



Canada's Centre for Global Trade
WINNIPEG, MANITOBA

Infrastructure Funding Options & Opportunities

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Trade and its Connection to Infrastructure

- Canada is highly dependent on trade – more than 2/3 (69%) of Canadian GDP can be attributed to imports and exports.
- At the same time, Canada is physically the second largest country in the world, with one of the lowest population densities in the developed world.



Canadian Exports and How They Move

Canadian Exports by Mode, Amount Shipped and Major Receivers – 2007

Mode	Amount Shipped (billions)	Major Receivers
Road	\$180.4	U.S. (97%)
Rail	\$74.3	U.S. (97%)
Marine	\$81.5	U.S. (26%), China (10%), Japan (10%)
Air	\$40.7	U.S. (38%), U.K. (15%), Germany (4%)
Pipeline & Power Lines	\$65.0	U.S. (100%)



Productivity and Infrastructure Gaps

- The productivity gap between the U.S. and Canada reached 20% in 2006.
- Between 1994 and 2006, infrastructure capital stock increased 24% in the U.S. and *decreased* 4% in Canada.
- \$200 billion is required to close Canada's infrastructure gap - \$72 billion for new infrastructure and \$123 to improve existing infrastructure (Brox 2008).
- From 1955 to 2007 the federal share of public infrastructure fell from 27% to 5% while the municipal share increased from 27% to 55% (Brox 2008).
- Municipal under-investment in infrastructure, the result of municipal fiscal constraints, has resulted in significant infrastructure gaps:
 - Edmonton - estimated \$19.1 billion infrastructure gap over 10 years (2008);
 - Regina - estimated \$2.1 billion infrastructure gap over 10 years (2009);
 - Winnipeg - estimated \$7.4 billion infrastructure gap over 10 years (2009).

Infrastructure = Competitiveness

- Given Canada's size and trade dependence, the efficient movement of goods and services becomes very important and investment in new and improved infrastructure critical.
- Infrastructure investments leave government with assets that continue to improve productivity.
- New / revamped infrastructure enhances private sector competitiveness by making transportation more efficient – reducing travel time, congestion, fleet wear-and-tear, etc.
- The annual cost of congestion in Canada's 9 major urban areas is between \$2.3 and \$4 billion.
- \$1 billion in infrastructure investment produces more GDP and employment growth in the first year than personal or diesel tax cuts.

Infrastructure Investments in Canada

Recent Canadian Federal Government infrastructure stimulus initiatives:

- Immediate Action to Build Infrastructure – Budget 2009 announced almost \$12 billion over two years. This includes funding for numerous federal infrastructure projects (bridges, railways, highways, border crossings, etc) and \$4 billion for the Infrastructure Stimulus Fund for infrastructure rehabilitation and new infrastructure in provinces, territories and municipalities.
- Building Canada Plan - \$33 Billion Infrastructure Investment Plan for 2007-2014.
- In addition, provinces and local governments make significant expenditures in infrastructure.

Provincial / Territorial and Local Expenditure in Transport* (dollars per capita)			
Region	1999-2000	2006-2007	2007-2008
British Columbia	861	794	868
Alberta	614	874	1,044
Saskatchewan	511	828	968
Manitoba	489	590	747
CANADA	534	645	754

*Includes expenditures on transit, roads & bridges, rail, marine, air and other (overhead expenses and local level communications)

Source: Transport Canada

Infrastructure Investment in Other Countries

- Estimated \$25-30 trillion in new global infrastructure investment over next 20 years. Of this:
 - Over the next decade, the U.S. will invest nearly \$150 billion annually;
 - Europe will invest about \$300 billion annually;
 - China will invest at least \$200 billion annually.

Projected Annual Infrastructure Spending (billions of dollars)	
Region	Amount
North America	\$180
Europe	\$305
Asia	\$400
Africa	\$10

Source: CIBC via CBC News – Jan/09

- *Canada's State of Trade 2009* claims China's continued growth during the recession can be partly attributed to fiscal stimulus and monetary easing, which encourage consumption and infrastructure investment.

Opportunities and Methods for Infrastructure Development

- **Delivery Efficiencies**
- **Dedicated Taxes**
- **Partnerships with the Private Sector**
- **Specific Infrastructure Funding Options**



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Delivery Efficiencies

(1) Annual and Five-Year Budgets

- Annual and Five Year Budgets: a longer-term budget identifying longer-term capital priorities is presented with the annual budget.
- Examples: Saskatchewan
- Benefits:
 - Tendering predictability allows industry to better organize human and capital resources;
 - Longer-term plans allow government to better plan and target transportation investments;
 - Municipal governments can better plan growth around investment from other levels of government.
- Considerations:
 - Administrative capacity and additional administrative costs;
 - A new budgeting system doesn't replace good planning and management.

(2) Rolling Budgets

- Rolling Budgets: budgets which are continuously amended to reflect changing circumstances. They eliminate 1-year time horizons and allow government to manage funds and investments on a multi-year basis.
- Example: Saskatchewan
- Benefits:
 - Removes inefficiencies associated with lapsed funding, re-appropriation of funds, project interruptions, etc;
 - Predictable, multi-year capital work for industry;
 - Government has more flexibility to plan / steer / target transportation investment;
 - Less administrative work as move from multi project to whole program management.
- Considerations:
 - Internal re-organization (multi project to whole program management) and associated learning curves, resistance, time / resource costs, etc.

(3) Early Tendering

- Early Tendering: the early and predictable release of construction tendering schedules, followed by early bidding and contract awarding.
- Examples: British Columbia, Manitoba
- Benefits:
 - More options for government because first to the market;
 - Industry can better plan bidding because of stable and consistent tendering schedules;
 - Early bidding and awarding lengthen the construction season;
 - Predictable tendering cuts costs by allowing industry to better (and earlier) organize staff, order materials, stabilize equipment costs and provide better materials and subcontractors.
- Considerations:
 - Administrative costs associated with ensuring all tendering is ready for early release instead of gradually over the season / as needed.



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Dedicated Taxes

(1) Dedicated Fuel Taxes

- Dedicated Fuel Taxes: tax revenue dedicated for a specific purpose (IE: infrastructure), opposed to general revenue.
- Examples: Manitoba, British Columbia, Ontario, U.S. Federal Government
- Benefits:
 - Stable and secure funding (historically);
 - Those who benefit from a service pay for it (IE: when fuel taxes are dedicated to road infrastructure);
 - Significant revenue source (U.S. Government collects \$1.9 billion annually);
 - Inexpensive to administer;
 - High compliance rate.
- Considerations:
 - Revenue doesn't increase fast enough to meet infrastructure needs;
 - Less funds in general revenue may result in less financial flexibility when responding to changing conditions;
 - Politicians are reluctant to raise fuel taxes;
 - Less stable revenue stream as vehicles become more fuel efficient / alternative fuels more common.

(2) Dedicated Taxes on Licences, Registration and Automobile Purchases

- Registration / License Fees: fee on vehicle registrations and / or licences. In Toronto fees are dedicated to roads and transit while in Minnesota they enter the Highway User Tax Distribution Fund for highways and roads.
- Sales Tax on Vehicles: sales tax levied on all vehicle purchases. In Minnesota a large portion of the tax revenue is dedicated to highways and transit. This dedicated portion will increase to 100% by 2012.
- Benefits:
 - Inexpensive to administer;
 - Collected on all vehicles that travel on public roads;
 - Fees can vary by vehicle size, somewhat reflecting the proportionate wear and tear costs;
 - Sales tax on vehicles can result in a large revenue stream.
- Considerations:
 - Fees do not vary by kilometres travelled;
 - Administrative costs associated with setting up the program;
 - Coordination with public or private insurance company (s);
 - Unstable funding because it depends on what kind of vehicles people are buying, with the recent trend towards smaller, less expensive vehicles.

(3) Time Limited Dedicated Taxes

- Time Limited Dedicated Taxes: tax collected for a fixed amount of time and dedicated to a specific purpose. In the U.S., some municipalities temporarily increase property (IE – Seattle) or sales (IE – San Diego) taxes by a small percentage, dedicating additional revenue to infrastructure. Many Canadian airports levy an improvement fee to help pay for infrastructure improvements. The fee is often charged on a ticket at the time of purchase.
- Examples: San Diego (California), Seattle (Washington), Winnipeg James Richardson International Airport, Calgary International Airport
- Benefits:
 - If attached to an existing tax, low administrative and overhead costs;
 - Progressive tax;
 - For airport improvement fees, those who use the facilities are the ones who pay;
 - More politically acceptable because it is a time limited tax. This is especially important if citizens must vote on the tax (as is the case in the U.S. with many property and sales tax increases);
 - Can raise significant revenue.
- Considerations:
 - Accountability issues if the tax is not reviewed until it is up for renewal / is finished;
 - Creating the tax may have significant time and resource costs (including campaigns to encourage the creation of the tax).

Partnerships with the Private Sector

(1) Public Private Partnerships

- **PPP:** The Canadian Council for Public-Private Partnerships defines a PPP as “*a cooperative venture between the public and private sectors, built on the expertise of each partner, that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards.*”
- Examples: British Columbia, Alberta, Ontario
- Benefits:
 - Utilizes private sector innovation, efficiency and expertise;
 - Lower costs if properly implemented;
 - Some risks (including cost overruns) can be transferred to private sector.
- Considerations:
 - Risks associated with design failure, faulty techniques, unexpectedly high costs, inadequate revenue streams, adverse impact, acts of God and regulations / policy;
 - PPP tend to fail if there is weak leadership support, lack of clarity, poor communication, inappropriate risk modelling, lack of internal capacity, inadequate planning, lack of operational focus and failure to realize value for money;
 - When interest rates are low, there is no incentive for the private sector to borrow because it increases costs.

(2) Arms Length Transportation Agencies

- Arms Length Transportation Agencies: Governments concede something (land, privilege, franchise, etc) to an agency to independently manage, operate, administer, control and / or develop. These agencies often have borrowing abilities.
- Examples: Vancouver Port Authority, Toronto Port Authority
- Benefits:
 - Utilizes private sector expertise;
 - Lower costs if properly implemented;
 - Private sector innovation and efficiencies, including the ability to quickly respond to changing conditions;
 - Private sector job creation;
 - Risks can be transferred to the private sector.
- Considerations:
 - Unexpectedly high operating costs and inadequate revenue streams;
 - Regulatory / policy risks;
 - Less accountable to the public and more difficult to ensure decisions are made for the public good.

Specific Infrastructure Funding Options

(1) Tax Increment Financing

- Tax Increment Financing: allows governments to promote economic development by dedicating property tax revenue from increases in assessed value within a TIF area.
- Examples: Denver, Portland, Chicago, Manitoba
- Benefits:
 - New / upgraded infrastructure encourages private sector investment;
 - Governments can finance redevelopment without general revenue funds;
 - No new public investment or direct taxation required;
 - Governments may be able to use TIF as their portion for matching-fund programs.
- Considerations:
 - Instead of competition for investment between jurisdictions, competition may arise between a TIF district and another district in the same jurisdiction.

(2) Development Charges

- Development Charges: one-time fees on new development, re-development or expansions, used to finance a portion of costs associated with new / upgraded infrastructure and service requirements.
- Examples: Ottawa, Toronto, California
- Benefits:
 - Raises revenue for infrastructure without raising taxes;
 - Effective for ensuring adequate funding to facilitate growth;
 - Developers may prefer to property tax because it can be directly passed on to purchasers.
- Considerations:
 - Actual charges on non-residential entities can be very large. Governments must choose to levy the entire charge (affecting competitiveness), use general fund revenues to make up the difference, and / or increase the infrastructure deficit;
 - If rezoning is required to levy a development charge and zoning is too flexible (IE: high traffic commercial developers can build in low-traffic industrial zones), developers don't end up paying for increased infrastructure requirements.

(3) Municipal Bonds

- Municipal Bonds: secured debt on which a municipality pays interest every period and the principal at the end of the bond's term. Build America Bonds provide municipal and state governments with funding for capital projects. Phoenix sold Build America Bonds for local improvements and to refinance water-system debt. The Ontario Municipal Economic Infrastructure Financing Authority (now merged with Infrastructure Ontario) issued a single series of Ontario Opportunity bonds in May 2003 for local infrastructure.
- Benefits:
 - Provides just-in-time financing;
 - Encourages local ownership in community development;
 - Potentially lower borrowing costs;
 - Potential cost savings on repayment.
- Considerations:
 - Administrative costs associated with setting up the program;
 - The municipality must acquire unsold bonds;
 - Implementation may be more expensive than accessing funding elsewhere;
 - Difficult in practice for municipalities without a credit rating;
 - Difficult for some Canadian municipalities, as they cannot run operating deficits.

(4) Frontage Levies / Taxes

- Frontage Levies / Taxes: user fees used to pay for part of services associated with frontage (street repair and cleaning, street lights, police and fire fighter services, water and sewer, etc).
- Examples: Winnipeg, various British Columbia municipalities
- Benefits:
 - Funds are not tied to the district where they are collected. They can be used in the most needed areas;
 - Increasing frontage levies while cutting property taxes decreases disincentives for fixing up / maintaining properties;
 - Way to dedicate revenue for new / upgrading of frontage infrastructure.
- Considerations:
 - Costs often shift from businesses to residential areas;
 - Levies must be revenue neutral because increased taxation affects competitiveness vis-à-vis other jurisdictions.

Planning for Economic Growth and Investment Returns

Planning for Economic Growth and Investment Returns

- Prioritize infrastructure investments – infrastructure increases productivity (and thus competitiveness) and labour intensity, which result in a growing economy and larger tax revenues.
- Examine geographic and natural assets and pair these assets with appropriate strategies, investment, coordination, and buy-in.
- Timing is essential as other jurisdictions examine ways to encourage economic growth and promote their competitive advantages.





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Thank you