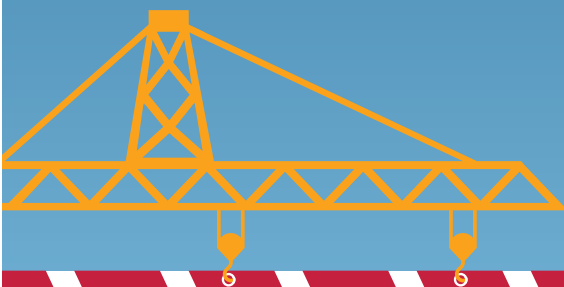




DRIVING PUBLIC INFRASTRUCTURE, JOBS AND ECONOMIC GROWTH

A Discussion Document to Support the Work of the Fiscal Arrangements Working Group ² Infrastructure Sub-Group (FAWG-ISG)

August 6, 2014



BUILDING CANADA UP SUMMIT

SOMMET FAIRE PROGRESSER LE CANADA

Welcome

As a valued stakeholder, we are pleased to have you join us for this summit on driving public infrastructure, jobs and economic growth.

At the 2013 summer Council of the Federation meeting, premiers from across the country asked me to lead a working group with provincial and territorial ministers responsible for infrastructure and economic development to analyse the importance of investments in public infrastructure for the economy.

Listening to the views of experts like you is an important part of this work. We look forward to hearing/receiving your views in a number of key areas. We think this is vital in order to:

- ☐ enhance and improve public infrastructure investments
- ☐ highlight regional/sectoral opportunities and challenges for public infrastructure investment
- ☐ build a shared understanding of key issues that relate to public infrastructure
- ☐ access expert opinion on infrastructure issues and best practices beyond traditional government sources

Canada's premiers are focused on modernizing the fiscal arrangements, in part, to improve the country's economic prosperity. Canada's premiers are motivated to ensure that fiscal balance is achieved in the federation so that economic, fiscal and social policies and programs are sustainable.

Modern, sustainable and reliable public infrastructure has been widely regarded as a key driver for economic growth, job creation and business attraction and forms the foundation for a healthy, safe and prosperous society. As the ☐physical backbone of a community,☐ public infrastructure enhances quality of life for individuals, while building up communities, industries and businesses.

The following questions cover topics that the Fiscal Arrangement Working Group ☐ Infrastructure Sub-Group, or FAWG-ISG, would value your insights upon. These questions are framed around the significant amount of evidence available that addresses the links between infrastructure investment and economic prosperity, and also contemplate the need to re-consider the relationship of infrastructure to current federal-provincial fiscal relationships.

Thank you for agreeing to share your perspectives on an issue of significance to the country.

Sincerely,

Kathleen Wynne,
Premier of Ontario and Chair of the Fiscal
Arrangements Working Group ☐ Infrastructure Sub-Group

Discussion Questions

1

ECONOMIC IMPACTS

The federal government has estimated that the short-term impact on the level of real GDP of a \$1 billion increase in infrastructure spending is approximately \$1.6 billion. Further, each \$1 billion invested in public infrastructure supports between 8,000 to 36,000 person years of employment in North America.

What public infrastructure spending best supports economic growth and generates the “biggest bang for buck” in terms of creating employment? From your sector’s perspective, what is the business case for public infrastructure investment?

2

INTERNATIONAL COMPETITIVENESS

According to the World Economic Forum, an inadequate supply of infrastructure is considered the 7th most problematic factor for doing business. A recent report ranked Canada’s infrastructure investments behind several G8 countries including, Germany, France, the UK and Japan.

In order to better position itself vis-à-vis its international competition, how much should Canadian governments be investing in public infrastructure? Should Canadian governments set a target for the level of investment in public infrastructure, say as a percentage of GDP? Should Canadian governments set a goal to be in the top 5, 10 or 15 OECD countries in terms of public infrastructure investment? If so, over what time period would it be reasonable to meet such a goal?

Discussion Questions

3

TYPES OF INVESTMENT

Infrastructure can be thought of as capital investments that facilitate the consumption of public goods and/or generate private economic activity. It generally includes things like hospitals, schools, postsecondary education facilities, government administration buildings, dams/dikes, highways/roads/bridges, transit, and waste, water and wastewater.

Are Canadian governments investing in the types of public infrastructure that facilitate economic growth? How do we ensure we strike the right balance between protecting our current infrastructure and building new projects? How can we ensure provinces and territories have the flexibility they require to invest in their priorities under federally funded programs? Given recent weather events in Canada, should we be investing more in disaster mitigation?

4

CONTRIBUTION OF THE FEDERAL GOVERNMENT

Provinces and territories combined invest 2.4 times more in infrastructure than the federal government. The federal government derives significant benefit from provincial and territorial infrastructure investments. Based on the return on infrastructure investments to governments, it is estimated that the federal government is annually investing about \$19 billion less than it should considering the benefits it gets from public infrastructure.

Given the federal government's stated emphasis on economic renewal and its role in ensuring an efficient and effective union, is it investing sufficiently in public infrastructure? Should there be a more predictable formula that links the level of federal infrastructure investment to the tax revenues it collects from the economic activity created by public infrastructure?

Discussion Questions

5

ROLE OF THE PRIVATE SECTOR

Governments across Canada have, in aggregate, invested significant funds in building and maintaining publicly owned assets — estimated at a little over 3% of GDP in the 2000s. At the same time, Canada has become a global leader in alternative financing and procurement, with provincial governments the most significant players in this area in Canada.

What are the optimal forms of public/private cooperation for investing in and developing public infrastructure? What are the impediments that limit the potential of public/private partnerships to deliver public infrastructure? What existing or potential practices should be considered to make public/private cooperation more successful in delivering public infrastructure?

The Importance of Public Infrastructure

For the purposes of this discussion guide, the types of public infrastructure under consideration include hospitals, schools, post secondary education and government administration, highway/roads/bridges, transit, and waste, water and wastewater.

Infrastructure investments provide two general types of economic benefits:

- in the short term, they support jobs and increase GDP through direct government spending (especially during economic downturns)
- over the long term, they increase private-sector productivity and economic growth, and enhance quality of life

In most respects, infrastructure and growth reinforce one another: public infrastructure leads to growth and growth requires infrastructure. At the same time, there is a difference between investment required to maintain the current stock of public infrastructure, and the need for incremental investments required to meet growing domestic demand and to allow for growth. This is important as the need, scale and frequency of investment activity will differ depending on the characteristics of each type of infrastructure.

In some high-growth jurisdictions in Canada, public infrastructure investments are trying to catch up in order to avoid bottlenecks that hinder economic growth.

The following pages include a compilation of facts and analysis that are relevant to a conversation about the links between public infrastructure and the economy. This evidence does not represent the full extent of the data available, but highlights key aspects to provide context as you think about the questions posed above.

Promoting Economic Growth

Finance Canada's "Seventh Report to Canadians" estimated the short-term economic multiplier effect of public infrastructure spending at 1.6, higher than virtually all other components of the federal Economic Action Plan. This means the short-term impact on the level of real GDP of a \$1 billion increase in infrastructure spending would be \$1.6 billion.

The Canadian Centre for Policy Alternatives 2009 report suggested a slightly higher multiplier effect for public infrastructure spending, when it concluded that \$1 billion spent on infrastructure stimulus would increase GDP by \$1.78 billion. The Conference Board of Canada recently estimated that from 2006 to 2014, the contribution of infrastructure spending to real GDP ▫ including direct, indirect, and induced impacts ▫ is \$11.3 billion per year: for every

\$1 billion invested in public infrastructure, GDP is boosted by \$1.14 billion in the short-to medium-term.

In general, most analysis of the impact of public infrastructure suggests that infrastructure investments:

- ☑ generate substantial and permanent positive effects on the economy
- ☑ are at least as or more impactful on economic growth when compared to other types of public investment
- ☑ help boost the economy ☑ that is, a dollar invested leads to higher GDP through direct, indirect, and induced impacts
- ☑ typically yield a positive rate of return
- ☑ and economic growth rise and fall together

Supporting Job Creation

It is also common to estimate the jobs supported by public infrastructure investment. The Canadian and American evidence shows that each \$1 billion invested in public infrastructure supports between 8,000 to 36,000 person years of employment, depending on the time scale, type of infrastructure, and whether induced jobs are included.

According to The Conference Board of Canada (2013), the biggest employment gains from public infrastructure investment are in business services, which encompass a wide range of sectors including transportation, financial services, wholesale and retail and others. Construction and manufacturing sectors are also major beneficiaries in job creation, given their direct relationship with the building of public infrastructure. Alternatively, these sectors are likely to be hit more severely when there is a significant drop in investment, implying a need for long-term stability in the level of infrastructure investment.

The U.S. Department of the Treasury with the Council of Economic Advisers (2010) has reported that public infrastructure creates middle class jobs:

- ☑ 61% of jobs created would be in the construction sector, 12% in the manufacturing sector, and 7% in retail trade
- nearly 90% of the jobs in these three sectors would be middle class jobs, defined as those paying between the 25th and 75th percentile of the national distribution of wages

Additionally, Statistics Canada (2008) estimated that each dollar of public infrastructure spending can decrease Canadian business costs by 11 cents and manufacturing sector costs specifically by 27 cents on average.

Enhancing Productivity

Public infrastructure constitutes a vital input for private sector production. It enables concentrations of economic resources as well as wider and deeper markets for output and employment.

Most studies suggest that public infrastructure reduces the cost of production in the private sector and that as the private sector has more public infrastructure investment to work with, output is produced at a lower private cost, thus resulting in an improvement in productivity. Statistics Canada (2009) estimated that on average, 50% of the Canada's productivity growth in the private sector between 1962 and 2006 was the result of growth in public infrastructure.

Efficient transportation systems help reduce congestion, increase economic opportunities, reduce fossil fuel consumption (leading to decreased overall energy consumption) and induce more government revenue.

Increasing Competitiveness and Investment Attraction

Infrastructure is regarded as the second basic pillar among the 12 determinants of measuring competitiveness in the World Economic Forum's *Global Competitiveness Report 2013-2014*. Infrastructure also influences two other pillars, namely technological readiness and innovation.

According to a 2013 World Economic Forum report, Canada ranked 14th among 148 countries using the Global Competitiveness Index (GCI), down from 10th in the 2010-2011 report. Specifically, Canada's infrastructure ranked 12th, which is behind many G8 countries including, Germany, France, the United Kingdom and Japan. Rankings were based on an assessment of the quality of each country's transport and electricity and telephony infrastructure. An inadequate supply of infrastructure was considered the 7th most problematic factor for doing business.

What Other Jurisdictions Are Doing

Across jurisdictions, advanced economies are challenged by the need to maintain and modernize existing infrastructure networks, such as transportation, telecommunications and water. Many emerging economies need to provide funding to support basic infrastructure requirements, such as access to clean water and sanitation and all-weather road networks.

According to the McKinsey Global Institute, a \$57 trillion infrastructure investment is required globally between 2013 and 2030.

When comparing investments in public infrastructure among peer jurisdictions, Canada ranks in the middle of the pack. Canada's investment per capita ranked fourth among G8 countries and 11th of 27 OECD countries examined in terms of average growing government-funded stock of capital (i.e., "gross fixed capital formation") between 2000 and 2010. Over these

same years, as a proportion of GDP, Canada's average public infrastructure investment (at approximately 2.9%) ranked 17th of 27, roughly half that of South Korea, and again fourth among G8 nations. By both measures, Canada was behind Korea, Australia, Japan, Spain, Sweden and Norway, roughly equivalent to the United States, and ahead of the United Kingdom, Germany, Finland and Italy.

In order for Canada to outperform other countries and strengthen its position as a leading international economy, additional public infrastructure investments are required.

Mitigating the Impact of Catastrophic Events

Canada's risk environment has undergone a notable transformation over the last three decades. Prior to 1996, only three disasters in Canadian history had exceeded \$500 million in damages (adjusted to 2010 dollars). However, beginning in 1996, Canada has averaged one \$500 million or larger, disaster every single year.

According to experts attending the 2013 World Conference on Disaster Management (WCDM), Canada's infrastructure has become more vulnerable to natural disasters due to the rising cost of upkeep and increasing frequency of extreme weather. Further, poorly maintained infrastructure can lead to catastrophic events.

The Insurance Bureau of Canada has made adaptation to extreme weather events its top priority, given the significant costs to homes and businesses from weather events. In fact, water damage has now surpassed fire damage for insurance claims.

Enhancing Quality of Life

In modern cities, congestion is often a serious problem. Congestion increases commute times, reducing both economic output and quality of life. Studies have shown that transportation infrastructure benefits people in general. For example, public transportation's overall effects save the United States \$4.2 billion gallons of gasoline annually. Further, households near public transit drive an average of 4,400 fewer miles than households with no access to public transit. This equates to an individual household reduction of 223 gallons per year. Significant time savings also result from the ease of congestion that is associated with improved transportation infrastructure. Water quality also benefits from public infrastructure investments.

— Funding and Financing of Public Infrastructure

Public infrastructure is not free. Governments across Canada have, in aggregate, invested significant funds in building and maintaining publicly owned assets – estimated at a little over 3% of GDP in the 2000s. Given budget constraints, this not only carries a noticeable opportunity cost – that is, each dollar invested in public infrastructure is not invested in other priorities such as social programs or tax relief – but an actual cost in terms of deficits and debt.

From an accounting perspective, infrastructure affects the bottom lines of governments across Canada in two key ways. First, governments typically borrow to pay the large costs associated with construction, increasing debt. Second, once constructed, the amortization (essentially, the using up of the asset over its useful life), related interest on debt, and ongoing maintenance costs combine to affect the surplus/deficit position for decades. This is exacerbated if governments do not invest strategically.

A highly effective prioritization of investments based on sound business-case analyses is critical, and needs to account for what drives demand for each type of infrastructure.

Lessons learned from across the country can help to inform future infrastructure investment spending. In particular, the Public-Private Partnership (P3) model may serve as a significant example of utilizing public and leveraged funds. Other jurisdictions may also provide useful alternatives for financing strategic infrastructure. In Canada, as in other jurisdictions, public-private partnerships have been employed on large infrastructure projects, as an efficient way to protect taxpayer funding and benefit from private sector expertise.

According to a recent Conference Board of Canada report, Canada has become a global public-private partnerships (P3) leader, with provincial governments the most significant players in the Canadian P3 arena. Further, a December 2013 report from the OECD pointed to innovative ways that public-private partnerships are being used in Canada through the engagement of non-traditional partners and matching grants.

Role of the Federal Government

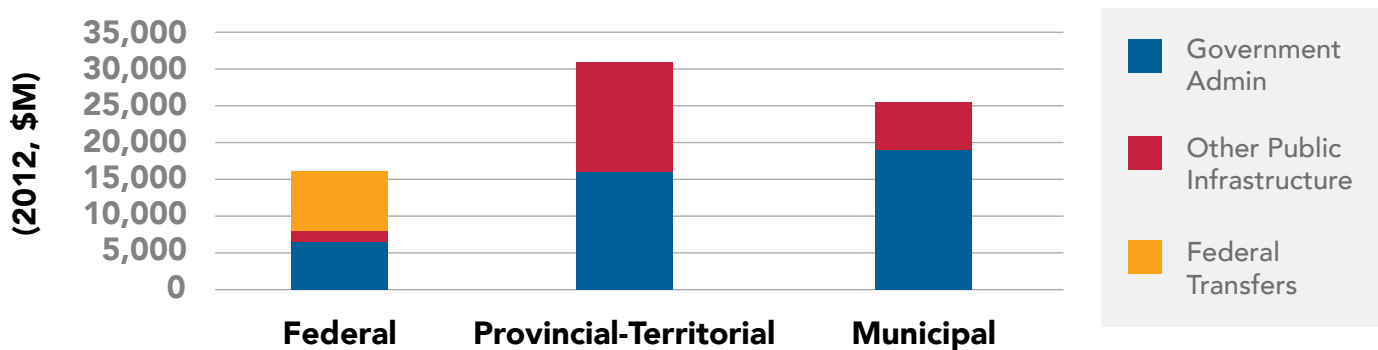
In Canada, the costs of infrastructure are borne disproportionately by provinces, territories and their municipal partners. However, the benefits in terms of revenues derived from the associated economic growth accrue roughly equally to provinces/territories and the federal government.

As a result, the argument has been made that a more equitable balance be struck between orders of government in funding modern, sustainable and reliable public infrastructure that help generate that growth.

Federal vs. Provincial-Territorial Fiscal Sustainability

The Parliamentary Budget Officer's 2013 "Fiscal Sustainability Report" projected that over the long term, based on current trends, the federal government will have growing surpluses while the provincial-territorial sector will have growing deficits. It estimated that the federal government had about \$25 billion of fiscal room in 2013, meaning it could reduce taxes or increase spending by \$25 billion and still achieve fiscal sustainability. By contrast, provincial-territorial-local governments need to increase revenue, reduce program spending or some combination of both by about \$36 billion per year to achieve fiscal sustainability.

Investment in Public Infrastructure by Order of Government



Sources: Ontario Ministry of Infrastructure, Statistics Canada

Notes: These data are modeled, based on data from Statistics Canada that are survey-based and self-reported. Therefore, the responses are given from the perspective of the asset owner and may not correspond to provincially reported investments. Further, the definition of public infrastructure may not correspond to individual provinces' definitions.

Return on Investment

In 2012-13, the provinces and territories collected over \$272 billion in own-source revenues while the federal government collected approximately \$257 billion. This implies a provincial-territorial to federal revenue ratio of roughly 1 to 1. While the revenue mix is slightly different between orders of government (i.e., more personal and corporate income tax but less consumption tax federally), the major revenue streams are relatively similar. The revenues collected by each order of government represent approximately 14% of GDP. In other words, for every \$1 billion in GDP, each of the two orders of government received approximately \$140 million in revenue.

With only one tax payer, governments that work together should see a fair distribution of those returns based on their investments. With benefits roughly equally split between the provinces/territories and federal orders of government, it could reasonably be expected that the investments should also be shared equally. If so, the gap between federal and provincial-territorial investment would be over \$19 billion annually after accounting for existing federal transfers, the Gas Tax, and the new Building Canada Plan. This would be equivalent in magnitude to half the Canada Health Transfer or half of federal GST revenues.

Background: Public Infrastructure in Canada

1945-1970

- ☐ Multi-decade boom created core infrastructure stock.
- ☐ Many regions experienced rapid economic and population growth.
- ☐ Much of infrastructure created during this period is still in use today.

1970-1980s

- ☐ Rates of investment in many provinces started to slow and total investment lagged for decades.
- ☐ Investment decisions relied on priority shifts in government spending, and were influenced by the oil crisis in the 1970s and inflationary pressures of the 1980s.

Late 1990s

- By this period, there was an accumulation of a significant infrastructure deficit in Canada, with growing traffic congestion, increasingly unreliable supply lines for industry, and a blunting of economic competitiveness.

2000s

- Governments started significant and concentrated investments to renew public infrastructure, partly because of deterioration.
- ☐ When the "Great Recession" hit in 2008, the federal and provincial-territorial governments successfully worked together to mitigate the impact of the recession through infrastructure stimulus investments.

Spring 2013

- ☐ Federal government announced the new Building Canada Plan, representing \$47 billion in new funding over ten years for infrastructure projects across the country.

Summer 2013

- ☐ At the summer 2013 Council of the Federation meeting, premiers asked Premier Wynne to lead a working group with provincial and territorial ministers responsible for infrastructure and economic development.
- ☐ The Infrastructure Sub-Group is analyzing the importance of investments in public infrastructure and will be making recommendations to all of Canada's premiers in August 2014.