



January 13, 2016

## National Priorities 2016

# Getting More Buildings for our Bucks: Canadian Infrastructure Policy in 2016

by

Benjamin Dachis

“As governments expand their investments in critical infrastructure, they should ensure they are investing in the right projects with the highest long-run returns, not necessarily the most shovel-ready ones.”

All indications are that 2016 and beyond will be banner years for government investments in infrastructure. The new federal government is promising major increases in funding for public transportation, and what it labels social and green infrastructure. Many provincial governments – Alberta and Ontario in particular – are planning major expansions of their capital spending in the next five to 10 years. Canadian cities will continue tackling what they term as chronic underinvestment in their local infrastructure.

All levels of government have the opportunity to focus on specific infrastructure policy priorities in 2016 and improve on them in order to get the most out of their spending. In particular:

- The new federal government should target infrastructure spending on areas with the greatest intergovernmental spillovers. It should revise the way it provides grants to lower levels of governments to reduce the potential blurring of accountability and perverse incentives for lower-level governments that arise from intergovernmental grants. The new federal government might also want to reconsider its plans for an infrastructure bank.

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Thanks to Jennifer Tsao for help with compiling municipal data from Ontario's Financial Information Return. Thanks to a reviewer and C.D. Howe Institute staff for their comments. Any errors remain my own.

- All provincial governments are facing infrastructure funding pressures. Provincial governments should look to expand road pricing on highways and roads wherever feasible to finance this spending and to relieve congestion. They should look to the province of Ontario, which is taking tentative first steps on road pricing through a pilot High Occupancy Toll (HOT) lane. Moreover, Ontario should expand its ambitions and introduce HOT lanes on other parts of the road network. Provincial governments should also judiciously apply cost-benefit analyses to all major infrastructure projects.
- Cities across Canada should put their budgets on the same accounting standard as higher levels of government – and indeed their own end-of-year financial statements. Reforming the way cities treat short-term and long-term costs of infrastructure would be the first step toward cities better matching the long-term benefits of infrastructure with long-term revenues and would thus be fairer to taxpayers. Cities should increasingly rely on users to finance infrastructure and reduce their reliance on development charges and reserve funds.

## **Federal Infrastructure Policy**

Infrastructure is at the forefront of the new federal government's economic growth plan. Over the next 10 years, it plans to increase total infrastructure spending by \$60 billion (Liberal Party of Canada 2015). In particular, the government will increase spending on items such as public transit, affordable housing, recreational facilities, flood protection and other green and social infrastructure. By 2025/26, the government proposes that federal infrastructure spending will reach about \$16 billion per year. In addition, the new federal government is proposing a Canadian Infrastructure Bank to allow cities to borrow at the rates of interest the federal government pays. How should the federal government make the best use of these promises?

### ***Federal Grants***

Should the new federal government in fact finance local infrastructure? In many cases, it should not. Higher-order government grants create numerous problems for local governments (Kitchen 2006). Grants can lead local governments to spend more on low value-for-money projects or else risk losing access to federal funds. The federal government can partly alleviate this problem by placing no conditions on how local and provincial governments spend capital grants. No matter the circumstances, higher-level grants to lower-order governments reduce the accountability of the recipients. As well, the lack of transparency confuses voters, who often do not know which government is responsible for the tax-raising and spending choices.

The main justification for federal government spending on infrastructure is when there is some form of interjurisdictional spillover (Dahlby and Jackson 2015). For example, the benefits of a project may spill across provincial borders and the kinds of taxes that the granting government levies might be less economically damaging than those collected by another government to which it grants money. International gateways expand trade, and are suitable projects for Ottawa to support. In addition, the spending by a lower level of government may result in higher incomes for local residents, who then pay higher taxes to multiple levels of government. When considering project-specific support, the federal government should quantify the extent of these spillovers for projects and only support infrastructure to the extent it is best placed to enhance these spillovers.

### ***Federal Infrastructure Loans and Public-Private Partnerships***

In addition to this direct spending, the new government's election platform announced plans for a "Canadian Infrastructure Bank to provide low-cost financing for new infrastructure projects" (Liberal Party of Canada

2015, p. 15). It is true that the federal government has a lower borrowing cost than private borrowers and municipalities. However, a lower interest rate is not a sufficient argument for government to take on borrowing for infrastructure.<sup>1</sup> The lower rate of interest that governments pay is a reflection of bond holders viewing taxpayers as the guarantors of cost overruns or late delivery of projects. Private borrowers have no such option. The lower interest rate of the federal government is, thus, an insurance policy that taxpayers implicitly provide bondholders. This does not benefit society, and is simply a transfer of risk onto taxpayers (Boyer 2013). When governments are considering the cost of financing in cost-benefit analyses, they should not assume that a lower rate of interest is a reason for governments to support infrastructure. For this reason, an Infrastructure Bank is not a desirable vehicle for infrastructure support.

The decision to raise public funds to finance a project creates negative externalities due to the economic harm of taxation. How much economic damage raising revenues causes depends on the specific type of tax the government uses. The negative effect of taxation requires that governments calculate the economic damage of the taxes they raise – known as the marginal cost of funds – for every dollar of revenue they raise to finance a project (see Dahlby 2009 for an assessment of the economic costs of infrastructure stimulus).

According to the mandate letter from the Prime Minister to the Minister of Infrastructure and Communities, the new federal government plans to remove a requirement that other levels of government assess whether a project is suitable for a public-private partnership. However, governments likely will not have the fiscal capacity to meet all of the future infrastructure needs of Canada. Rather than proceed with projects without private partners, the federal government should continue to assess whether a government subsidy or a loan guarantee to “crowd-in” private capital, as part of a public-private partnership, is necessary for a socially worthwhile project to be financially justifiable. Governments should only directly provide infrastructure when doing so costs less than subsidizing private provision (see Dachis 2013 for a discussion of the decision rules for determining appropriate government investments).<sup>2</sup>

## **Provincial Infrastructure Policy**

Provincial governments are responsible for a large share of government infrastructure and, in particular, they are increasingly focusing their expenditures on road and public transit construction. As governments expand their investments in critical infrastructure, they should ensure they are investing in the right projects with the highest long-run returns, not necessarily the shovel-ready ones.

### ***Provincial Investments in Road Infrastructure***

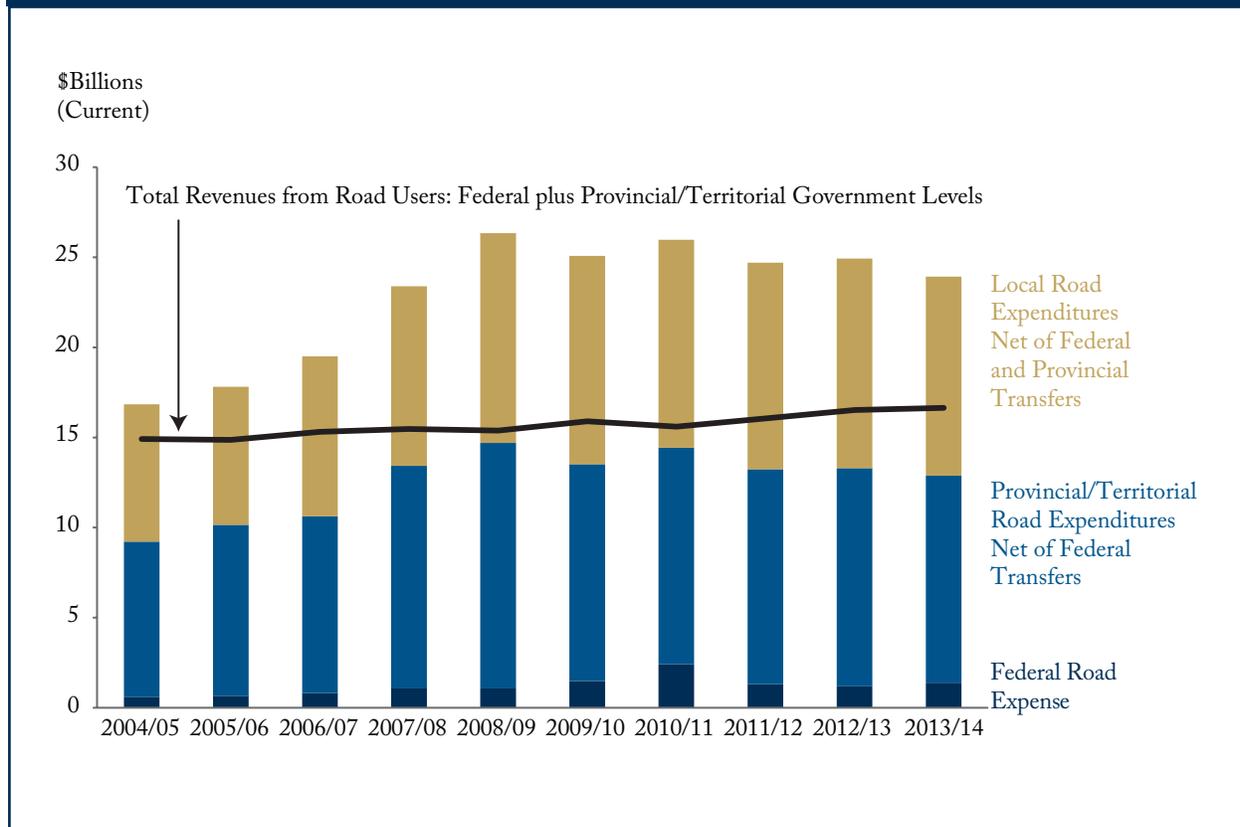
Canadian provinces are making major infrastructure plans for roads. To take two examples, the province of Ontario plans to spend \$15 billion for road projects outside of the Greater Toronto and Hamilton Area over the next 10 years (Ontario 2015). The province of Alberta plans to directly spend nearly \$7 billion on road and bridge infrastructure over the next five years (Alberta 2015).

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1 This is a mistake Ontario’s Auditor General (2014) made when accusing Infrastructure Ontario of having high financing costs. She said its use of private-public partnerships has cost \$8 billion more than traditional public financing. (See “Auditor general blasts Liberal’s public-private funding and ‘high-risk’ MaRs loan,” *Toronto Star*, December 9, 2015.)

2 See also Poschmann (2003).

**Figure 1: Canadian Government Road Expenses and Revenues from Road Users, 2004/05-2013/14**



Note: Local road expenses are missing from Transport Canada data from 2009/2010 to 2013/2014, which I estimate assuming local expenses hold at the same historical ratio to provincial expenses from 2002/2003 to 2008/2009. Local revenues from road users are negligible.

Source: Author's calculations from Transport Canada Statistical Addendum as described in Dachis (2011).

To finance this new infrastructure, provincial governments should look to road pricing. Although this approach is often politically unpopular, at least initially, Ontario is showing how governments can introduce the public to the notion of road pricing. The province is introducing a pilot project for a High Occupancy Toll (HOT) lane. HOT lanes are similar to traditional carpool lanes, with the exception that single-occupant vehicles can access the lane if their drivers pay a toll. The price to access a HOT lane would vary based on time-of-day demand. HOT lanes are an improvement over traditional carpool lanes that are often underused during rush hour.

Opponents of road pricing call HOT lanes “double taxation” of drivers because both the tolls and part of government tax revenues go toward building and maintaining roads. However, HOT lane revenues – like road pricing on other roads – could bring the price that drivers pay for infrastructure they use closer to the actual cost of it. Gas taxes (which are about 85 percent of road-related revenues), vehicle licenses, and other revenues from drivers have covered less than 70 percent of roadway expenses across Canada since 2008 (Figure 1). Further, these revenues do not curb traffic congestion. And, as vehicles become more fuel efficient, fuel tax revenues will cover less and less of the cost of building and maintaining roads.

The province of Ontario should expand the scale of the HOT lane pilot program and other provinces should adopt this approach on provincial highways. For example, the ring roads in Calgary and Edmonton are ideal locations for HOT lanes, as are new highway expansions in other provinces.

In Quebec, the major road-pricing issue is the fate of the soon-to-be-completed new Champlain Bridge. The federal government as the owner of the bridge, not the province, must decide on whether to place a toll on the replacement bridge. During the election campaign, the Liberal party promised not to do so. However, the federal government should toll the new bridge in the same way that the provincial government of British Columbia successfully placed a toll on the new Port Mann Bridge and is planning to do for the Massey Tunnel replacement. Such a toll can ease congestion and pay for the construction cost of new road infrastructure. Likewise, Nova Scotia should follow through on plans to add prices to sections of its busiest highways (Laroche 2015).

### ***Financing and Deciding on Provincial Investments in Public Transit***

Public transit is the other major investment facing provincial governments across Canada. For example, the province of Ontario is planning to spend \$16 billion over the next 10 years on public transit for the Greater Toronto and Hamilton Area. Provinces should be ensuring that they put all major projects through a rigorous cost-benefit analysis. Such cost-benefit analyses are rare, and provinces should conduct more such analyses and then target investments into projects that have the largest economy-wide economic spillovers, known as externalities. To provide one example, traffic congestion is a negative externality in which one person's decision to drive harms others.

On the other hand, a positive externality is a benefit that accrues to others from an individual's decision. Urban agglomeration externalities are among the main benefits of urban living. These range from accessing jobs that better match peoples' skills, sharing knowledge face-to-face, and creating demand for more business, entertainment and cultural opportunities which, in turn, benefit other people. When congestion and a lack of infrastructure make urban interactions too costly to pursue, these benefits are foregone, adding significantly to the net costs of congestion (see Dachis 2013 and Dachis 2015a for details of these economic costs in Toronto and Metro Vancouver). Provinces should explicitly include these potential positive externalities when assessing public transit projects. In addition, they should ensure that all major infrastructure investments in all areas of the economy are subject to cost-benefit analyses that incorporate similar economic benefits and social harms.

### **Municipal Infrastructure Policy**

Municipal governments are most closely linked to infrastructure policy. No other level of government has as much discussion of the best ways to finance infrastructure. Canadian cities should first look to emulate Ontario's provincial policy of selling underutilized assets – such as electricity distribution companies – to generate funding for infrastructure that governments necessarily must own. They should also rethink how they budget for infrastructure. Cities should change their budgeting to an accrual accounting system and away from their current and outdated cash accounting system.

### ***Cities Need Better Budgets and Asset Management***

Municipal governments should take a close look at whether they need to own many of the capital-intensive assets they currently hold. For example, governments don't need to own electricity companies to keep electricity costs down. Provincial regulators, such as the Ontario Energy Board, keep a close regulatory eye on all price changes regardless of who owns the companies. This is akin to the way natural gas utilities are regulated by the Ontario

Energy Board. Ed Clark, Chair of the Premier's Advisory Council on Government Assets, summed up worries of government ownership of regulated electricity assets as “adding a belt when already wearing suspenders.”

As of 2013, municipal governments in Ontario hold \$14-billion worth of distribution property and equipment (Dachis 2015b). The proceeds from sales would complement the province's contribution to transportation infrastructure investment. The cities of Calgary and Edmonton should consider similar sales of their major utility corporations, Enmax and Epcor, respectively.

Canadian cities can change the way they view financing infrastructure by reforming the way their budgets are presented (see Dachis and Robson 2015). Municipal budgets show expenses on capital items on a cash basis. Cash budget presentations that show outlays on such assets as in-year expenses (as cash budgeting does), rather than capitalizing them and amortizing them as they deliver their services (as accrual accounting does), likely biases municipalities toward raising revenues upfront to finance infrastructure expenditures that will yield benefits well into the future.

Looking at the record of major Canadian cities suggests that cash budgeting has led them to over-charge today's taxpayers for long-lived capital projects. On an accrual basis, Canada's 24 largest municipal governments have shown a cumulative surplus of \$41 billion since 2008 (Table 1). Their total surplus – how much today's taxpayers paid in fees and taxes over and above the value of municipal services they received – was \$6 billion in 2014 alone. In Ontario, the municipalities of Vaughan, Halton Region, and Markham stand out in this respect; among major western Canadian cities, Calgary, Saskatoon and Surrey, B.C. also do not appear to be spreading the costs of capital over time as fairly as they could.

Changes in provincial legislation could foster better municipal budgeting, but cities also have the capacity to present more meaningful numbers on their own. The common concern with accrual accounting is that it understates the cost of infrastructure. To address this problem, cities should move to multi-year budgets along with their move to accrual budgeting in order to fully capture the long-term budgetary effects of infrastructure.

### ***How Are Cities Financing Infrastructure?***

Decisions about how to finance assets are not necessarily linked to decisions about how to represent them in financial statements. However, accrual accounting provides a basis for good decision-making where a government borrows, say, \$1 billion to finance an asset that will produce services for 20 years and amortizes that loan over the same 20-year period. That approach straightforwardly tries to match costs and benefits over time. Ontario cities (where the necessary data are available) offer a clear illustration of how cities are financing their infrastructure and why the tools should be improved.

Since 2010, Ontario cities have increased the share of infrastructure that they finance from reserve funds (Figure 2). Meanwhile, they have decreased their reliance on debt financing and are also relying less on capital grants from higher-order governments.

Ontario cities are not financing their infrastructure in a way that matches costs and benefits over time. Reserves are funds paid for by previous generations of taxpayers. By definition, these taxpayers do not benefit from future capital investments. Debt is a better financing tool that is most appropriate for many long-lived assets, particularly those that can be financed from user fees.

Many Ontario cities rely on development charges to the private sector to finance infrastructure. Such charges are politically popular because voters do not directly pay them. In addition to cash development charges, Ontario

Table 1: Budget Surplus as a Share of Revenues and Total, Selected Canadian Cities

Municipality	2014 Surplus		2008-2014 Surplus (\$millions)	Municipality	2014 Surplus		2008-2014 Surplus (\$millions)
	(\$millions)	(Percent share of revenues)			(\$millions)	(\$millions)	
Toronto	788	7.0	5,281	Waterloo Region	87	9.0	455
Montreal	606	9.7	3,235	Halton Region	260	26.9	1,516
Calgary	1,091	24.0	6,499	Halifax	36	3.8	575
Ottawa	356	10.0	2,598	Saskatoon	202	23.2	1,431
Edmonton	488	15.7	3,893	Niagara Region	56	6.4	380
Peel Region	378	16.1	1,989	Surrey	189	22.4	1,272
York Region	317	13.8	2,491	Mississauga	(23)	-2.9	475
Hamilton	190	11.0	1,171	Brampton	125	16.5	978
Winnipeg	213	12.4	1,401	Windsor	18	2.5	439
Vancouver	215	13.8	987	Vaughan	211	33.8	957
Durham Region	153	12.3	1,189	Sudbury	28	5.2	273
London	117	10.6	1,030	Markham	87	23.7	850
				All Major Cities	<b>6,187</b>	<b>12.4</b>	<b>41,369</b>

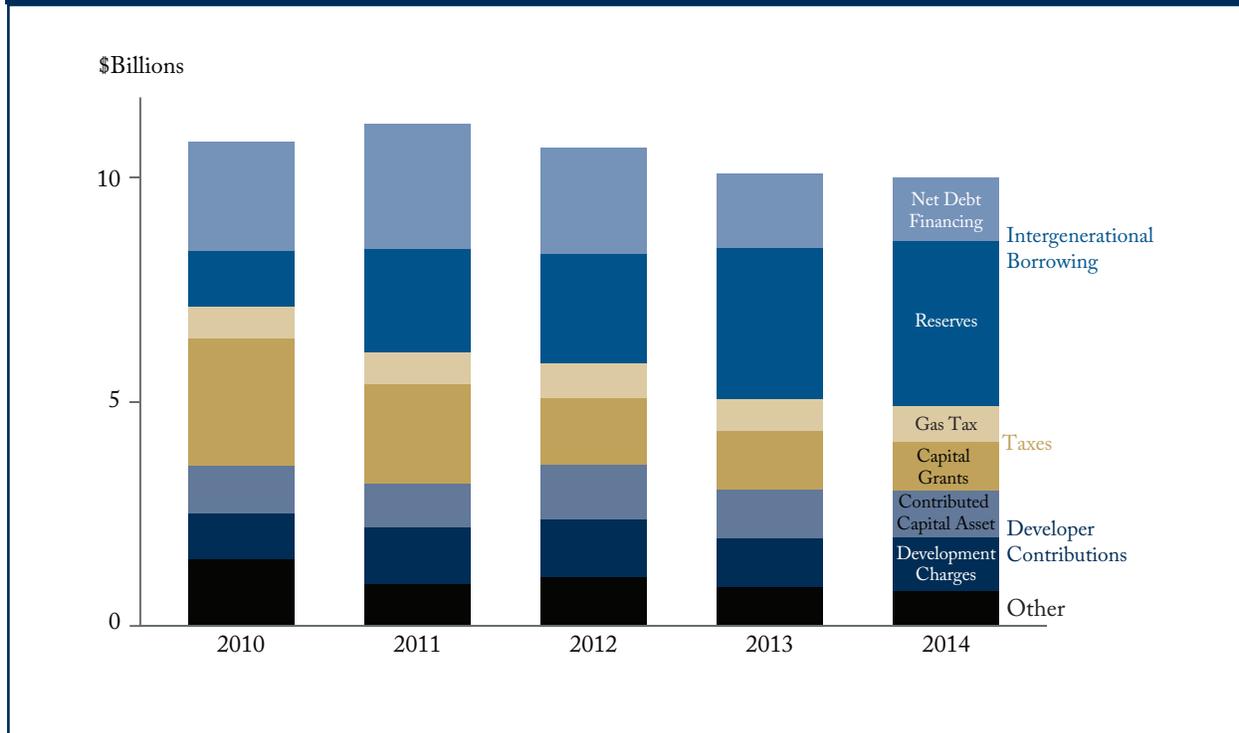
Note: Cities ranked by 2014 revenues.

Source: Dachis and Robson (2015).

cities collect in-kind contributed capital assets from developers that form the basis of neighborhoods.<sup>3</sup> In total, Ontario cities have collected more than \$2 billion per year from developers to finance local infrastructure. These development charges and other contributions that businesses notionally must pay will result in home buyers spending more to buy a home.

3 For example, Sections 42 and 37 of Ontario's *Planning Act* provide the option of in-kind contributions for parklands or other community amenities to secure planning approval for buildings that exceed zoning requirements. Many other provinces have similar provisions. In Vancouver, these are known as Community Amenity Contributions.

Figure 2: Sources of Capital Financing, Ontario Municipalities, 2010-2014



Note: Development Charges represent the summation of Development Charges and Recreational Land (lines 415 and 416, respectively) of Ontario's Municipal Financial Information Return.

Source: Author's calculations from Schedule 53 of Ontario [Financial Information Return].

Another consequence of cities financing the full cost of infrastructure upfront is that the cost of using that infrastructure later will fall (Blais 2010). That will result in residents overusing this infrastructure. Cities should instead focus on making the direct users of infrastructure pay. For example, cities should have broader authority to charge road tolls. The City of Toronto currently has the power to levy road tolls. Metro Vancouver cities are seeking such powers, something the provincial government has said it will only allow after a referendum on the matter (Shaw 2015). The province of British Columbia should allow cities to levy road tolls. Cities should also require residents to pay the full cost of municipal services like parking, water and waste water (see Renzetti 2009 for a discussion of cities underpricing water).

Cities should also look to how they can build on residential property taxes as a way to finance infrastructure. Gibbons and Machin (2005) find evidence that the values of houses near new transit infrastructure rise relative to those in the rest of a city. A property tax that captured this increase in location-specific house values could provide a dedicated revenue stream to fund transit expansion and equate the benefits of infrastructure with who pays for it, akin to a user fee which has no broader economic harm (Dachis 2013). Canadian cities can look to modify their property taxes into a tax increment financing tool, also called a Community Revitalization Levy in Alberta, as a way to collect this increase in housing value at little economic cost (Found forthcoming). Cities

should increasingly finance long-lived transportation infrastructure upfront with debt financing or public-private partnerships, then pay the debt or private providers with long-term revenues from property taxes as part of a tax increment finance scheme.

## Conclusion

Canadian governments of all levels are preparing for a major spending increase on infrastructure in 2016. They should all be considering reforms to their current infrastructure policies to make sure they get the most out of these new investments.

- The new federal government should reconsider plans for an Infrastructure Bank and rethink its granting policies. Raising taxes to finance infrastructure has an economic cost, which the government should consider before increasing spending. The federal government should look to public-private partnerships to finance infrastructure whenever sensible.
- All provinces should look to expand their road pricing programs. High Occupancy Toll (HOT) lanes are a start, but they should also look to more comprehensive road pricing to complement judicious investments in public transit. Provincial governments should also have in place comprehensive cost-benefit analyses of all major infrastructure investments.
- Cities should put their budgets on the same accounting standard as their own year-end financial statements and higher levels of governments – and look to better match those who benefit from government infrastructure with those who pay for it. That means relying less on upfront charges and more on user fees for infrastructure such as roads, parking and water. Cities should also look to tax-increment financing as a way to capture the increase in land values from location-specific infrastructure.

## References

- Alberta. 2015. "Capital Plan. Fiscal Plan 2015–18."
- Auditor General of Ontario. 2014. *2014 Annual Report of the Office of the Auditor General of Ontario*. Chapter 3, Section 3.05.
- Blais, Pamela. 2010. *Perverse Cities: Hidden Subsidies, Wonky Policy and Urban Sprawl*. UBC Press.
- Dachis, Benjamin. 2011. "Congestive Traffic Failure: The Case for High-Occupancy and Express Toll Lanes in Canadian Cities." E-Brief 122. Toronto: C.D. Howe Institute. August.
- . 2013. *Cars, Congestion and Costs: A New Approach to Evaluating Government Infrastructure Investment*. Commentary 385. Toronto: C.D. Howe Institute. July.
- . 2015a. "Tackling Traffic: The Economic Cost of Congestion in Metro Vancouver." E-Brief 206. Toronto: C.D. Howe Institute. March.
- . 2015b. "Now's the time for Ontario's cities to quit the electricity business." *The Globe and Mail*. April 17.
- Dachis, Benjamin, and William B.P. Robson. 2015. *Building Better Budgets: Canada's Cities Should Clean Up their Financial Reporting*. Commentary 439. Toronto: C.D. Howe Institute. November.
- Dahlby, Bev. 2009. "Once on the Lips, Forever on the Hips: A Benefit-Cost Analysis of Fiscal Stimulus in OECD Countries." Background 121. Toronto: C.D. Howe Institute. December.
- Dahlby, Bev, and Emily Jackson. 2015. "Striking the Right Balance: Federal Infrastructure Transfer Programs, 2002–2015." University of Calgary. The School of Public Policy Research Papers. 8: 35. November.
- Found, Adam. Forthcoming. *Tapping the Land: Tax Increment Financing of Infrastructure Costs*.
- Gibbons, Stephen, and Stephen Machin. 2005. "Valuing Rail Access Using Transport Innovations." *Journal of Urban Economics* 57(1): 148-169.
- Kitchen, Harry. 2006. *A State of Disrepair: How to Fix the Financing of Municipal Infrastructure in Canada*. Commentary 241. Toronto: C.D. Howe Institute. December.
- Laroche, Jean. 2015. "Tolls proposed for 8 sections of 4 busiest Nova Scotia highways." CBC News. June 19.
- Liberal Party of Canada. 2015. "A New Plan for a Strong Middle Class."
- Ontario. 2015. *Ontario Budget 2015*. Available online at: <https://www.ontario.ca/page/ontario-budget-2015>.
- Poschmann, Finn. 2003. *Private Means to Public Ends: The Future of Public-Private Partnerships*. Commentary 183. Toronto: C.D. Howe Institute. June.

Renzetti, Steven. 2009. *Wave of the Future: The Case for Smarter Water Policy*. Commentary 281. Toronto: C.D. Howe Institute. February.

Shaw, Rob. 2015. "Any move to toll roads, bridges would trigger another referendum: Fassbender." *The Vancouver Sun*. October 6.

This E-Brief is a publication of the C.D. Howe Institute.

Benjamin Dachis is a Senior Policy Analyst, C.D. Howe Institute.

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