interactions between capital and operating
Same level of aggregation in budget and reports	If not, difficult to reconcile
Multi-year operating budgets	Enables intertemporal comparisons
Comprehensiveness and consistency of budgets	Includes all municipal expenditures on same base and not some on net (of dedicated revenues) basis and others on gross basis
Departmental gross expenses reported clearly	Related to previous point
Budget bias	Sign of average annual deviance between actual and forecast results
Budget accuracy	Size of average deviation
Source: Dachis and Robson (2011).	
Note: Institutional practices (first six items) are scored from A (meets all six criteria) to F (meets none of them).	
^a Unfortunately, although accrual accounting has been required for municipal financial accounting (but not budgeting) purposes since 2009, there is still not sufficiently solid information to evaluate the adequacy of municipal infrastructure with much confidence. Moreover, although the existence of a provincial pension plan (OMERS) for municipal employees considerably alleviates one of the risks facing many U.S. cities (Inman, 1995), it is by no means clear that all liabilities are as yet accounted for in an economically meaningful way.	

sorts of qualitative and quantitative indicators that have been used recently in Canada to assess municipal fiscal health and performance.

As Table 4 implies, fiscal transparency is fundamental to sound public policy. Public sector accounts should be comprehensive, comprehensible, and widely available. Budgets should be drawn up to display the real status of the public finances. The more open and transparent the public policy process, the more likely are policy decisions to be grounded in fact rather than fantasy, and, other things being equal, the more closely policy outcomes may be expected to coincide with stated policy intentions. However, fiscal transparency is difficult to achieve because of the inherent complexity of the underlying accounting issues (Irwin, 2012), because municipal accounting is constrained by law and regulations and used by different groups for different reasons (MFOA, 2014), and because politicians and officials have strong incentives to hide taxes and liabilities, exaggerate benefits, and generally present fiscal realities in as complex and confusing a way as possible in order to live the quiet life available to

those who exert monopoly control over information that might be used to make them accountable for their actions (or lack of action).²⁵

The key to effective accountability, and hence to good governance, is to make relevant information publicly available in a comprehensive and comparable form. Uncomfortable though the lives of politicians and officials may be when their actions are open to public scrutiny, the more that is known, and the more publicly it is known, the better policy outcomes are likely to be. Sustainable economic outcomes require not only that the rules of the game be clear, but also that all players have access to broadly the same fiscal and financial information base. In addition to comprehensiveness, a key factor in appraising budgetary policy is what may be called “discipline.” Budgetary institutions may have important effects on fiscal outcomes (Alesina and Perotti, 1999). Important factors include the legitimacy, predictability, honesty, and effectiveness of the budgetary process, the existence of a coherent strategy (as evidenced, for example, by a coherent medium-term expenditure plan), and the capacity of budgetary institutions to analyze and implement policy.

To take differences in both processes and structures satisfactorily into account in assessing fiscal health requires establishing meaningful links between structures and processes—for example, the existence of a city manager, a strong mayor system, a unified city or regional budget, etc.—and the relevant outcomes in order to be able to estimate the extent to which fiscal outcomes are not simply reflections of exogenous influences. This is far from easy. There is, for instance, a considerable literature (e.g., Rodden, Eskelund, and Litvack, 2003) that suggests that local governments subject to a hard budget constraint are more likely to tax and spend sensibly than those that are not; but how can the existence, strength (over the time period considered), and shape of such a constraint be measured?²⁶

Even if both the starting point (the initial conditions) and the institutional setting (the structural indicators) are satisfactorily taken into account, the question still remains as to how to assess fiscal performance in terms of the extent to which success has been achieved. Performance is a function both of exogenous conditions and institutional factors (including

²⁵ Budgetary confusion may also facilitate corruption, as suggested by Klitgaard’s (1991) well-known formulation. $C = M + D - A$, that is, corruption equals monopoly plus discretion minus accountability.

²⁶ Stavins, Wagner, and Wagner (2002) approach an analogous problem in the environmental context by separating the problem into two components: the economic problem of dynamic efficiency and the political problem of intergenerational equity. One might perhaps consider a similar approach to the problem of urban fiscal sustainability. Similarly, some of the questions about the relevance of such national accounting concepts as GDP for such policy goals as growth and welfare raised by, for example, Kubizsewski et al. (2013) may also be relevant in the urban context.

capacity). Unfortunately, many common fiscal indicators measure *inputs*, not the policy *outputs* that are of ultimate concern. Some input measures simply record the availability of resources (revenues). Others may relate to process (e.g., budget execution; see Table 4).

Some outputs (such as tax collections) may easily be quantified. Even in these cases, however, the underlying production function in terms of administrative and policy inputs (e.g., the organizational structure of the tax administration or of multi-year budgeting) is seldom sufficiently well understood for causality to be asserted very convincingly. Other outputs may be more subjective—for example, how appropriate one considers the structure of financial accounting to be. In principle, input from clients (taxpayers) with respect to the level and quality of service and compliance costs should also be included in benchmarking exercises, although there is little evidence of any systematic attempts by governments at any level in Canada to find out what the customers think. In an interesting study in India some years ago, for example, perceptions with respect to staff behavior (e.g., with respect to corruption) and the amount and reliability of the information provided to the public were found to overlap strongly with perceptions of the quality of the service provided (Paul, 1995).²⁷ It would be interesting to see, for example, if the recent contracting scandals in Montreal or the recent uproar about the mayor in Toronto has had any such impact on perceptions of the probity of local officials, the quality of local public services, or the acceptability of local taxes.

In the end, the “best” set of fiscal indicators to assess fiscal health is likely to be a mixed bag. Indicators may, for example, be quantitative or qualitative. Qualitative measures, in turn, may be scalable or ranked, or they may simply record whether some feature or characteristic (e.g., a city manager) exists. Indicators may be available periodically (monthly, quarterly, annually) or only at irregular intervals (if based on special studies or surveys). They may be available only for some cities, or for some parts of a metropolitan area, and hence difficult to compare across regions.²⁸ Indicators may be purely descriptive or subjective (whether based on expert judgment or, rarely, on public opinion surveys). The standards or norms against which a particular country is to be assessed may be explicit (best practice, perceived potential, group average, etc.) or implicit and purely

²⁷ For a recent update and review of the methods and effects of what he calls “demand-side governance,” see Paul (2014).

²⁸ As emphasized by Chernick, Langley, and Reschovsky (2011b), to make valid comparisons even within particular countries or provinces, it may often be necessary to “construct” comparable urban areas.

subjective, reflecting such factors as one's conception of an ideal or attainable level.²⁹ Whether qualitative or quantitative, indicators may be purely descriptive—How is the budget organized? How much revenue is collected from the property tax?—or they may incorporate (often implicit) judgmental elements—Is there a single metropolitan government? What is the level of wages, salaries, and benefits relative to those paid to similarly qualified persons in the private sector?

It is difficult, and may sometimes be impossible, to aggregate or average such heterogeneous indicators meaningfully, even with respect to any one area. The basic approach taken in many discussions of fiscal health is what might perhaps be called the pre-analytic step of collecting clusters of indicators under a number of broad headings that are thought to provide a profile of some relevant dimension of the issue. These indicators may then be assessed in terms of static short-run measures such as the ratio of taxes to some measure of local economic activity or longer-term measures such as the present value of future obligations (such as those for employee pensions). The results are often categorized, scaled, or graded in what usually seems to be a relatively arbitrary fashion and then aggregated (usually with equally arbitrary weights) into a composite index or ranking. It is far from clear how seriously to take many such exercises, which, like the bond ratings mentioned earlier, usually reflect as much the judgment of those who compile them as they do the underlying data.

UNDERSTANDING URBAN FISCAL HEALTH

Initial conditions, processes, and institutional structures all need to be taken into account when interpreting fiscal indicators. To do so satisfactorily requires both careful assessment of the various factors thought to affect the capacity (and perhaps willingness) of a city to respond to particular types of shocks and the establishment of meaningful links between structures and processes. Consider for example, how each of the following might affect the interpretation of a particular set of quantified “fiscal indicators” purporting to measure urban fiscal health:

- The existence of one sort of transfer rather than another—unconditional or conditional, general or earmarked, fixed or gap-filling, mandated and unfunded or cost-reimbursement;³⁰

²⁹ Such technical aspects of this issue as the use of stochastic production functions instead of regression analysis have been much discussed in the recent literature on estimating national tax “effort”; for a useful recent assessment, see Cyan, Martinez-Vazquez, and Vulovic (2013).

³⁰ Some aspects of these questions are discussed in Bird and Smart (2002) and Kim, Lotz, and Mau (2010).

- The existence of a particular governmental structure—one-tier or two-tier, regional or fragmented, strong or weak mayor, direct or indirect elections to council, ward-based or city-wide elections, parties vs. non-partisan, city manager or council metropolitan government;³¹
- The existence of a particular system of public financial management—a single treasury ledger system or a set of fund accounts, or cash, modified accrual, or accrual accounting.³²

Some of these factors can be dealt with to some extent empirically by a variety of techniques. But it requires a considerable leap of faith to conclude that observed differences in “outcomes” as measured by the chosen fiscal indicators are solely the result of local “effort” (or its absence) rather than of factors not really within the control of local decision makers. Even the best set of fiscal indicators is not, and cannot be, a substitute for careful case analysis.

As the constant reference to comparative rankings by both business school deans and national and local politicians tells us, numbers are powerful even when, as with most city rankings and many so-called “governance indicators,” they are often suspect in various ways. Good numbers, properly used, may illuminate reality and may not only enable meaningful assessment of performance but also suggest new and promising lines of inquiry. Measurement and quantification have long been essential ingredients in the development and application of scientific thought. However, even good numbers may be misunderstood and misinterpreted, and bad numbers may all too easily pass for good among those who do not take the time to understand what the numbers can and do measure, and, equally importantly, what they do not and cannot show. The fact that the unwary may cut themselves with sharp tools, however, is no reason we should not sharpen our analytical tools as best as possible. It is only through careful study and appreciation of what can be measured, and with what degree of reliability, that knowledge of the world and how it works is obtained and improved. Despite the inherent limitations and risks, it therefore seems worthwhile to attempt to develop meaningful and comparable indicators of urban fiscal health. But we should use even the best such indicators properly, and with care.

Two analogies may perhaps make the point a bit clearer. First, the results of even the best-designed and best-executed analysis of fiscal health at best provide raw material that requires further interpretative analysis. In this sense, indicators of urban fiscal health may be compared to the information that consumer magazines assemble with respect to automobiles. Some

³¹ The first of these questions is discussed in Bird and Slack (2007).

³² The last of these points is discussed in Irwin (2012).

indicators reported describe various mechanical and other features of the different vehicles. Others report the results of specified performance tests. Still others may report the more subjective judgment of experts (or perhaps even a statistically meaningful set of owners) with respect to the quality and general appeal of the car. What the editors deem to be the “best buy” in terms of the particular way they choose to weight these various factors in reaching an overall assessment may also be indicated. In the end, however, it is left up to the reader to draw his or her own conclusions from *all* the information presented in terms of his or her own interests and concerns.

Second, continuing with the automobile example, consider it now from the perspective of someone who is managing a city rather than buying one—think now about driving a car.³³ The instruments on the dashboard provide us with some basic data such as how fast we are going, how much fuel is left, and how hot the engine is. They also give us some warnings about possible problems through a series of indicator lights—including in some cars one particularly worrying and annoying light labeled “check engine,” which may signal anything from a loose gas cap to a possibly calamitous impending engine failure. We may even have a GPS system that tells us where we are and, assuming we know where we are going, how to get there. All this information is useful to varying degrees in different circumstances.

But none of it helps much if we are bad drivers, who drive too fast in black ice conditions (cities that borrow more than they can repay) or unlucky drivers, who get hit by falling rocks or by someone running a light at an intersection (cities that suffer unforeseeable economic shocks or are blindsided by abrupt changes in intergovernmental transfers). Perhaps the most useful indicator for all drivers is the most basic, the fuel gauge, which tells us how much longer we can carry on doing what we are doing before we sputter to a halt. A good indicator may be either like a fuel gauge telling us how much gas we have in the tank (our current state of fiscal health) or like some combination of a GPS system showing us where we are and how to get to where we want to go and an assessment of how well we are fitted to handle the next phase of the journey (our fiscal sustainability).

A fiscal crisis for a local government occurs when it runs out of gas—that is, when its potential to raise revenues is insufficient to cover the expenditures that it is legally mandated to carry out. If maximum tax revenues are less than required expenditures (net of transfers and other revenues) someone who is legally entitled to a claim on the local government loses and crisis ensues. In principle, to determine if a city faces a crisis in this sense,

³³ This is a variation of an example used to illustrate a similar point in a quite different context by Heal (2011).

all one has to do is (1) calculate the maximum tax revenues, T^* , that a city can collect with its designated revenue structure; (2) calculate the cost of the expenditures, E , that it is legally required to carry out; (3) estimate the transfers likely to be received from other levels of government, TR ; and (4) calculate how much the jurisdiction can expect to get from such other revenues as fees, OR . If T^* is less than $E + TR + OR$, then there is a crisis (Inman, 1995).

Or is there? Obviously the credence one puts in such calculations depends on two things. The first is the reliability of the estimates; what is maximum tax revenue, for example? Bird, Slack, and Tassonyi (2012), without suggesting that it would be a good idea to do so, recently estimated that four out of the five regions in the GTA, could, if they really had to do so, probably squeeze more property tax revenue out of their residential tax base, with the City of Toronto having by far the most “tax room” in this sense.³⁴ One region (Durham) seemed more likely to lose than to gain revenue by increasing taxes on housing. However, all regions appeared to have room to raise revenue by taxing nonresidential property a bit more, although the City of Toronto had the least such room. Apart from the extreme case of Toronto, which ranked at the top in terms of taxing business and the bottom in terms of taxing housing, the other four regions ranked in the same order—from top to bottom, Halton, York, Peel, and Dufferin—in terms of the room they apparently have to increase taxes. To put the point most simply, this study indicates that what one assumes to be the “maximum” tax revenue in most cities is determined more by political than by economic factors.

Much the same is true about the implicit but critical assumption in much discussion of urban finance that no changes in required expenditures are feasible—that is, it is simply not possible to pay city workers less, to reduce pension obligations, to negotiate better prices for materials the city buys, to provide services more efficiently, or to reduce service levels. None of these things is likely to be either easy or popular, but is anything really untouchable? If necessary, cities can do all sorts of things to put their financial houses in order: cut back on or eliminate programs, reduce salaries and wages or fire people, refuse to pay pensions or debts, raise taxes and charges, sell assets, etc. Indeed, they must do such things unless cushioned by bailout and bankruptcy (although this aspect of the problem is not discussed further here). Only if one assumes that all the terms in the equation set out above are properly estimated and that the underlying assumption

³⁴ Bird, Slack, and Tassonyi (2012), following Haughwort et al. (2004), estimate what is called the revenue-maximizing tax rate (RMTR)—the top of the “revenue hill” (Laffer curve), as it were. However, this rate is inevitably greater than the “optimal” rate in terms of allocative efficiency (Bird and Wallace, 2005).

about the rigidity of the revenue and expenditure possibilities is correct, can one take the outcome of such an equation as an indicator of crisis—though it may certainly reflect some degree of fiscal (and political) stress.

Although measuring urban fiscal health has inherent limitations and risks, it is definitely worth developing as meaningful and comparable fiscal indicators as possible. Even the best such indicators will never provide a certain or clear guideline telling any city what to do, but they may, if done well, be helpful in understanding how a city is doing relative to others in roughly similar circumstances. Providing a base case against which to assess performance is no mean contribution to the complex and ongoing task of assessing how well particular governments are doing.

Some years ago, for example, the director of railways in India, a country in which railways traditionally constitute the core of the transport system, was asked: “Why do you bother to have a timetable when the trains are always late?” His reply was both simple and accurate: “How would you know they were late if we did not have a timetable?”³⁵ Benchmarking is equivalent to establishing a timetable in the sense that at its best it establishes clear and ideally measurable objectives against which to measure performance. These objectives may be an idealized vision of what should be. They may be a more or less well-based estimate of what should happen if the system works well. Or they may be based on past experience or on the average outcomes suggested by experience elsewhere. However such benchmarks are established, once they exist, not only has a standard against which to judge reality been set, but, more importantly, we know what information needs to be collected—how late are the trains?—in order to determine the extent to which the goals established are actually met. Although there are always elements of judgment in making such measurements, the basic framework for analysis is nonetheless established by the timetable (the benchmark, or standard).

Even when there is not only a timetable but also information on the extent to which it is not met, however, we are only at the beginning of analysis. We may know how many trains are late and by how much. But the real questions are: Why are they late, and what can be done to improve matters? Trains may be late for many reasons: system design failures (inappropriate signal configurations), environmental factors (landslides, floods), operating problems (breakdowns), human errors (crew asleep or poorly trained). At best, all that benchmarking can do is to tell us that there is something that should probably be looked at more closely. It cannot and does not tell us exactly what happened, why it happened, or how it can be fixed.

³⁵ This example is from Das-Gupta (2002), and much of what follows is based on Vazquez-Caro and Bird (2011).

Most benchmarking exercises understandably emphasize quantitative measures of success. However, what can be measured and what matters are not always the same. An additional problem is that benchmarking is often carried out by outsiders who may use the results in ways that those being benchmarked may not like. If those who generate most of the critical data used for benchmarking know that they will be judged by it and they see no direct benefits for themselves from accurate reporting, accurate reporting seems unlikely.³⁶

Benchmarking may be useful to identify areas of weakness—symptoms—but it seldom provides either clear explanations of the underlying problems or many insights helpful in resolving those problems, apart perhaps by exposing cities to how others have dealt with similar problems. Nonetheless, even incomplete and partial benchmarking may improve matters by encouraging city governments to collect and analyze data that they should have if they want to know what they are doing. To be most effective in influencing behavior, the objectives benchmarked should be congruent with the real strategic objectives of the organization. Whether or not this is the case, however, the basic logic of benchmarking is sound and should in principle be both attractive and useful even to those who are being benchmarked: if other cities deliver similar services better than you do, why not learn from them? Modifying and adapting the successful practices of others has always been an important way in which individuals and organizations improve their performance.

Another motivation for benchmarking is to spot opportunities for change and improvement. Such opportunities are often “soft” (qualitative) in nature and difficult to identify. Concentrating only on gathering data on “hard” (quantifiable) systems, as economists in particular seem programmed to do, may produce severely incomplete information and even lead to changes (such as the introduction of new technology or the adoption of large-scale infrastructure projects or development plans) that in the end prove unsustainable.³⁷ It is thus important to gather information also

³⁶ It is not clear that this caution is always taken as seriously it should be by those who design grant systems in which the amounts allocated are distributed largely in accordance with numbers that are to some extent under the control of potential beneficiaries. As was said in a different context: “Any observed statistical regularity will tend to collapse once pressure is placed upon it for control purposes” (Goodhart, 1975).

³⁷ Further illustrating the point made in the preceding note, Flyvbjerg (2009) documents the shocking extent to which the numbers used to assess a very large number of important infrastructure projects have consistently underestimated costs and overestimated benefits, thus resulting all too often in what he calls the “survival of the unfittest”—that is, those projects whose proponents present the most biased numbers. Much the same could perhaps be said of most projects put forth by private developers, not least those seeking public subsidies. Beware of proponents bearing the “gift” of favorable numbers, as the Greeks might have put it.

on such critical soft elements of organizational culture as management philosophy, behaviors and style, the degree of participative management, communication and recognition, empowerment, and ownership.

Most people who are overweight want to believe that there is a simple magic bullet that can resolve the problem. They want a pill, a potion, or a machine that will make the problem go away. They do not want to hear that what they really need to do is to change their diet and exercise regime for life. Similarly, local politicians and officials understandably want to avoid such difficult, time-consuming, and often conflict-laden tasks as rethinking what they are really doing and re-engineering their whole organizational structure and processes to do it better. It always seems much easier to buy a new technological package off the shelf or to hire additional or better qualified (and paid) staff than to change how one does business. It seems easier, but, on the whole, it seems much less likely to produce “good” or “better” results, let alone the “best” results that are presumably the desired end goal.

Three broad approaches to benchmarking may be found in practice and in the literature. The first, and by far the most popular, is benchmarking by numbers—the quantitative approach. The second, also popular, is benchmarking by (presumed) good institutional practice—the qualitative approach. In practice, as already discussed, mixes of these two approaches are common in measuring fiscal health. It is easy to mix them in part because both approaches share an important common characteristic in considering each component or aspect of the urban fiscal scene separately. A third approach is distinct, however, in considering how all aspects of the urban fiscal system function *as a whole* in the context of the environment, particularly the intergovernmental environment, within which that system is embedded. In this approach, the most important function of good benchmarking is less to define a particular set of benchmark indicators than to identify the management practices—good, better, and best—that underlie and explain a set of good indicators. However, not much seems to have been attempted along these lines with respect to assessing city performance.³⁸ Although it may not yet be possible to reduce the inevitably highly case-specific detail required to apply such a systemic approach to a model that could be applied more generally, perhaps as we learn more about how different features and indicators are connected with particular outcomes we may at least be able to develop a more useful taxonomy of municipalities combining different features in ways associated with different outcomes to serve as benchmarks for evaluating individual performance.

³⁸ For an example of applying this approach to benchmarking the performance of national tax administrations, see Vazquez-Caro and Bird (2011).

The key conclusion here, however, is simply that benchmarking and diagnosis are very different. Even the best benchmarks can never replace the educated eye of an expert in providing a diagnosis of a given situation, although they may help by directing that eye to problematic areas. Just as medical doctors must interpret test results (which are also usually benchmarked against presumably relevant and reliable information), those who wish to improve urban fiscal systems must understand in depth not only exactly what is meant by specific benchmarks but also (and equally in depth) the context within which they are interpreted in order to provide sound recommendations. Better diagnostic tools may improve diagnosis, but even the best tool cannot replace a good doctor who is familiar with the patient and his or her environment. Similarly, even the best-designed urban fiscal system for any particular context is unlikely to function well unless it has both adequate political support (including resources) from the top and a good management team in place. Assessing how well the system is doing requires both a systematic analytical approach and detailed local knowledge. There are few shortcuts to success in the never-ending task of improving public policy.

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