Banking on infrastructure: public-private finance solutions to the infrastructure gap in Canada

Heather Whiteside[1]

Draft: not for citation without author's permission

Canada is in serious need of infrastructure investment and renewal, with some estimates suggesting that 6-10 times more funding is needed than is currently being spent. The solution embraced by the federal Conservatives favoured using public funds to promote private finance through public-private partnerships (via the P3 Canada Fund overseen by the Crown corporation P3 Canada). In the lead up to the fall 2015 federal election, the Liberal Party proposed the creation of an infrastructure bank, the practical details of which remain thin even as of May, 2016, but the ambition is novel at the federal level and one worth investigating. Unlike most other G-20 countries (and many others around the world), Canada does not have a national infrastructure bank or the like.

This paper uses a critical political economy perspective to analyze the prospect and implications of how an infrastructure bank style arrangement might help (or not) to close the infrastructure spending gap. To do so, the paper summarizes current and previous fiscal policy trends, analyzes the country's fixation with using private finance via public-private partnership infrastructure deals, surveys infrastructure bank arrangements abroad and proposals in Canada, and evaluates options for how to capitalize an infrastructure bank.

Given that this is a policy in creation, the paper is largely exploratory and the findings are tentative. While it may be too soon to call for certain, the longstanding practice of generalized fiscal austerity and a penchant for privatization suggests that funds for a Canadian infrastructure bank will likely come from two sources: 'asset recycling' which generates revenue from the sale of existing state assets and investment from pension funds eager to gain equity shares in brownfield projects. Both routes contain pitfalls, and both indicate a profound shift in the postwar fiscal policy trajectory. The use of public bond financing and federal funding of municipal infrastructure in the 1950s and 1960s was replaced by the 1980s and 1990s with fiscal austerity, but the resurgence of public spending today is occurring mainly through access to private capital markets and 'unlocking' the fiscal value of existing infrastructure. Prospects such as these induce or indicate (troubling) implications and social transformations of their own, whether a public infrastructure bank is present or not.

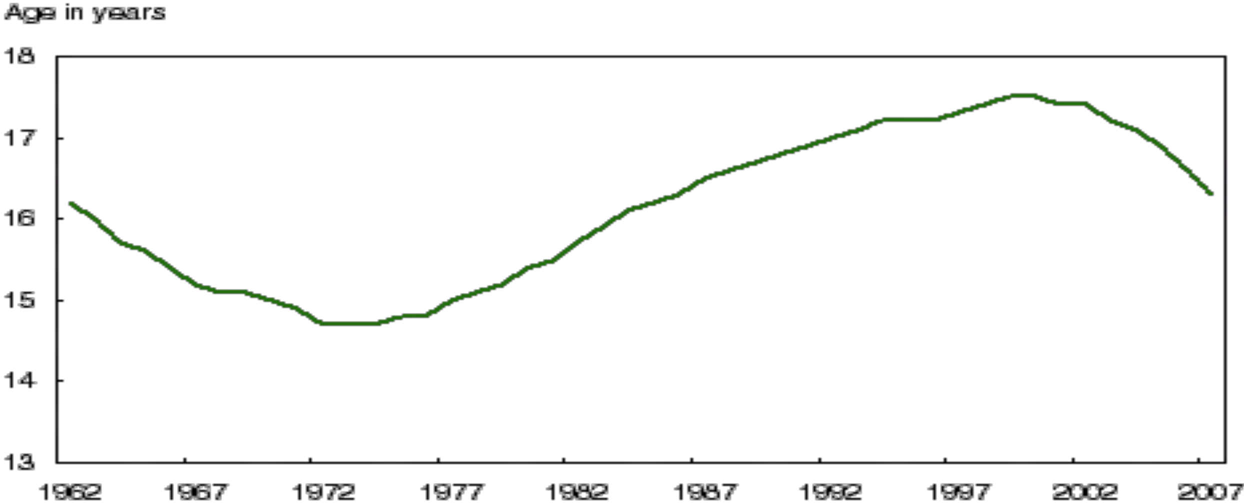
The public infrastructure spending gap & the private finance 'solution'

Investment in Canadian public capital stock over the past century reached its zenith in the 1950s and 1960s, and infrastructure was newer in the 1970s than ever before or since (figure 1). By 2004, TD Bank estimated the deficiency in the addition, maintenance

[1] Heather Whiteside is an Assistant Professor of Political Science at the University of Waterloo: h2whiteside@uwaterloo.ca. Paper to be presented at the Canadian Political Science Association annual meeting, 2016.

and replacement of Canadian public infrastructure stock to be as high as $125 billion, or 6-10 times current annual investment (TD Economics 2004); others warn it could reach $400 billion by 2020 (Mirza and Haider 2003). Not only does aging and inadequate infrastructure make it difficult to meet the social policy obligations of government along with creating problems for individuals and communities (e.g., traffic gridlock, a lack of affordable housing, poor air quality), it is also an economic drain. Congestion and shipment delays in the Greater Toronto Area alone lead to an estimated loss of $2 billion annually (TD Economics 2004). Canada's "infrastructural pre-conditions for urban growth" have become increasingly reliant upon spending inherited from earlier decades, leaving aged and stressed infrastructure by the mid-2000s – a phenomenon not too unlike what is witnessed in other countries as well (see Kirkpatrick and Smith 2011, 479).

Figure 1. Aging infrastructure is the face of the public infrastructure spending gap in Canada



Source: Gagnon et al. 2008.

The gap did not happen overnight, it is the result of decades of public sector spending restraint. The majority of current Canadian public infrastructure was built during the postwar era (Mirza 2007, 5-6) but because infrastructure is a long run investment, the effects of capital expenditure cuts in any given year are far less obvious than with more politicized social program spending. When governments are looking to balance the books, it ought to be no surprise that infrastructure would hold a lower priority in fiscally lean years, however, that this area of spending would suffer for so long – decades on end – is what makes addressing the infrastructure gap today particularly vexing. For nearly half a century, from the 1960s to early 2000s, investment in public infrastructure as a proportion of GDP has declined, but the 1980s and 1990s experienced the lowest levels by far (Canadian Chamber of Commerce 2013, 6).

The types of infrastructure that are now the oldest vary by province (figure 2) but tend to be bridges and overpasses, wastewater treatment, and sewer systems. Without exception, these public works are now over ten years old on average. Bridges and

overpasses are the oldest, at around 25 years, and water supply systems are an average of 20 years old.

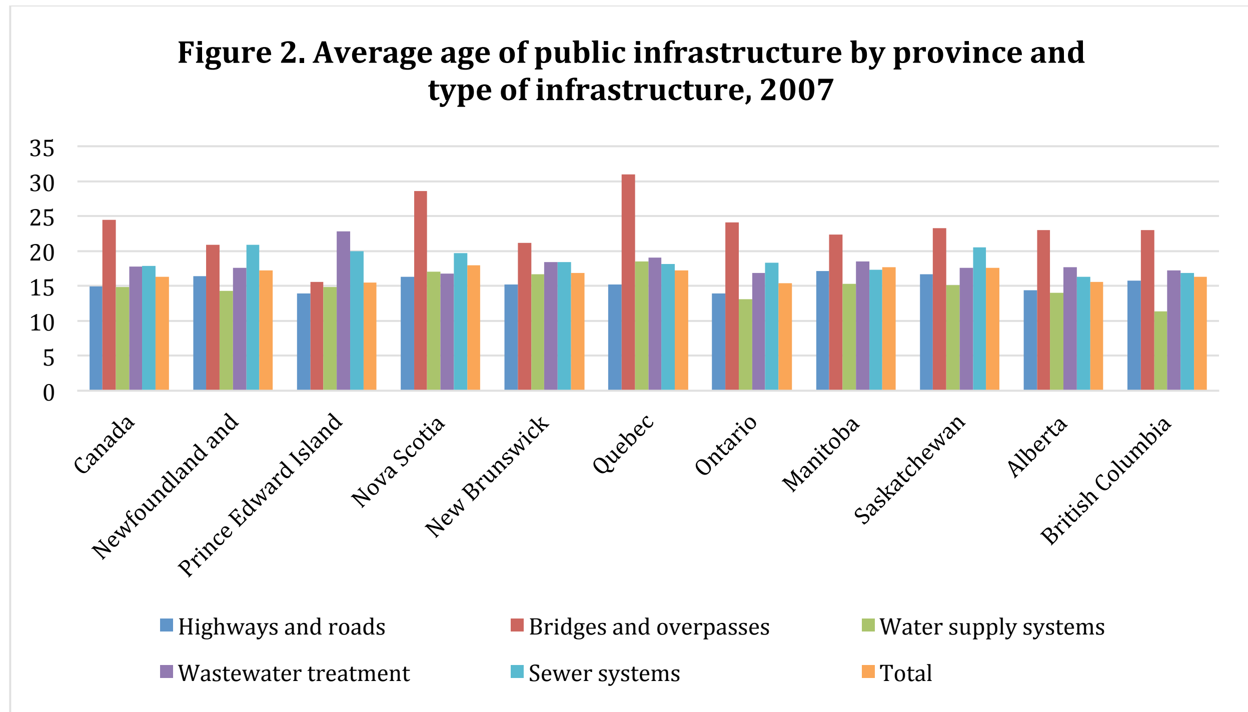


Figure 2. Average age of public infrastructure by province and type of infrastructure, 2007

Source: Gagnon et al. 2008.

The 1980s and 1990s were a time of transformation in Canadian fiscal policy – how, where, and when government spends. Most jurisdictions, particularly the federal government, began implementing significant spending cuts and shifting responsibilities downward onto subordinate or dependent levels of government. Federal transfers for social programs like health and education were frozen or slashed beginning in the late 1980s and continuing well into the 1990s. Capital expenditures (spending on public works and infrastructure) suffered greatly as costs were deferred and shifted to municipalities.

Over the years, the federal government has incrementally withdrawn from public capital investment and the ownership of public capital stock. As Mackenzie (2013) shows, in 1955 the federal government owned forty four percent of the Canadian public capital stock, the provinces owned thirty four percent and local governments owned twenty two percent; by 2011 this federal-municipal relationship had reversed: the federal government's share dropped to thirteen percent, municipalities owned fifty two percent and the provincial ownership portion was almost identical at thirty five percent (figure 3).

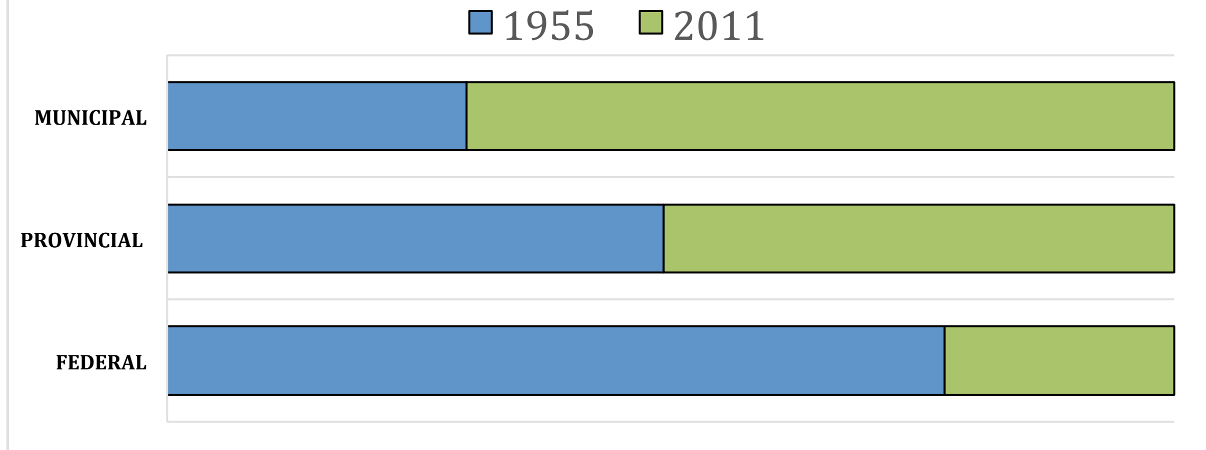


Figure 3. The federal government owns far less public infrastructure today than it did sixty years ago; municipal govenrments own far more. Financial burdens have shifted accordingly.

Source: Mackenzie 2013.

For all the impact they have on most Canadian's lives and identities, cities are the most fiscally vulnerable level of government in Canada: they collect only eight percent of total tax revenue (CCC 2013) yet municipalities are responsible for vital infrastructure of great social, economic, and political importance (public transit and ports, landfills and recycling facilities, water and sewage, roads and bridges). Decades of spending cuts and downward cost shifting from federal and provincial governments have, in turn, created such a chronic and growing infrastructure backlog that in 2013 the Federation of Canadian Municipalities identified the need for infrastructure spending and federal cost sharing for public works as being at the top of their agenda (figure 4).

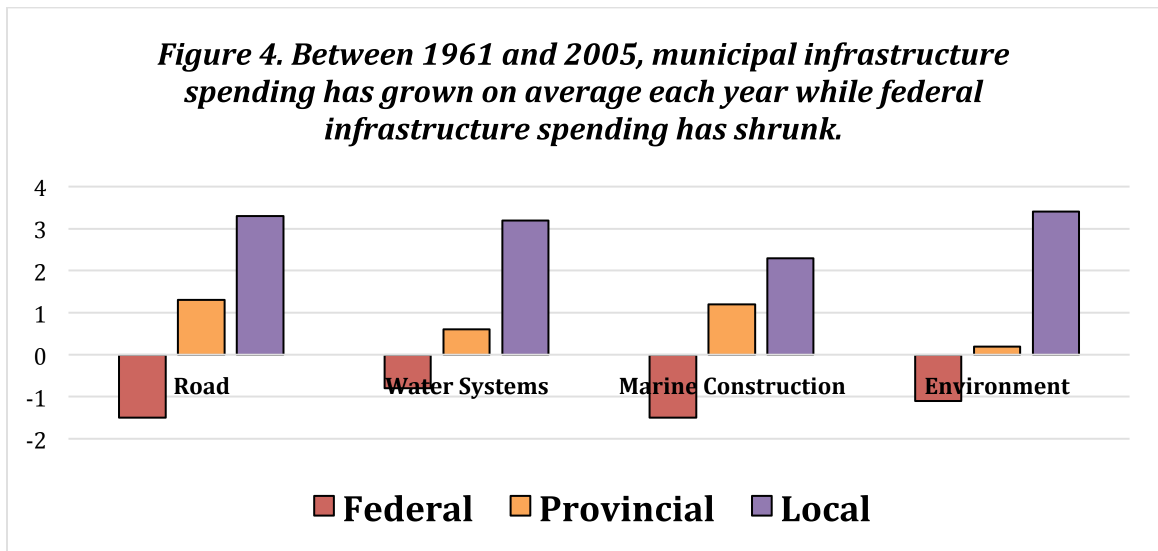


Figure 4. Between 1961 and 2005, municipal infrastructure spending has grown on average each year while federal infrastructure spending has shrunk.

Source: Roy 2011.

Intergovernmental transfers, crucial as they are for public infrastructure, are but one source of municipal funds. Kitchen (2006) describes the most common forms of public works financing accessible by Canadian municipalities as being: internal revenue sources consisting mainly of general operating revenues, earmarked user fees reserves, special charges on property, special assessments and local improvement charges, and development charges; and external revenue sources consisting of intergovernmental grants and borrowing from private markets. Internal revenue sources are widely thought to be generally quite inelastic in most parts of Canada (save the largest urban centres) given that property taxes can only be pushed so high and Canadians tend to resist paying direct user charges. External revenue sources are both more malleable and more contentious. Grant revenue is reliant on the benevolence and ideologies of other levels of government; borrowing is heavily restricted by provincial governments and constricted by credit ratings.

The presence of provincially-imposed balanced budget legislation and longstanding controls on debt financing have no doubt helped produce the infrastructure gap, but these measures have also led to a situation where municipalities currently enjoy very high credit ratings and thus can secure relatively low interest rates on public bonds. Despite the credit crunch and other forms of market instability post-2008, only two municipalities were downgraded between January 2008 and February 2014 (and only by a single notch), and one third were upgraded once or more (Hanniman 2015).[2]

With their high credit ratings, historically low interest rates, provincial control over municipal borrowing and de facto guarantees provided for municipal debt, public borrowing could be an attractive option for closing the infrastructure gap in Canada. Yet as it currently stands, revenue bonds, the form of public debt most suited for infrastructure because it links debt repayment to public works activities, are scarcely used. Investor demand and government access to credit are not lacking, but supply is scant. Public debt remains seen, more often than not for ideological reasons, as imprudent and a sign of fiscal mismanagement. Instead we see Canadian infrastructure (municipal and provincial) being financed through private debt and equity arrangements, structured as public-private partnerships (P3s). P3s are listed in public accounts as capital expenses but stretched out as annual lease payments, lending to the illusion that private finance is not public debt despite it representing a long run fiscal obligation that must be repaid by government or the public one way or another.

Arguments in favour of using private financing vary between it being a way to capture 'extra' money or a way to 'replace' public spending but the reality is that private financing through the P3 model must be paid back either through government-owed availability payments (taxpayer compensation sent to the private partner for its services, e.g., hospital cleaning) or by the public directly through user fees (collected at the time of use, e.g., highway tolls). Repayment schemes make P3 a mechanism of infrastructure financing, not funding. Another significant drawback with private financing is that it is more expensive and the 2014 report by Ontario's Auditor General makes this dynamic clear: 74 P3 projects have added an additional (and unnecessary) $8 billion to the

---

[2] Of those downgraded, neither were due to infrastructure-related fiscal imprudence: North Bay is facing secular economic decline and Vancouver took on significant public costs as a result of the 2010 Winter Olympics.

province’s long run budget obligations due mainly to interest rate differentials (AG 2014). Even with historically low prime rates, private P3 borrowers pay more for debt because of the private partner’s legal structure. As a ‘special purpose vehicle’, lenders have no recourse to the assets held by the individual companies making up the private partner and thus credit ratings are lower and interest rates are higher than those secured by government borrowers in Canada who have the full faith and credit of the tax base to pledge toward debt repayment.

The chronic shortfall in public money for infrastructure and return of austerity since 2010 (Baines and McBride 2014) has been leveraged by privatization enthusiasts to argue for greater use of the P3 model to privately design, build, operate and finance public infrastructure at all levels of government across the country. TD Economics (2004), Deloitte (2004), and Canadian Chamber of Commerce (CCC 2013), just to name a few, all recommend P3s as a readymade ‘solution’ to the infrastructure gap challenge.

By the end of the Harper era, federal spending and procurement initiatives to address infrastructure needs had carved out a central role for the P3 model. Included here are Infrastructure Canada’s P3 screen (the requirement that applications to access its 10-year, $14 billion New Building Canada Fund first consider the P3 option if a project’s capital costs exceed $100 million), and the requirement that municipalities adopt P3s in exchange for support from the $1.25 billion P3 Canada Fund.

A combination of provincial P3 enthusiasm (Whiteside 2015) and federal P3 tied-aid has led to the triumph of private financing for large public infrastructure, despite public borrowing being both feasible and fiscally attractive. Canadian P3s now total over 200 and have spread into nearly all jurisdictions and sectors (table 1).

Table 1. Canadian P3s (as of late 2015)

	Healthcare & Hospitals	Education	Transportation	Energy	Enviro	Justice & Corrections	Real Estate	Recreation & Culture	Defence	Gov’t Services	IT	Total
BC	13	1	9	2	8	4	2	3	0	0	0	42
AB	1	4	8	1	5	1	0	1	0	0	0	21
SK	2	2	3	0	1	0	0	1	0	0	0	9
MB	0	0	4	0	1	0	0	0	0	0	0	5
ON	58	4	16	2	7	11	1	11	2	4	0	116
QU	9	0	6	0	0	1	0	2	0	0	0	18
NB	2	2	3	0	2	1	0	2	0	0	0	12
NS	0	1	1	0	0	1	0	0	0	0	0	3
PEI	0	0	0	0	0	0	0	0	0	0	0	0

NF	1	0	0	0	0	0	0	0	0	0	1	2
YU	0	0	0	0	0	0	0	0	0	0	0	0
NWT	1	0	0	0	0	0	0	0	0	0	1	2
NU	0	0	1	0	0	0	1	0	0	0	0	2
MULTI	0	0	2	1	0	0	0	0	0	0	0	3
ALL	87	14	53	6	24	19	4	20	2	4	2	235

Source: CCPPP n.d.

Public infrastructure spending in 2016 and beyond

> "We will establish the *Canadian Infrastructure Bank* to provide low-cost financing for new infrastructure projects. The federal government can use its strong credit rating and lending authority to make it easier and more affordable for municipalities to build the projects their communities need. Where a lack of capital represents a barrier to projects, the Canada Infrastructure Bank will provide loan guarantees and small capital contributions to provinces and municipalities to ensure that the projects are built." (emphasis added, Liberal Platform, October 2015)

During the autumn 2015 federal election campaign, Trudeau made several infrastructure-related pledges. Most notably, the Liberals floated the idea of establishing an 'infrastructure bank' as a dedicated source of funds to address the infrastructure gap. Details were scant as to how this bank might function and, most importantly, where the initial source of funds capitalizing the bank will come from: taxation, public bonds, the sale of public assets, market financing, or a mix of public and private sources? And will the infrastructure bank's funds be tethered in any way to P3s? Answers to these questions were never made clear and in some ways remain as debatable now, in May 2016, as ever. It even remains unclear as to whether the infrastructure bank will be established at all. How these questions are answered will have a significant impact on the Canadian infrastructure finance and procurement landscape for decades to come (tentative answers to be provided later in the paper).

Trudeau also campaigned on the promise to dramatically increase funds sent by Ottawa to the provinces and to speed up the project approval process. In the lead up to the election the Liberals touted that their $125 billion infrastructure spending plan would "kick start" the economy. Looking a little deeper reveals that this did not refer to entirely new stimulus moneys: $65 billion was already in place by the Harper Conservatives, and annual infrastructure spending would only amount to somewhere around $10 billion per year (a mere fraction of the $300 billion spent annually by the federal government).

Once elected, the mandate letter to incoming infrastructure minister Amarjeet Sohi issued in November 2015 required that a 10-year plan be established including that the Building Canada Fund be more 'transparent' and that its P3 screen should be removed to speed up funding – particularly for projects like roads, ports, and highways that are of a

'strategic and trade-enabling' nature. What this holds for the future of private finance and P3 is uncertain. Removing the federal P3 screen does not necessarily mean a project will not be developed as a P3, it only means that proposals are not forced to consider the P3 route. Given that many provinces continue to have P3 screens and that most infrastructure projects are in their jurisdiction, changes at the federal level may be of little consequence.[3] Further, by end of January, 2016, the federal Crown corporation P3 Canada was assuring industry that the federal government was still committed to P3s despite the policy change (P3 Bulletin 2016a). In April 2016, Sohi comforted the P3 industry by clarifying at a P3 Hub Canada event that, "there has been some discussion in infrastructure circles and the media that this campaign commitment to remove [the] P3 screen indicated a lack of support for P3 in general. I'm here today in part to reassure you this is not the case" (Chignall 2016).[4]

In February, 2016, prior to releasing the budget, the federal government hired an investment banker from Bank of America Merrill Lynch to assist with the design of a Canadian Infrastructure Bank (CIB) and advise the Infrastructure Minister along the way (pro bono). The investment banker's work, and six-month position in the office of Infrastructure Minister Amarjeet Sohi, began at the end of March, 2016. The adviser (whose name has yet to be released) is also charged with helping to encourage Canada's largest public pension funds to contribute to the capitalization of the bank. Parallel to this hire is the creation of an executive advisor of infrastructure at Finance Canada who will liaise with the Finance Minister, Infrastructure Minister, and P3 Canada.

The 2016 Budget bifurcated infrastructure spending – addressing infrastructure gap needs in a 'two-phase' manner (see Budget 2016). Phase one targets shovel-ready and shovel-worthy projects (dubbed 'existing assets'), aimed essentially at stimulus spending and immediate/small-scale infrastructure projects. Phase two, the specific details of which are scheduled to be released in 2017, are those infrastructure investments that have a longer time horizon, are likely to be far more expensive, and are of a strategic nature. Targets include fulfilling Liberal platform ambitions of developing green energy, low-carbon transit, and trade-enabling highway infrastructure. Portions of the existing (Harper era) Building Canada Fund were also accelerated in Budget 2016.

In total, over five-years, the 2016 infrastructure commitment is budgeted at $11.9 billion: phase one commits $3.4 billion over the first three years, phase two commits $5.0 billion over five years for water, wastewater, and green projects and $3.4 billion for social infrastructure like affordable housing, child care and recreational infrastructure, and on-reserve health care facilities. New funds have been created to support the additional spending and manage disbursement (such as the Public Transit Infrastructure Fund) and established funds have been targeted (such as the Gas Tax Fund) to additionally support

---

[3] While early 2016 saw Newfoundland scuttling the previous government's plan to develop P3s in long-term health care, Saskatchewan is increasingly enthusiastic for P3s in its jurisdiction, and the Northwest Territories announced it was backing the P3 model in April, 2016.

[4] It is entirely likely that politicians and policy makers will remain committed to P3s with or without the screen in place: February 2016 saw both the Department of National Defence issuing a call for P3 advisors (P3 Bulletin 2016b) and an announcement that the regeneration of Toronto's crumbling Gardiner Express Way is poised for P3 use. On the other hand, relaxing the federal P3 screen could also mean that there is a split in Canada's use of P3 in the future: entrenching P3 for some types of projects (like schools, hospitals, and courthouses) and more flexibility with others (particularly transportation projects).

new infrastructure. The federal commitment to funding municipal infrastructure has been increased from a maximum of 33 percent, to 50 percent.

Addressing a meeting of the Canadian Council for Public Private Partnerships (CCPPP) – Canada's longstanding and leading P3 industry think tank and policy promoter – in April 2016, the Infrastructure Minister pledged that CCPPP would be consulted when planning for phase two. He also clarified why the Canadian Infrastructure Bank was not included in the budget, its purpose, and the role for private finance, P3, and CCPPP consultations:

> "When we included the Canada Infrastructure Bank in our platform, there were a couple of policy objectives we were trying to reach: to provide lower cost financing for municipalities, to leverage the private sector more effectively, and to address any other gaps in the marketplace. But we are not rushing this – we do not want to duplicate the work others are doing and want to make sure we consult broadly before landing on details. And we will engage folks in this room on what should and should not be included in the design of this new financing vehicle." (Sohi 2016)

The Federation of Canadian Municipalities (FCM) indicated in the lead up to election 2015 that it hoped the federal government would create an infrastructure bank, and seek their advice in its creation (FCM 2015). The FCM reiterated this position in its budget submission in 2016, noting in particular it would like for the government to have the bank provide low cost financing for affordable housing projects (FCM 2016).

Is the CIB to be a vehicle for private sector investment and profit making, as the CCPPP would like, or for assisting with low-income housing, as the FCM advocates for? While it is not inherently impossible to satisfy both, it will be difficult. It remains unclear as to what the exact nature of the CIB mission will be, how it will be accomplished, and exactly what role the federal government intends to play in fixing the infrastructure gap. Lofty aims espoused during election time could easily be contradicted by the bank's capitalization strategy – both in terms of offering private equity holdings and how assets are generated. It appears likely that P3s will play a role, possibly a large role, in Canada's future infrastructure plans, indicated through assurances offered to the CCPPP and P3 Hub Canada, and through the active courting of pension funds (a topic to be returned to shortly). The FCM, meanwhile, appears to have received fewer assurances. Given that CIB details remain scarce, this paper will now fill in some gaps.

Infrastructure banks

Canada is among the few advanced industrialized countries without a national infrastructure bank. Seven out of 10 Canadian provinces have services similar to an infrastructure bank: a financing authority that provides pooled borrowing and financing for municipal or provincial borrowers (e.g., Municipal Finance Authority of British Columbia, Alberta Capital Finance Authority, Ontario Financing Authority). Provincial financing authorities' interest rates are determined by the provincial credit rating and holdings are capitalized through government borrowing or bonds, with repayment coming from that jurisdiction's taxpayers. Thus despite provincial coverage in this area, subnational infrastructure bank finances are limited as is their ability to adequately address the

infrastructure gap. Ultimately the narrow capacity for provincial borrowing, unwillingness to take on public debt, and the limited ability of municipal borrowers (where the infrastructure gap is most pernicious) to repay large amounts of debt make a national infrastructure bank a superior policy option. A CIB would offer the lowest interest rates (as reported in Annex 2 of Budget 2015, Canada's net debt is lowest in the G-7 and less than half the average of G-7 countries), and would be able to fully support the needs of municipal borrowers.

The CIB would have many models to choose from, infrastructure banks being relatively common internationally (see Siemiatycki 2016). The UK Green Investment Bank invests in renewable energy infrastructure that is aligned with government policy objectives (wind, energy efficiency, waste, bioenergy), it seeks to create local jobs and generate commercial returns. It was started with £3.8 billion in public funds but by 2015 the government was looking at a partial privatization, particularly to target pension fund investment and other institutional investors (mutual funds, insurance companies). It does not offer any low cost financing, it uses market rates, it mainly attempts to de-risk new investment so as to attract greater private sector capital.

The Asian Infrastructure Investment Bank (AIIB), created in January 2016 and seen by many as a World Bank rival, was launched with China's $100 billion capital investment. China, India, and Russia are the three largest shareholders (30 percent, 9 percent, 7 percent, respectively). The AIIB aims to finance infrastructure projects in Asia as a way of enhancing regional cooperation and economic development. It was first proposed in 2013 and now 34 founding countries hold over 74 percent of the bank's shares. Its purpose is to finance "high quality, low cost" projects in the region, from airports to railways, roads, and cell phone towers (Middleton 2016). It is not at this time clear whether these projects will be P3 exclusive, but as of May 2016, it appears as though some financing will be in the form of sovereign loans and some will be through P3s with private partners. In 2015 China sent a delegation to Canada to inquire into its P3 model, in connection with the incipient AIIB.[5]

Other examples include the European Investment Bank, which is owned by EU member states and operates to finance and advise on infrastructure projects that fulfill EU policy objectives; and the Nordic Investment Bank, which draws on private capital markets to fund members' infrastructure projects.

More generally, an infrastructure bank is a repository of funds dedicated to financing infrastructure (public and/or privately owned) and is often legally structured as a trust. National infrastructure banks can provide low interest loans and credit enhancement services to subordinate levels of government with lower credit ratings and less capacity to borrow. According to one estimate, the typical interest rate spread is roughly 1 percent; meaning $100 million in interest rate payments can be saved on a $500 million, 35-year loan (Cole 2016). Infrastructure banks can fund individual projects, they can earn interest, can create funds for financial investment, and can circumvent regular public sector accounting rules. Infrastructure banks often target specific sectors and

---

[5] Ross (2015) indicates several features distinguish the Canadian P3 model, including: flexibility in the role of the private partner (from full scale to more limited participation), reliance on specialized government agencies to run P3 programs (e.g., Partnerships BC, Infrastructure Ontario), and assigning limited demand risk to the private partner (most payments come from government, not users).

projects to advance public interest or public policy goals that are too risky to attract private investment (e.g., green energy, affordable housing).

If structured as a trust, a CIB would be able to dodge existing accounting rules currently hampering federal intergovernmental fiscal transfers. As it currently stands, federal spending on provincial infrastructure is counted on Ottawa's books as a capital expenditure recorded in the year paid out by the federal government even if the province use the money years later, creating a disincentive for quick and dedicated federal funding. Fenn (2014) suggests that the federal government could borrow through a CIB to finance intergovernmental transfers rather than accounting for them as capital expenditures or using tax expenditures. The federal government uses this same strategy to support CMHC and Export Development Canada by offering interest free loans, underwriting, and issuing bonds without owning the infrastructure outright (with the CIB this would also avoid challenging provincial jurisdiction).

Infrastructure banks can also be a source of expertise in financial transactions, asset management, real estate, infrastructure design and development, and engineering. In Canada these roles are increasingly monopolized by P3 private partners and private consultants. Siemiatycki argues that "the real benefit" of a CIB would be if it were to act as a centre of excellence because Canada has "a chronic history of picking projects that don't deliver on its benefits" (quoted in Fekete 2016; see also Siemiatycki 2016). From this view, financing alone would not distinguish the CIB; instead it ought to provide financial services along with vetting proposals and providing procurement and planning advice in order to provide for more effective infrastructure delivery in Canada.

Banking on infrastructure

> "Where it is in the public interest, engage *public pension plans* and other innovative sources of funding—such as demand management initiatives and *asset recycling*—to increase the long-term affordability and sustainability of infrastructure in Canada." (emphasis added, Canadian Federal Budget 2016, Chapter 2, p. 88)

Direct public borrowing through bond markets, as discussed earlier, are a viable policy option in Canada given the relatively low level of federal debt and the high credit ratings enjoyed by subnational governments. Access to credit is not the issue, dissuasive ideology is. In this climate, new sources of revenue must be sought out in order to close the current infrastructure gap and avoid creating one in the future. One options for finding new funds favours selling public assets, reminiscent of the privatization push in the 1980s. More sustainable options would be to have the federal government shoulder a proportionally larger (and more appropriate) share of Canada's infrastructure cost burden, to transfer or generate more tax revenue, to generate economic growth, and to enter into new markets through the operation (rather than sale) of Crown corporations.

In Ontario we see the return of an older trend: the sale of revenue-generating high-demand assets (such as ownership shares in Crown corporations) as a way of paying down government debt and finding the cash needed to pay for new public infrastructure, particularly public transit. In November 2015 the province auctioned off nearly 90,000,000 shares in Hydro One (its hydroelectricity utility Crown corporation) and between those proceeds, tax benefits, and a special dividend, it brought in $5 billion. At the time of this

initial sale, the province said it was looking to sell a maximum 60 percent share in the utility, retaining 40 percent and control because no single investor will hold over 10 percent. Time will tell whether this promise is kept but if history is any guide, political promises can be fickle.[6] Even if money from the sale of Hydro One is dedicated to public transit and other infrastructure projects, procurement policy in Ontario (the Infrastructure Planning, Procuring and Financing Framework) dictates that P3s must be first considered. Earmarking funds for transit might sound innocuous but as the Finch West and Eglinton Crosstown LRT P3 projects show, privatization takes multiple forms today. Thus, Hydro One, a century-old existing public asset, with the potential for significant revenue remitted to the province through annual dividends, is being sold to fund new P3 schemes that cost more than they would have if publicly financed.

In Australia this practice is known as 'asset recycling'. Their 'Asset Recycling Initiative,' launched in 2014 by the commonwealth (federal) government, introduced an AUS$5 billion plan to "encourage the sale of public infrastructure" by paying state and territory governments that choose to privatize their state owned enterprises fifteen percent of the sale price if they also agree to use the privatization revenue to develop P3s within their jurisdiction (announced by the Australian Trade Commission 2014, 8). As the ANZ bank describes it, for Australia at least, "the next [infrastructure] boom will be dominated not by brownfield or greenfield development but by asset disposal programs. The bulk of disposals will be the privatisation of state-owned assets" (quoted by the Australian Trade Commission 2014, 9).

Asset recycling will benefit the P3 industry by providing a new source of funds needed to encourage the tendering of additional projects and will benefit the private superannuation fund industry by opening up sites for long run investment that offer equity shares as they have long requested. Roger Lloyd, director of investments for the superannuation fund Palisade Investment Partners' Regional Infrastructure Fund supports recycling infrastructure assets because: "It's about taking existing assets and putting it to the private sector… Recycling is something that will probably benefit or lead to greater attractiveness of the sector for our local players because you will have a lower risk and a larger pipeline of assets to get excited about" (quoted in Jimenez 2012).

Pensions funds prefer 'brownfield' (existing infrastructure projects) to 'greenfield' (projects not yet built) investments because of the lower risk they carry to investors. Pension fund managers also require the projects are sufficiently large to bring in steady, reliable, and significant returns on investment. These aspects limit the types of projects that pension funds are interested in. Mark Wiseman, president and CEO of the Canada Pension Plan Investment Board (CPPIB), endorses and promotes the asset recycling approach: "With growing infrastructure deficits worldwide … we often reference this model with our own government and others as one to follow to incent and attract long-term capital" (quoted in Blatchford 2016).

Canada's federal Liberals are openly courting the country's well capitalized public pension funds, as if this were a 'made at home' solution to the infrastructure gap but

---

[6] With Highway 407, for example, the province not only reneged on its promise to remove the tolls but it then privatized the highway for ninety-nine years. The new promise became that revenue earned through the sale of Highway 407 would be earmarked for social need; instead it went to pay down debt, cover tax cuts, and issue token temporary tax rebates through cheques in the mail.

pension funds do not make investment decisions for nationalistic or even sectoral purposes – they demand high rates of return, and thus for them to invest in Canadian infrastructure, projects would have to remit returns on investment upwards of 8-14 percent (Siemiatycki 2016, 35). In order to gain their investment in Canadian infrastructure, it is entirely likely that P3s would have to be set up as equity investment vehicles.

Canadian pension funds are global investors. For the CPPIB, non-Canadian investments totaled 75 percent in 2015, in areas like ports, toll roads, and energy facilities (Deveau 2016). Canadian pension funds received returns on investment in 2015 of 5.4 percent through international diversification (Reuters 2016), weathering storms other private investors faced in financial markets, making it unlikely that they will be overly willing to give up on what works by now shifting to greenfield infrastructure in Canada. The strategy of direct equity investments in brownfield infrastructure and real estate was pioneered by Canadian pension funds, which some investors have dubbed "maple revolutionaries" (Scuffham 2016). Canada's top 10 public pension funds now have assets in excess of $1.1 trillion (tripling in size since 2003), one third of which is held in infrastructure and real estate (Reuters 2016) (table 2).

Table 2. Assets held by Canada's top 10 public pension funds exceed $1.1 trillion in 2015	
Canada Pension Plan Investment Board (CPPIB)	$265bn
Caisse de depot et placement du Quebec	$192bn
Ontario Teachers' Pension Plan	$154bn
PSP Investments (federal pension plans)	$112bn
BC IMC (BC pension, insurance, other public sector)	$104bn
Ontario Municipal Employees Retirement System (OMERS)	$73bn
Healthcare of Ontario Pension Plan (HOOPP)	$61bn
Alberta Investment Management Corporation (AIMCO)	$50bn
Ontario Pension Board (OPB)	$22bn
OPSEU Pension Trust (OPTrust)	$18bn

Source: Boston Consulting Group 2015.

Pension funds have also recently begun to engage in more risky, leveraged activities: creating in-house hedge funds to invest in derivatives (forwards, swaps, options), and mortgaging their existing real estate assets to do so. HOOPP chief executive summarizes the intent: "We have to earn that return somehow. If I don't do this, what am I going to do instead?" (quoted in Altstedter 2015).

Boldly stepping into the netherworld of secondary financial markets parallels the initial financialization of the CPPIB (and others that took a similar route) when in the mid-1990s it ended its decades-long practice of investing almost exclusively in Canadian public bonds. Changes today are motived by the same factor: low central bank interest rates. Whereas in the 1980s, pension plans could lock in double-digit interest rates on Government of Canada bonds, by the 1990s tight monetary policy was substantially relaxed; in the wake of the 2008 global financial crisis and given the persistence of low

growth, prime rates remain low. Today HOOPP says it must earn 3.4 percent above inflation to cover its pension obligations, and 10-year Canadian government bonds yield only 1.7 (ibid). Yet one would be mistaken to think this is merely a financial imperative. The restructuring of CPPIB was a deliberate attempt to financialize the public pension system, as is the participation of public sector pension in privatization-vehicles (P3 infrastructure). Public and union pension funds have long since turned away from national development interests and toward global capital market and investor interests. Staff now frequently comes from Wall Street investment banks and private equity firms, and CPPIB has offices in Toronto, London, and Hong Kong – these are private investment initiatives and agents.

The top four Canadian pension funds rank in the world's top 10 infrastructure investors, the top 10 Canadian pension funds are within the top 200 globally. Their capital as pooled public savings is undeniably attractive to governments seeking infrastructure investors, and the Trudeau government is eager to have them invest in the CIB. The notion is simple: link infrastructure-financing demand with institutional funds' supply. Yet from an academic perspective, something quite curious is happening with this growing link between pension fund finance and public infrastructure today. Two views, distinct but complementary, underpin the transformation: changes in class relations and changes within pension systems and their role in society. The former explains why pension funds are now reliant on financial market investments; the latter how pension funds influence financial market investment. Susanne Soederberg (2011) calls the former 'cannibalistic capitalism' – "the process by which workers' savings in the form of pension funds feed off both their own increased indebtedness and that of other workers, a condition driven largely by stagnant real wages and unemployment" – and its one way of explaining why and how pension funds have come to be reliant on high-risk investments. Gordon Clark (1998) provides the other side of the ledger with his notion of 'pension fund capitalism' – how AngloAmerican countries' change in pension plans, the employment relationship, and the preference of government for market-based solutions has created the conditions under which pension funds have come to create or at least guide financial market flows and instruments.

Whatever the interpretation, it remains clear that pension funds are more than mere repositories of workers' savings, they are private capital actors and major institutional investors within financial markets. They demand profit, and they are not particularly sentimental when it comes to why and where infrastructure is needed – only that it provides an adequate vehicle for returns on capital invested.

Concluding Remarks

Between the financialization of public infrastructure that turns public works into profitable investment sites for capital, the growing asset recycling craze that monetizes the existing built environment for market sale, and the increasing presence of pension fund actors as supply and demand for equity investment in infrastructure, the world of public finance has shifted as of late. Canada is no exception. The infrastructure gap produced after decades of austerity is now being closed through more expensive market finance, by selling public assets, and clambering for workers' pooled savings. A Canadian Infrastructure Bank

could be structured in ways that find novel solutions to older problems, but could also wind up merely being a new layer of bureaucracy contributing to each of these three new trends.

Policy actions thus far suggest that the CIB is less likely to be capitalized through public bond offers (the far cheaper option and the one that would leave the greatest amount of control for public policy), but instead through privately pledged equity, where institutional investors take an ownership stake in the Bank and its investment in infrastructure projects across the country. If so, returns would certainly need to be generated somehow, likely through a P3-style repayment schedule (user fees or government repayment over time). Selling state assets (or 'recycling' them) is another leading contender for CIB funds. All remains supposition, of course, as the budget, released at the end of March, 2016 made no fiscal commitment the Canadian Infrastructure Bank whatsoever.

If current trends are any indication, we are witnessing a transformation in fiscal policy. The 1950s and 1960s were a time of Keynesian-style federal spending through transfers, grants, and public bond debt. The 1980s and beyond were a time of deep cuts and downward cost shifting which led to an enduring infrastructure spending gap, witnessed through aging and inadequate infrastructure. Today there is talk of resurgent public spending commitments to provide for the infrastructural underpinnings of economic growth and social prosperity but the financing needed to accomplish this is largely drawing on private capital markets through public-private partnerships and schemes increasingly embroiled in secondary financial markets. Even union and public pension funds are now in on the financialization and privatization of public works. Alternatives that would allow for greater democratic control and a wider range of policy options in the future include revenue from the activities of (as opposed to the sale of) state owned enterprises, sovereign wealth funds generated from mineral and oil and gas revenues, and public bond debt.

References

Altstedter, A. 2015. "Canadian pension plans turn bold: Funds employ risky formula in low interest rate world." *Bloomberg News*. November 10. http://business.financialpost.com/news/fp-street/canadian-pension-plans-turn-bold-funds-employ-risky-formula-in-low-interest-rate-world

Auditor General of Ontario (AG). 2014. "Infrastructure Ontario – Alternative Financing and Procurement." *Annual Report for the Auditor General of Ontario*. http://www.auditor.on.ca/en/reports_en/en14/305en14.pdf

Australian Trade Commission. 2014. *Investment Opportunities in Australian Infrastructure*. Canberra: Australian Government.

Baines, D. and McBride, S., eds. 2014. *Orchestrating Austerity*. Winnipeg: Fernwood.

Blatchford, A. 2016. "Liberals may sell off public assets to help bankroll infrastructure." April 24. http://ipolitics.ca/2016/04/24/liberals-may-monetize-public-assets-to-help-bankroll-infrastructure/

Boston Consulting Group. 2015. *Measuring Impact of Canadian Pension Funds*. October.

Budget 2016. Government of Canada. http://www.budget.gc.ca/2016/home-accueil-en.html

Canadian Chamber of Commerce (CCC). 2013. *The Foundations of a Competitive Canada: the need for strategic infrastructure investment*. December. http://www.chamber.ca/media/blog/131218-The-Foundations-of-a-Competitive-Canada/131218_The_Foundations_of_a_Competitive_Canada.pdf

Canadian Council for Public Private Partnerships (CCPPP). n.d. "Project Database." http://projects.pppcouncil.ca/ccppp/src/public/search-project

Canadian Federal Budget. 2016. Ministry of Finance. March 22. http://www.budget.gc.ca/2016/docs/plan/budget2016-en.pdf

Chignall, S. 2016. "Sohi says Trudeau government supports the use of P3s for some projects." April 19. http://ipolitics.ca/2016/04/19/sohi-says-trudeau-government-supports-the-use-of-p3s-for-some-projects/

Clark, G. L. 1998. "Pension Fund Capitalism: A Causal Analysis." *Geografiska Annaler Series B Human Geography*. September.

Cole, L. 2016. "Infrastructure bank just one tool to ensure the right investment." *Daily Commercial News*. March 7. http://dailycommercialnews.com/Infrastructure/News/2016/3/Infrastructure-bank-just-one-tool-to-ensure-the-right-investment-1013975W/

Deloitte. 2004. *An Opportunity to Meet Transportation Infrastructure Needs*. http://www.deloitte.com/view/en_ca/ca/3be51060261fb110VgnVCM100000ba42f00aRCRD.htm

Deveau, S. 2016. "Canadian pension funds urge Trudeau to think big on infrastructure: 'We're looking for projects of scale'." *Bloomberg News*. March 16. http://business.financialpost.com/news/fp-street/canadian-pension-funds-urge-trudeau-to-think-big-on-infrastructure-were-looking-for-projects-of-scale

Federation of Canadian Municipalities (FCM). 2015. "Cities and Communities: partners in Canada's Future." Federation of Canadian Municipalities. https://www.fcm.ca/Documents/reports/FCM/Cities_and_Communities_Partners_in_Canada_Future_EN.pdf

Federation of Canadian Municipalities (FCM). 2016. "Cities and Communities: rising to the moment." Federation of Canadian Municipalities. http://www.fcm.ca/Documents/reports/2016-FCM-FedBudgetSubmission-EN.pdf

Fekete, J. 2016. "Stakes are huge as Liberal government moves forward on Canada Infrastructure Bank." *Ottawa Citizen*. March 18. http://news.nationalpost.com/news/canada/canadian-politics/liberal-governments-trumpeted-canada-infrastructure-bank-taking-shape

Fenn, M. 2014. *Recycling Ontario's Assets*. Mowat Centre Research #85.

Gagnon, M., Gaudreault, V., and Overton, D. 2008. *Age of Public Infrastructure: A Provincial Perspective*. Ottawa: Statistics Canada.

Hanniman, K. 2015. "A Good Crisis: Canadian Municipal Credit Conditions After the Lehman Brothers Bankruptcy." Institute on Municipal Finance & Governance Munk School of Global Affairs. http://munkschool.utoronto.ca/imfg/uploads/326/1694_imfg_no_22_online_final_sept._2.pdf

Jimenez, K. 2012. "Super fund calls for PPP model to back big projects." *The Australian*. October 23. http://www.theaustralian.com.au/business/wealth/super-fund-calls-for-ppp-model-to-back-big-projects/story-e6frgac6-1226501005227

Kirkpatrick, L. O. and Smith, M. P. 2011. "The infrastructural limits to growth: Rethinking the urban growth machine in times of fiscal crisis." *International Journal of Urban and Regional Research*. 35.

Kitchen, H. 2006. *A State of Disrepair: how to fix the financing of municipal infrastructure in Canada*. CD Howe. https://www.cdhowe.org/pdf/commentary_241.pdf

Liberal Platform. 2015. "Canada Infrastructure Bank." October. https://www.liberal.ca/realchange/canada-infrastructure-bank%E2%80%A8%E2%80%A8/

Mackenzie, H. 2013. *Canada's Infrastructure Gap: where it came from and why it will cost so much to close*. Ottawa: Canadian Centre for Policy Alternatives. January. https://www.policyalternatives.ca/sites/default/files/uploads/publications/National%20Office/2013/01/Canada%27s%20Infrastructure%20Gap_0.pdf

Middleton, R. 2016. "World Bank's rival Asian Infrastructure Investment Bank launched by China with $100b capital." January 18. http://www.ibtimes.co.uk/world-banks-rival-asian-infrastructure-investment-bank-launched-by-china-100b-capital-1538463

Mirza, S., Haider, M. 2003. *The State of Infrastructure in Canada: implications for infrastructure planning and policy*. Report prepared for Infrastructure Canada Research and Analysis. March.

P3 Bulletin. 2016a. "PPP Canada: Govt Committed to P3." *P3 Bulletin*. January 25. http://www.p3bulletin.com/news/view/96922

P3 Bulletin. 2016b. "Canada Govt Seeks P3 Advisors." P3 Bulletin. February 8. http://www.p3bulletin.com/news/view/97386

Reuters. 2016. "Canadian pension funds defy volatile markets to achieve 5.4% annual return in 2015." February 18. http://business.financialpost.com/news/fp-street/canadian-pension-funds-defy-volatile-markets-to-achieve-5-4-annual-return-in-2015

Ross, T. 2015. "Why is China so Interested in Canada's Public-Private Partnerships?" June 16. https://www.asiapacific.ca/blog/why-china-so-interested-canadas-public-private-partnerships

Roy, F. 2011. *Roads to Rinks: Government Spending on Infrastructure in Canada, 1961 to* 2005. Ottawa: Statistics Canada.

Scuffham, M. 2016. "Canadian pension funds pull back on infrastructure deals as prices climb beyond reason." *Reuters*. February 5. http://business.financialpost.com/news/fp-street/rpt-canada-pension-funds-pull-back-on-infrastructure-as-prices-climb

Siemiatycki, M. 2016. Creating an Effective Canadian Infrastructure Bank. Commissioned by the Residential and Civil Construction Alliance of Ontario (RCCAO). February 16. http://www.pppcouncil.ca/web/pdf/rccao_infrastructure_bank_discussion_paper_02172016.pdf

Soederberg, S. 2011. "Cannibalistic Capitalism: The Paradoxes of Neoliberal Pension Securitization." *Socialist Register*.

Sohi, A. 2016. "The Honourable Amarjeet Sohi, Minister of Infrastructure and Communities, to the P3 Global Hub Presented by the Canadian Council of Public-Private Partnerships." April 19. http://news.gc.ca/web/article-en.do?nid=1057649

TD Economics. 2004. *Mind the Gap: finding money to upgrade Canada's Aging Public Infrastructure*. TD Bank Financial Group.

Whiteside, H. 2015. *Purchase for Profit: public-private partnerships and Canada's public health care system*. Toronto: University of Toronto Press.