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NEW MODELING APPROACH

By Geordie Gordon

Traditional economic modeling methods do not adequately capture the long-term economic benefits of government investment in infrastructure. A model developed by the **Canadian Centre for Economic Analysis** attempts to better determine those long-term economic impacts by using a systems model that measures how the infrastructure can support other economic activities.

Presenting a recent CANCEA [report](#) examining infrastructure investment in Ontario, president and CEO **Paul Smetanin** said that traditional economic models only account for three types of economic benefits: direct, indirect and induced. These benefits are generated simply by the government spending money, no matter what the money is spent on. It doesn't take into account the form and function of the infrastructure being built.



Panellists and organizers at the Investment in Public Infrastructure event. From left to right: CANCEA president and CEO Paul Smetanin, CCPPP president and CEO Mark Romoff, Toronto Region Board of Trade president and CEO Janet De Silva, Infrastructure Ontario executive vice-president John McKendrick, RCCAO executive director Andy Manahan, Barrie mayor Jeff Lehman and OCS CEO Sean Strickland.

"Direct, indirect and induced is basically the value you receive just by spending money, whether you spend it on ice cream or a hole in the ground, you'll pretty much get that benefit because it's just the swirl of money in the economy," he said.

The CANCEA model, called Prosperity at Risk, incorporates a fourth benefit, called systemic impacts, that aren't captured in traditional models. Smetanin said that systemic impacts are a measure of how physical infrastructure alters the movement of people, capital and ideas, as well as how the physical infrastructure supports population and economic growth.

When the systemic impacts of infrastructure investment are taken into account, the Prosperity at Risk model shows that a \$1-billion government investment in infrastructure will generate \$16.3-billion in GDP and 85,000 job-years over a 30-year period. This is compared to the estimate of \$1.2-billion in GDP and 15,000 job-years derived from traditional analysis methods.

Barrie mayor **Jeff Lehman** told participants at the event that the model could have an impact on the political decision-making process, but that there may be barriers to communicating the benefits to the public.

“You will never take the politics out of decision making, but you can expect better decision making and only if you can communicate the results of this work very, very clearly, and that is challenging indeed,” he said. “We must find a way to take—and this is a herculean task—the complexity of what we’re discussing today and be able to explain it to somebody while you’re standing in line for a coffee, because that is the currency of decision makers and that is a tremendous challenge.”

University of Toronto geography associate professor **Matti Siemiatycki** told *NRU* that the model presented can help with some of the technical decision making when it comes to infrastructure projects.

“There’s a strong recognition that infrastructure can drive economic growth, social benefits and environmental improvement, but it really depends on what projects you build. Part of the key takeaway from this discussion was coming up with the methodologies for picking the right projects, both the technical methodologies... but also the political process to make sure that information gets integrated into the decision making,” he said.

Smetanin said in an email to *NRU* that the Prosperity at Risk model should help governments make difficult decisions when it comes to infrastructure by weighing the value and consequences of those decisions. It should allow for the reevaluation of investments when information changes or more becomes available.

“Realistic value and consequence identification should allow governments to understand what sustainability looks like and justify complex decisions against the virtues of prosperity for a population. Re-running of the model once new information comes in should help governments continually justify policy and stay with the decisions they have made,” he said. **Residential and Civil Construction Alliance of Ontario and the Ontario Construction Secretariat hosted the event December 1st at the University of Toronto.**