Hamilton Spectator

Providing the essential lens to assess and guide infrastructure investment

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By Andy Manahan and Sean Strickland

The landscape for infrastructure investment in Canada has been transformed. The majority Liberal governments at Queen's Park and Ottawa have an excellent opportunity to work together on plans to invest more than $255 billion in public infrastructure over the next 10 years.

There should be some constructive conversations between newly-minted federal minister Amarjeet Sohi and his Ontario counterpart, Brad Duguid, ahead of the Trudeau government's Dec. 4 throne speech.

Part of those discussions will involve how to best set priorities for infrastructure investment.

With this new political alignment, a window has opened to incorporate evidence-driven research for a new era of co-operation between Ottawa, Queen's Park and municipalities. Much better data, metrics and other analytics are essential for all of our government representatives to work closely together to deliver infrastructure projects in Ontario.

Strategic considerations and better funding approaches will be crucial to achieve socio-economic prosperity for Canadians. Choosing the proper methods of delivery and asset management will help to ensure that the Canadian economy continues to grow.

Public infrastructure catalyzes and fosters population and productivity growth by: supporting the movement of people, capital and ideas; increasing the efficiency of capital and labour; and attracting more private sector investment.

While there is a clear need for co-ordinated and effective policy, there are serious limitations with the traditional economic models currently available, such as input-output models: these do not properly recognize the unique characteristics of public infrastructure, resulting in a limited measurement focused mainly on short-term stimulus effects.

As Jean-Claude Trichet, then governor of the European Central Bank, said in 2010, "As a policy-maker during the crisis, I found the available models of limited help. In fact, I would go further: in the face of the (global economic) crisis, we felt abandoned by conventional tools."

There are other options.

A recent research report by a Toronto-based think-tank — the Canadian Centre for Economic Analysis (CANCEA) — assesses Ontario's $130-billion, 10-year pledge through the lens of agent-based modelling (ABM) and a systems approach. "Investing in Ontario's Public Infrastructure: A Prosperity at Risk Perspective" also illustrates how the usual short-term, stimulus-focused traditional economic models cannot tell the difference between the impacts of public investment in infrastructure and ice cream. CANCEA's goal was to demonstrate how traditional models miss so much of infrastructure's benefits, especially the multi-decade contributions to GDP, incomes, private investment and public sector revenues.

The research found that for every $1 billion invested in infrastructure as part of Ontario's 10-year plan, $1.7 billion would be generated in provincial tax revenues, and $1.6 billion would be raised for federal coffers.

So what is ABM? It's a method of measuring an economy's potential performance based on its relationship with all socio-economic factors, including infrastructure, housing, banking and health care, as well as non-financial events that translate into financial outcomes. This "systems thinking" framework acknowledges these interactions in order to understand that an economic system is more than the sum of its parts. It's a big data and analytics approach similar to that used by the Institute for New Economic Thinking at Oxford University.

Traditional evaluation approaches are incapable of fully assessing what is at risk tomorrow if an appropriate investment is not made today. An ABM measure of Ontario's 10-year infrastructure program demonstrates more than five times higher increases in job creation and total wages paid than traditional models.

Given that much of the public infrastructure in Canada not in a state of good repair, modelling the investment opportunities to support effective spending is not just an academic exercise. As the throne speech approaches, governments at all orders have important decisions to make for strategic infrastructure investment.

We all know that public infrastructure investments are important and that many projects, such as water systems and transit, are essential to promoting our shared prosperity. But our evaluation techniques need to improve. In an era of deficits, the last thing anyone wants is for our limited funding to be misspent.

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