Setting the **New Progressive** Agenda

June 2015

Canada2020

Canada2020

Canada 2020 is Canada's leading, independent, progressive think-tank working to redefine the role of the federal government for a modern Canada. We produce original research, host events, and start conversations about Canada's future.

Our goal is to build a community of progressive ideas and people that will move and shape governments.

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Introduction

This book is about engaging progressives to think about the country they want to see in 2020 and in the years ahead. It is about laying out concrete and feasible public policy prescriptions for the next decade.

As millennials take the stage, the opportunity to change and redefine how we approach some of the issues facing the country is for us to seize. We are very excited to introduce innovative and new ideas in the public discussion. Put together, they offer a compelling case for a progressive vision for the years ahead.

We live in challenging times. Around the world and in Canada, globalization has forced us to change the way we think about public policy. Income inequality, infrastructure, climate change, security, privacy, democratic renewal are all issues of national importance but they have important international ramifications that require nation states to work together to address them. We can no longer conceptualize them in silos - they are linked to each other.

Canada 2020 has been at the forefront of this ongoing discussion. Since 2006, we've hosted more than ninety events across the country on topics of relevance for decision-makers and citizens. The response has been amazing. People genuinely and persistently believe government can play a meaningful and positive role in the 21st century. We believe this book will offer them compelling reasons to be optimistic about our collective future.

I want to thank Robert Asselin, our new Vice President of Policy and Research, for being the driving force behind this project and Alex Paterson, our Communications and Program Coordinator, for making it happen. I also want to thank our board of advisors for their continuing support and insights.

We look forward to the next phase of the discussion and we hope to see you at one of our events.

Sincerely,

Tim Barber
Co-Founder, Canada 2020

Public Policy in the 21st Century

Dr. Don Lenihan, PhD
Senior Associate, Policy & Engagement at Canada 2020

Robert Asselin
Vice President, Policy & Research at Canada 2020

" The process around policymaking is now just as important as the issues themselves"

In the traditional Westminster parliamentary system, policymaking was largely a partnership between the public service and politicians. Public servants were experts on policy and provided the government of the day with options and advice for solving issues. The government then made decisions based on its mandate and the advice. It set priorities, presented solutions to the public, and shepherded them through the legislative process. Finally, the public service implemented the government's decisions, with the politicians overseeing this work. We can call this the "traditional approach to governance."

This system worked well for much of the 20th century. But over the last few decades, new trends have emerged in Canada and around the world that are impacting on the policy process and making traditional governance increasingly ineffective:

- **THE DIGITAL REVOLUTION:** Information and communications technologies have greatly increased the speed, complexity and interdependence of events. Today, more and more systems—from supply chains to the environmental movement—are organized on a global, rather than national, level.

- **INTERCONNECTEDNESS OF ISSUES:** In traditional governance, policymakers drew boundaries around issues and proposed solutions from within these boundaries. Today, experts see issues as far less self-contained and far more interconnected. Issues around climate change, security or food production tend to form clusters—often from different policy fields—whose constituent parts interact with one another in complex and often surprising ways.

- **GROWTH IN THE PUBLIC POLICY COMMUNITY:** The number of private and not-for-profit organizations within the policy community has exploded. Stakeholders of all kinds now play a very engaged role in the policy process and often exert great influence on it, both at the policy development and implementation stages.

- **CHANGING PUBLIC EXPECTATIONS:** Citizens today are far less deferential to politicians than earlier generations. They want elected representatives to be more accountable to them and often feel that, as citizens, they should have a direct say on issues they care about.

- **THE RISE OF SOCIAL MEDIA:** Social media are also changing the political culture, though in ways that are sometimes less than clear. On one hand, they provide new ways of linking citizens into public debate. On the other hand, young Canadians, who are the biggest users of social media, are less inclined to vote, join political parties or participate in the political process. Studies suggest they do not relate to politics or traditional political institutions the same way as earlier generations.

- **THE CONSTANT CAMPAIGN:** Political parties now rely heavily on political marketing techniques to pitch their "products"—that is, their policies—to targeted groups. This, in turn, requires a clear, consistent and easy-to-understand message. To achieve this, parties have centralized communications to a point where today caucus members are expected to follow the same script. The result is a simplification of the message and a polarization of debate over the issues.

Of course, it is not just the policy process that is changing. The issues are also changing:

- **URBANIZATION:** A growing proportion of Canadians live in a handful of urban centres. As these metropolitan areas grow, the needs, expectations and concerns of the population are changing, creating new policy issues, from concerns about gang violence to the need for massive new transportation infrastructure.

- **DEMOGRAPHICS:** Like many OECD countries, Canada has an ageing population, which is increasing pressure on government services, especially healthcare, at the same time it is decreasing the tax base that funds these services.

- **MOBILITY:** People are far more mobile today than at any time in the past. They travel frequently and most will move to another city at least once in their lifetime. Government services may need to be modified to support this kind of mobility.

IMMIGRATION AND DIVERSITY: Although Canada was always defined by immigration, today immigrants are flooding in from all parts of the globe. As a result, our population is among the most culturally and ethnically diverse in the world. Ensuring new Canadians settle into their communities is critical to the overall stability and cohesion of the country.

- **TERRORISM AND SECURITY:** 9/11 changed Canadians' views on security. With the rise of ISIS, those concerns are surging again, including a new focus on home-grown terrorism. Countering these threats has become a high political priority.

In sum, both the policy process and the issues have changed in ways that are putting huge pressure on traditional governance, which was designed for a very different world. We can summarize the challenges as follows:

1. POLICY ISSUES ARE OFTEN MORE MULTIFACETED, FAST-MOVING AND INTERCONNECTED THAN IN THE PAST

2. THE POLICY PROCESSES OFTEN INVOLVE MANY STAKEHOLDERS

3. THE PUBLIC IS LESS DEFERENTIAL, MORE DEMANDING AND YOUTH ARE LESS DEMOCRATICALLY ENGAGED

4. POLITICAL DEBATE IS NOW MORE SCRIPTED, POLARIZED AND ACRIMONIOUS

These four bullets provide the basis for what we believe should be a different kind of policy debate, one that focuses not only on solutions to the issues, but also on how policy is made and implemented. In our view, **the process around policymaking is now as important as the issues**, as the following reflections show.
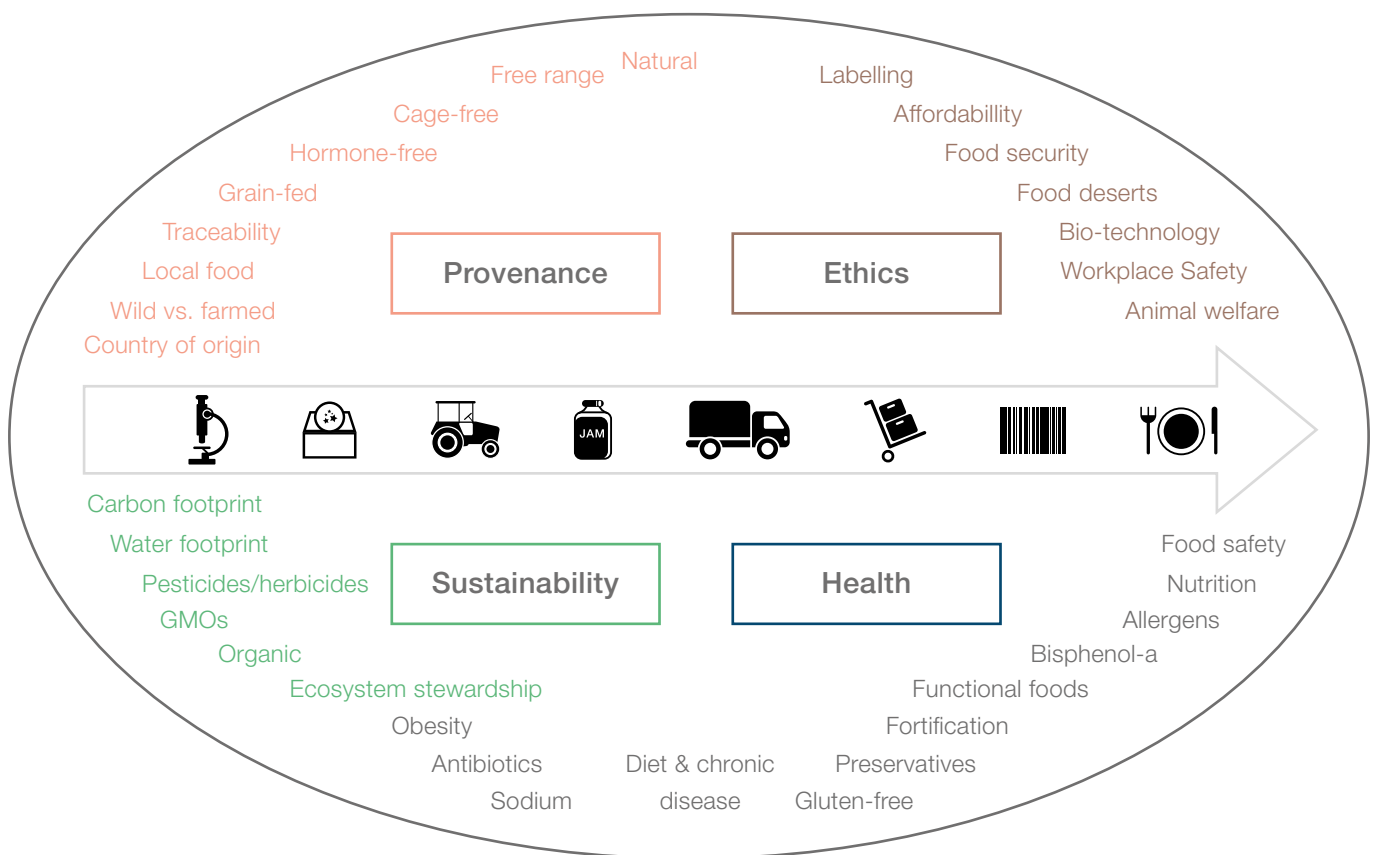
Complexity and the Risks of Policymaking

We said that policymakers today see issues differently from the past. Issues around climate change, security or food production are organized in clusters, whose constituent parts are interconnected and interact in complex ways. The diagram below neatly illustrates this. It shows how a very diverse collection of issues is now contained within a single supply chain that moves food products from the producer to the consumer. Only a few decades ago, most of these issues were barely discussed by policymakers or consumers. Yet, today, effective management of the supply chain must include all of them:[1]

The profound impact of rising societal expectations across the food system

Confronting how we think about "trust," "transparency" and "authenticity"

Natural
Free range
Labelling
Cage-free
Affordabillity
Hormone-free
Food security
Grain-fed
Food deserts
Traceability
Bio-technology
Local food
Workplace Safety
Wild vs. farmed
Animal welfare
Country of origin

Provenance   Ethics

Carbon footprint
Water footprint
Food safety
Pesticides/herbicides
Nutrition
GMOs
Allergens
Organic
Bisphenol-a
Ecosystem stewardship
Functional foods
Obesity
Fortification
Antibiotics
Diet & chronic
Preservatives
Sodium
disease
Gluten-free

Sustainability   Health

A representation of consumer and social food issues and perspectives
Source: Differentiate to Compete; The Consumer Perspective, CAPI, May 2014.

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But the diagram is more than a striking illustration of how multi-faceted food production has become. It also highlights one of the most troubling characteristics of the new policy environment. In the minds of political decision-makers, a simple equation is emerging between complexity and political risk: **The more multi-faceted the issue, the higher the risk that the policy process around it will fail.**

Basically, big issues are an easy target for critics, who can seize on some controversial aspect of a complex plan or strategy, use it to cast doubt on the whole plan, and then mobilize opposition against it. The constant campaign only heightens the risk. Its highly scripted and polarized style of debate actually narrows the space for argument or explanation. As a result, political leaders find themselves trying to explain the policy challenges around very complex issues from within the old paradigm of self-contained policy silos, one-size-fits-all solutions, and winner-takes-all debates.

Over the last two decades, governments have learned to approach multi-faceted issues with caution. With so many players in the field and so many linkages to other issues, it is very easy for something to go wrong. This leads to a fifth finding about the new policy environment:

5.

THE RISE OF MICRO-TARGETING

In fact, the trend now is for governments to focus on smaller, more manageable issues that are important to specific groups, and that can be solved easily within the timelines of the electoral cycle.

[1] *Leveraging Trade Agreements to Succeed in Global Markets*, by John M. Weekes and Al Mussell. The Canadian Agri-Food Policy Institute, 2014.

In fact, the trend now is for governments to focus on smaller, more manageable issues that are important to specific groups, and that can be solved easily within the timelines of the electoral cycle. Indeed, there is growing interest in so-called **micro-targeting**, where highly specific policies, such as small tax breaks or regulatory changes, are aimed at very specific groups.

There is nothing wrong with targeting smaller groups, as long as this is not seen as an alternative to dealing with the big issues. That is a problem. Avoiding big issues does not make them go away. Instead, they fester until, eventually, something gives.

The moral is that the political risks around multi-faceted issues need to be mitigated so that decision-makers feel comfortable taking positions on them. This, in turn, requires important changes in our approach to policymaking. In particular, it calls for much closer attention to the kind of policy process that is needed to support different solutions. There is no one-size-fits-all.

Focusing on Process

If process is often the problem, it is also part of the solution. Process is maligned because so much of it is poorly designed, unnecessarily complex and as likely to frustrate results as to produce them. On the other hand, well designed processes of the right sort can do much to improve the situation: they can simplify issues and speed up decisions; they can make opaque and unresponsive processes transparent and inclusive; and they can help ensure that effort produces results. Indeed, the process around implementing the solutions will often be as important as the proposed solutions and will strengthen them in two basic ways:

- Focusing on process issues such as transparency, responsiveness and inclusiveness can help ensure the **legitimacy** of a solution. As a result, citizens and stakeholders will be much more willing to accept it, thus reducing the political risks of failure.

- Process can make a huge contribution to the **effectiveness** of a solution by helping to bring the right mix of people, skills and resources into the policy process to ensure the best decisions are made and implemented.

What Issues does this Book Address?

In choosing the papers for this book, we divided the issues into two basic categories: governance and policy issue.

GOVERNANCE

If policy issues are the questions that get resolved through political debate and decision-making, governance defines the process by which these debates and decisions unfold. In theory, while citizens and political parties differ on policy, they should agree on governance. In practice, however, our governance processes are under attack for a wide range of shortcomings: lack of transparency and accountability; not being fair to or representative of stakeholders; failing to produce effective solutions; ignoring evidence; and blurring jurisdictional responsibilities. Our series will include two papers on key governance areas:

- Democratic Reform – by Robert Asselin
  Foreword by Donald Savoie

- Open Government & Open Dialogue – by Dr. Don Lenihan and Carolyn Bennett, MP
  Foreword by Deb Matthews

POLICY

Policy issues are the substantive problems that arise in the various policy fields. The policy issues for this series include the following:

- Carbon Tax – by Nic Rivers
  Foreword by Tom Rand

- Skills & Higher Education – by Daniel Munro
  Foreword by Kevin Chan

- Child benefit spending – by Lauren Jones, Mark Stabile, and Kevin Milligan
  Foreword by Jennifer Robson

- Infrastructure – by John Broadhead, Jesse Darling and Sean Mullin
  Foreword by David Dodge, O.C.

- Security & Oversight – by Wesley Wark
  Foreword by Anne McLellan

- Privacy in the Public Service – by Chantal Bernier
  Foreword by Michael Geist

- Foreign Policy for the Future – by Roland Paris
  Foreword by Michael Kergin

An Agenda for Democratic Reform

Robert Asselin
Vice President, Policy & Research at Canada 2020

"The history of the idea of democracy is curious; the history of democracies is puzzling."

Professor David Held, London School Of Economics

Foreword

Signs are everywhere that our country's political institutions are in an urgent need of repair. There is a link between the decline in the ability of Parliament to hold the government to account, the sharp decline in voter turnout, spreading morale problems in our national public service and the growing cynicism towards politics and government.

Robert Asselin not only captures the reasons for this state of affairs, he also explores how we can deal with the malaise. He provides a balanced assessment of possible reform measures and outlines a series of recommendations for Canadians and our politicians to ponder for strengthening how we can best govern our country.

by Donald Savoie
Professor, University of Moncton
Canada Research Chair in Public Administration and Governance

Introduction

More than two thousand and three hundred years ago, Aristotle spoke about the virtues of *demos* – he stated in Politics that in a democracy *everyone* has a share in everything. It's a powerful statement to begin with, and also one that would be challenged by many of his contemporaries.

From Ancient Greece to the present day, the *practice* of democracy has been heavily criticized. When the great liberal thinkers of the eighteenth and nineteenth century - Montesquieu, Rousseau, de Tocqueville, Locke, Mill - thought and wrote about emerging liberal and representative democracy, they had a few clear imperatives in mind: ending absolutism and asserting the principles of liberty, equality and the rule of law as founding and inviolable principles of modern constitutional democracies. At the core of it, they thought that individuals should be free to pursue their self-interest without control or excessive restraint by society.

None of them thought liberal democracies would be perfect in their design, nor in their implementation. They were pursuing the establishment of key universal normative principles. Execution would vary and constitutional design would matter greatly as well.

In the Federalist papers (1787), Jay, Madison and Hamilton wrote eloquently on the challenges of designing constitutions and institutions. In 1866-1867, our own fathers of Confederation, inspired by the British parliamentary system, made two important implicit determinations:

A strong executive branch was a necessary feature of our parliamentary system, and as such would bring considerable amount of stability in our political system; and,

Our constitutional conventions (the non-written part of our Constitution) would be tributaries of key normative pillars of our democracy: the rule of law, constitutional monarchy, judicial independence, federalism, minority rights and parliamentary sovereignty, and as such would provide necessary checks and balances on the executive.

What's wrong with our democracy?

Today, many participants and observers of democracies – journalists, pollsters, political scientists, citizens, even politicians themselves –have concluded that most western countries (including our own) are experiencing a real malaise about the practice of representative democracy in modern polities.

As Pipa Norris observes in her much acclaimed book *Democratic Deficit: Critical Citizens Revisited:* "A host of scholars of American politics have detected signs of a rising tide of popular discontent and vote anger (Dionne, Craig, Tolchin, Wood), as well as deep mistrust of government (Nye, Zelikow and King, Hetherington)…". In Canada, two recent books, *Democratizing the Constitution* (Aucoin, Jarvis and Turnbull) and *The Tragedy of the Commons* (Loat and McMillan) have focused on the shortcomings of our constitutional conventions and institutions, as well as the diminished role of our elected legislators. Countless columns and op-eds have also been written on the perceived decline of our democracy.

So, what is the nature of the malaise exactly? And what are the symptoms?

For the sake of this paper and brevity, I will suggest that there are three fundamental problems we ought to address in Canada. I accept that this characterisation is subjective and may be contested, but I believe it provides a fair conceptual framework to work with.

1. The first is the issue of *political legitimacy*. The most common symptom cited amongst those who believe we have a democratic deficit issue is the declining electoral participation rate.

2. The second is institutional – mainly how our institutions allow power to be exercised and checked in our political system.

3. The third problem is *trust*. It is caused mostly by behavioural issues - on one hand modern politics and the political tactics used by political parties to win elections (negative advertising, wedge politics and personal attacks) and on the other hand the lack of interest and engagement from the citizenry.

These criticisms are certainly not new. But have they gotten worse?

I am arguing in this paper that they have.

Our democratic deficit or malaise is not just a theoretical or an intellectual issue. It matters on a daily basis. We get worse decisions when people do not engage or inform themselves. Sound policy decisions matter for Canadians on a daily basis for issues that affect their lives. We will have less prosperity tomorrow if we make stupid decisions today.

Lately, political scientists have theorized about democratic deficits and what they mean and imply for the future of democracy. The word deficit is an important one. It implies that there is an imbalance between the perceived democratic performance of the state and public expectations. Are those expectations reasonable? Or attainable? And sustainable? This is not an easy determination.

Given everything that is involved here – public opinion, political culture, political behaviour, democratic governance, political psychology, political communications, public policymaking – even agreeing on the normative conceptualization of democratic deficit isn't a foregone conclusion.

Let's start with an obvious observation: there is no silver bullet here. Institutional reform has many limitations. Most of our politics is dictated through behaviours and political culture. I will offer some thoughts on those at the end of the paper. In any democracy, governments don't (nor should they) have carte blanche. They operate within constitutional, legal, political and financial and other constraints. Citizens are naturally critical of their elected representatives. As people get more and more educated, this only gets exacerbated.

The objective of any democratic reform should be to get to a level of trust that ensures the degree of disaffection amongst citizens could not jeopardize democratic institutions' legitimacy. How does one know when this is the case? It is mostly a qualitative question, and any answer can be critically second-guessed.

Trust isn't a sole product of institutional or constitutional design either. There is no evidence to suggest for example that presidential systems are more inclined to gather more trust in the citizenry than parliamentary systems. Americans are as critical of their elected representatives as Canadians are. In fact, although the American system is often cited as an ideal of representative democracy, Americans have become almost completely disillusioned with the kind of politics it has produced. Congress approval rate has been below 20% for years.

It would be wrong to suggest that institutions can't or shouldn't be reformed to advance a robust democratic reform agenda. But we shouldn't be naïve about this. Political incentives will always be there for reprehensible behaviours. It isn't a Socratic contest about who is the most virtuous amongst political actors. The end goal of politics is not to be virtuous, but to win power. Therefore, our aims should be to focus on specific achievable goals.

Let's begin with the issue of political legitimacy. Since 2000, the electoral participation rate for federal elections has been consistently below 62%, except in 2006.

Parliamentary

Year	Voter Turnout	Total vote	Registration	VAP Turnout	Voting age population	Population	Invalid votes	Compulsory voting
2011	61.41%	14,720,580	23,971,740	53.79%	27,368,468	34,030,589		■ No
2008	59.52%	13,929,093	23,401,064	53.59%	25,993,117	33,212,696	0.70%	■ No
2006	64.94%	14,815,680	22,812,683	58.39%	25,374,410	32,805,041	0.60%	■ No
2004	60.91%	13,683,570	22,466,621	55.28%	24,751,763	32,207,113	0.90%	■ No
2000	61.18%	12,997,185	21,243,473	54.64%	23,786,167	31,213,580	1.10%	■ No
1997	67.00%	13,174,698	19,663,478	57.06%	23,088,803	30,785,070	1.44%	■ No
1993	69.64%	13,863,135	19,906,796	63.87%	21,705,750	28,941,000	1.40%	■ No

Source: International Institute for Democracy and Electoral Assistance (IDEA)

In the last Ontario election, less than half of the eligible voters cast their ballot.

For the last decade, election after election, two out of five Canadians have not bothered to vote. There is an unprecedented degree of cynicism and disengagement amongst the citizenry.

As Postmedia Columnist Andrew Coyne observed recently "Majority governments are now formed in this country with the support of barely one in five adult citizens — about the same as elected governments a century ago, when women were not allowed to vote. We are, in short, facing a crisis of democratic legitimacy."

Like many other western countries, there is a huge disconnect between elected officials and the people. The incarnation of our collective sovereignty – our Parliament – has lost much of its relevance and has become a theater for partisan bickering.

The media coverage of politics has turned into a perpetual horserace, animated by pollsters, with many talented journalists looking for the eight second clips for their stories and doing less and less substantive analysis.

Integrity and corruption are an ongoing problem, as they are in all countries. Canada is certainly not the worst but there have been scandals in the recent years that have affected public confidence.

But the reality is this: citizens have become too easily cynical and dismissive of politics and governments. And politicians have become too comfortable with the status quo and have no strong incentives to address these criticisms.

This isn't an easy fix.

Many critics of our electoral system have argued that our first past the post system has contributed to discouraging people from voting. The two most common refrains are that 1) singular votes won't change outcomes when it is obvious who will win in a particular riding or region 2) governments – even large majority governments – get elected with much less than 50% of ballots cast (often around 35% in Canada), which isn't democratic.

The case for a preferential ballot

Although I am skeptical of the efficiency of a PR system in Canada, I agree that our first past the post system poses a problem of political legitimacy. An acceptable compromise would be to institute a *preferential ballot*, wherein voters would rank their choices and the winner in each riding would need to capture more than 50 per cent of the vote.

The thrust of it is quite straightforward: if no candidate is the first choice of more than half of the voters, ballots assigned to the eliminated candidate are recounted and assigned to those of the remaining candidates who rank next in order of preference on each ballot. If this does not result in any candidate receiving a majority, further rounds of redistribution occur.

This system would ensure that the winning candidate in each riding would get 50% plus one of the votes. It would reinforce the democratic legitimacy of the government.

What about mandatory voting?

Changing our electoral system could lead to enhanced political legitimacy but we have no guarantee it would lead to higher voter turnout.

Many countries – in fact thirty of them including Brazil, Belgium and Argentina – have mandatory voting in effect. Australia implemented it in… 1924!

In all these countries, but most notably in Australia, the evidence shows that mandatory voting has led to very high voter turnout and a positive change in the political culture.

Voter turnout for Australia (Parliamentary)

Year	Voter Turnout	Total vote	Registration	VAP Turnout	Voting age population	Population	Invalid votes	Compulsory voting
2013	93.23%	13,726,070	14,722,754	79.67%	17,048,864	22,262,501	5.91%	▮ Yes
2010	93.22%	13,131,667	14,086,869	81.02%	16,208,479	21,515,754	5.60%	▮ Yes
2007	94.76%	12,931,460	13,646,539	82.38%	15,696,515	20,434,176	3.95%	▮ Yes
2004	94.32%	12,354,983	13,098,461	82.37%	14,999,498	19,913,144	5.18%	▮ Yes
2001	94.85%	12,054,664	12,708,837	84.20%	14,316,998	19,294,257	4.82%	▮ Yes
1998	94.99%	11,545,132	12,154,050	82.24%	14,039,112	18,750,982	3.78%	▮ Yes
1996	95.77%	11,243,941	11,740,568	82.99%	13,547,920	18,308,000	3.20%	▮ Yes
1993	95.75%	10,900,861	11,384,638	83.43%	13,065,440	17,656,000	2.97%	▮ Yes
1990	95.31%	10,225,800	10,728,435	82.09%	12,457,450	17,065,000	3.19%	▮ Yes
1987	93.84%	9,715,428	10,353,213	84.14%	11,546,730	16,263,000	4.94%	▮ Yes
1984	94.19%	9.293.021	9,866,266	84.20%	11,036,240	15,544,000	6.34%	▮ Yes
1983	94.64%	8.870.174	9,372,064	81.24%	10,919,090	15,379,000	2.09%	▮ Yes

International Institute for Democracy and Electoral Assistance (IDEA)

There is no reason to conclude that what has been successful in other countries wouldn't be in Canada. Again, there is no need to reinvent the wheel in terms of the mechanics. It has been done by others.

Like similar electoral authorities in other countries, Elections Canada would carry the responsibility of making sure citizens exercise their legal obligation to vote and would be authorized to impose a symbolic sanction (20$ in Australia) for those who do not. There are generally universal provisions (travel, illness, and religious objections for example) under which citizens are justified not to vote.

Under most mandatory voting systems, citizens' obligation is attendance at a polling station. They still have the right to abstain or to choose none of the above candidates. They can even drop a blank ballot into the box if they choose to.

So, why mandatory voting?

It really comes down to how one sees the role of the state in a society and the kind of political culture one wants to live in. On one side, there is the Hobbesian view where the state is there to protect citizens against abuses of infringing on individual rights. On the other hand, there is a more idealist vision of the state where it becomes a facilitator for achieving a democratic community.

I will take a side and choose the latter.

If – as Aristotle stated that in a democracy everyone has a share in everything - then we have an obligation as fellow citizens to fulfill that promise, to step up and make our democracy a real social contract amongst ourselves. Simply put, it ought to be an act of common citizenship that bonds us together. Voting every four years is the least we could do to achieve this.

I won't pretend that there are no philosophical challenges to mandatory voting.

Is it morally acceptable to force a citizen to vote? Does it infringe on his individual right as a citizen? Is it compatible with our Charter of rights and freedoms?

For liberals, individual rights are not easily reconcilable with the idea of a duty to a political community.

If we see voting as a right, and as an individual right only, then it is unlikely one can support mandatory voting. I personally believe it ought to be more than a right, but in fact a collective commitment – a duty of citizenship. This is what Australians and other nations have agreed to.

There is most likely a Charter test to be added as a consideration before moving on such a policy at the federal level. Furthermore, the implementation of such a bill would require that more resources be devoted to Elections Canada to ensure people who are ill or have disabilities, homeless, hospitalized, living abroad, have literacy and numeracy problems can vote. Again, Australia is quite a model in that regard and has shown it can be done.

There are probably other considerations as well, and they have to be looked into. But mandatory voting is a policy we ought to consider seriously if we are serious about democratic reform in our country.

Carrying on electoral mandates

Political legitimacy isn't the sole result of getting more democratic participation. It has to be accompanied by *better* accountability while governments are in office - in other words by improving how electoral mandates are carried.

Accountability is a core principle of our democracy. We expect our elected representatives to be accountable for their actions and decisions while they're in office.

The non-written part of our constitution is made of important conventions in this regard. The most important one is that our system function under the doctrine of "responsible government" which requires that to keep governing the government has to retain the confidence of the House of Commons. For this doctrine to work, the Ministry has to respect another convention – ministerial responsibility – that calls for ministers to accept responsibility and be accountable when things go wrong.

This means amongst other things answering questions in the Commons (as well as in parliamentary committees). The problem these days is that these conventions are being somewhat ignored or looked over by the executive branch of government – namely the Prime Minister and his Cabinet - as we have seen by the prorogation crisis of 2008 or many recent examples where ministers aren't even allowed to speak in the House to justify or explain what went wrong in contentious files.

Contrary to what many have been led to believe in recent years, the Prime Minister is not directly elected by citizens but appointed after he or she can demonstrate he or she has the confidence of the House of Commons. In other words, only the House is elected, and as such, is the unique beneficiary of our collective sovereignty. Our system only works if this is well understood.

In their latest and excellent book "Democratizing our Constitution" the late Peter Aucoin, Mark Jarvis and Lori Turnbull have suggested that in order to restore accountability in our system of government we need to codify our constitutional conventions. It would certainly be worthwhile to do so but is embarking on constitutional reform the best way to proceed? Is it the only way to achieve better accountability? Would the courts really be able to enforce these written conventions? How so? At the end, isn't it a matter for the public to render a judgement on elected officials?

To be sure, I share the purpose: we need (much) better legislative oversight on the executive branch of government. My own view is that institutional reform is the way to go to ensure this happens.

Institutional reform

People often forget how fairly young representative democracy is in mankind history. Human beings started writing more than three thousand years ago. Representative democracy is only a few centuries old.

Some will argue that the birth of parliamentary democracy happened in 1215, when King John was forced to agree to Magna Carta, the "great charter" of legal rights which insisted that he listen to and follow the advice of the barons. The first known official use of the term Parliament was in 1236. It described the consultative meetings of the English monarch with a large group of his nobles (the earls and barons), and prelates (the bishops and abbots). The word Parliament means an event arranged to talk and discuss things, from the French word "parler".

Our House of Commons has three important functions:

- Examining and challenging the work of the government (scrutiny)
- Debating and passing all laws (legislation)
- Enabling the government to raise taxes and spend monies

The problem is not that our legislative branch is powerless – it is that it doesn't perform these functions very well.

Why not? There are no easy answers. Part of the explanation is that they are failing to adequately and effectively use the mechanisms at their disposal. There is no doubt that in recent years legislators have let the executive steamroll them more than ever before.

There are ways for backbenchers and opposition MPs to play a more meaningful role in our polity. I believe we can reinforce the legislative oversight on the executive in four meaningful ways:

1. Providing parliamentary committees the means to do their work

There are several reasons why house committees have not been used effectively.

First, many MP's perceived committee work to be somewhat secondary to their constituency functions. It very rarely provides them any visibility. The political incentives to perform well in that role aren't overwhelming. Because of this and real time constraints, their role as legislators is frankly overlooked.

Second, they too often lack the technical knowledge and expertise to effectively challenge senior officials who come testify in front of them. Most importantly, they mostly rely on one researcher from the Library of Parliament to provide them substantive analysis and briefing notes on complex bills and issues. MPs offices are terribly understaffed, and because of budget limitations, MP's staffs (often very young staffers)

are doing what they can to assist in committee preparation but they do it under very challenging circumstances.

Third, house committees lack independence. In essence, government MP's allow themselves to be controlled by the PMO. And opposition MPs let their House Leader (or Leader's office) tell them what position they should take - or even worse - what they should say and how they should behave in committees.

This is where I believe we have much to learn from the US system. Of course, one has to proceed with caution here. The American system is fundamentally different from ours – the legislative branch is completely separate and independent from the executive branch. But I believe there are two pillars of the US system we can draw upon.

The first is establishing some form of legislative independence. In our parliamentary system, individual MP's aren't free agents. They are elected under their party's banner and as such they owe loyalty to their party's positions, values, etc. But that shouldn't mean a total abdication of their prerogatives as individual

legislators. If MP's are only there to be relays of their party's leadership in the house, why bother to have elected MP's?

But of course to establish some independence, one needs to establish their own credibility as a legislator. This requires an important personal time investment: understanding the issues, meeting with policy experts, engaging vigorously with stakeholders, etc.

The second is resources and expertise. If we want MP's to fulfill their role and hold the executive to account, we need to provide them with the means to do so. If Parliament matters and ministers are allowed to hire more than twenty staffers, why are we accepting that MPs can only hire one legislative assistant under their current budget? Most importantly, why aren't we giving more resources to committees to really fulfill their mandate? In the US, most congressional and senatorial committees can count on more than twenty five paid non-partisan researchers/professionals to help them carry their work, most of them being Ph.D. and experts in their field. I'm not arguing we need twenty-five researchers per committee. But surely we can do better than one.

2. Easing the party line

As I wrote previously, there is undeniable logic for observing and carrying on party discipline in our democratic system. In order to carry their electoral mandate, governments need the confidence of the House. On budget bills and matters of confidence, it would make little sense to let MPs loose. There would be no party coherence and therefore no stability in our political system. Governments would fall all the time.

The problem we are facing is that we have gone to the extreme of that logic. Individual MPs feel powerless because their voice – and the voice of their constituents – is not being heard in the House. Votes are being whipped for all matters, the notable exception being Private Members Bills (even then actual practice isn't consistent). On matters of non-confidence, individual MP's should be allowed to vote freely.

The very own essence of *Parliament* – parler – is being lost. Our democratic debate can't be strong in this country if somehow we don't allow our representatives to speak their mind on issues of national relevance. At the same time, MP's need to step up their game and stop being overly partisan. They need to bring substance to the debate, not just recite their party talking points. Otherwise, they will look silly and don't make good use of the influence they can have in the debates of the day.

In the recent years, many commentators have observed that our politics have become too "partisan". I am worried that there has been a bit of misrepresentation in that characterisation and that we need to properly define partisanship in order to have an informed debate on the role of MP's in Parliament.

Partisanship is an obvious and essential feature of our politics and democratic institutions.

It is probably the most normal thing about belonging in a Parliament. You are elected under the banner of a political party that believes in certain things and oppose others. When the House of Commons in Britain was destroyed after a raid in the Second World War (1941), Churchill insisted that it had to be rebuilt in an oblong form - having the two sides of the House in front of each other. He thought a semi-circle (hemicycle in French) would not provide full justice to the nature of parliamentary debate. He believed a semi-circular chamber would give rise to "political theorists" and kill party politics. He wanted the Leader of the Official Opposition to face the Prime Minister in the Commons.

We expect the opposition to oppose the government. We even called it Her Majesty's Loyal Opposition. We provide an official residence (Stornoway) to the Leader of the Official Opposition. So the whole system is based on the premise of partisanship. The real issue of course is the extent to which partisanship in its modern manifestation has become detrimental to the quality of our democratic debate.

3. Reforming Question Period

There are no better examples of this phenomenon than observing what is going in Question Period (QP) these days. It's an appalling spectacle.

Ministers are allowed not to answer questions directly addressed to them. Point persons are chosen on the government's side to handle the controversial questions and most of the time, they provide no answer and use their time to launch nasty attacks on their adversaries. The opposition is no better. They use their 45 second questions to try desperately to make the news at night and QP becomes a daily bad

TV show. In a book Maclean's columnist Paul Wells wrote on Stephen Harper, he stated that when he was Leader of the Official Opposition, his MP's would come into his office all morning to formulate and practice their questions in front of him.

There is rarely any statesmanship. It's a gong show. What is sad is that this daily exercise takes away more or less two hours of the Prime Minister's time every day when the House sits. It serves very limited accountability purposes.

No institutional reform will disallow juvenile and childish behavior in the House. But we ought to try to bring substance and decorum. QP should be about real accountability.

I am proposing a reform in three points:

1. Extending questions and answers to 90 seconds (from the current 45 seconds) so that it is less of a television show but a forum where more meaningful answers from the PM and Ministers can be provided.

2. Instituting a Prime Minister's Question period once a week based on the UK Model. This would allow the PM to answer more questions from MPs from all parties (not just the leaders).

3. A more forceful Speaker's role. For example, the Speaker could refuse to recognize MPs (including Ministers) who behave inappropriately. More importantly, the Speaker could ensure Ministers answer questions and could sanction MPs and Ministers that interfere with proper questions and answers either by not recognizing them or kicking them out (as is the case in the UK).

I am not suggesting that these propositions alone will fix QP. They all have their own shortcomings, and no reform would be perfect. But it seems to me the status quo is untenable.

4. Senate Reform

There has been much debate about what we should do about the Senate. An institution of the 19th century, the upper chamber has been at the forefront of public discussions recently.

The central question we ought to be asking in light of any democratic reform exercise is this: does the senate still serve a legitimate and useful purpose in our political system?

Many will answer "no". They will argue that because it is an unelected body, it doesn't meet the democratic legitimacy test of the twenty – first century.

Others will say that it can but only if there is meaningful reform. There have been many reform proposals to that effect over the years, from triple E Senate to provincial nominees, most of them focusing on electing senators instead of appointing them.

As the Supreme Court recently ruled in a much anticipated decision last May, there is no shortcut to Senate abolition or changing how senators are appointed. The only route is a formal constitutional amendment that requires the support of at least a majority of provinces representing 50% of the Canadian population (depending on what reforms were being attempted).

In short, Senate reform or abolition is not impossible, but it would require long and substantial constitutional negotiations with the provinces and would only serve to open old constitutional wounds the country has no appetite for. Remember the Meech and Charlottetown Accord saga?

If anyone is under the illusion that provinces would just be happy to raise their hands in assent and ask for nothing in exchange for senate reform or abolition they should think again. Quebec Premier Philippe Couillard has already stated publicly he won't even consider discussing Senate reform before the Québec issue would be discussed and resolved.

So what then?

There are ways to address some of the issues without going the constitutional route.

One of the problems is that the Senate has been an easy way for Prime Ministers to reward party loyalists. Of course, there have been excellent appointments and there are amazing Canadians

serving in the Senate, from both parties represented in the upper chamber.

But it is fair to say merit-based appointments have not been the golden rule and that has led to a more partisan chamber. In order for the Senate to perform his second-thought sober function properly, the nomination process has to change to effectively result in merit-based appointments, and not be based on party loyalty.

Here is a proposition. A new non-partisan advisory committee could be formed and recommend Senate appointments on merit to the Prime Minister. The advisory committee would consist of one representative per province and territory (13 people) and members would come from all ways of life. A similar process has been followed in British Columbia a few years ago when a citizen assembly was created.

But instead of being selected randomly, the members of the committee would be selected by an ad hoc House of Commons committee. No partisan affiliation would be allowed. Canadians selected to sit on the committee would do so for three years, and their mandate would not be renewable. The committee would submit a list of candidates to the Prime Minister for his consideration every time there is a vacancy. As per the recent SCC decision, the PM would have the last say on appointments.

This is only a proposition. There might be other and simpler ways to proceed. The idea is to create a non-partisan process that is fair and leads to sound appointments. A criteria list could be provided to committee members and include some of the characteristics candidates should have, for example service in their community, professional and personal achievements, etc.

At the end, everybody will benefit from an improved appointment process and a less partisan Senate.

The role of *demos* in a representative democracy

It would be wrong to put all the blame on politicians or institutions when it comes to democratic reform. We have the politicians we elect, and we have the institutions we choose. Any democracy is as good as its citizens want it to be.

Respected scholars have suggested we are already in a post-politics era. They argue that governments have become powerless in this globalized era of governance.

Others have noted that we live in an individualistic society. Institutions with different missions – from the United Nations to the Catholic Church to private banks, hospitals and schools – are all going through a confidence crisis. We are witnessing the most powerful country's free fall. We see countries on the verge of bankruptcy.

Cynicism, fatigue, disillusion are words often used to describe the state of our politics. Every week, the newspapers and newscasts are full of stories about corruption, mismanagement and waste of taxpayers' money.

By presenting 120-second reports that focus mostly on controversies, the media is for the most part exacerbating the negative feelings people have towards the political class. Newsrooms have become production lines. Twenty-four hour news comes with ridiculous deadlines for journalists. There are a lot of punchy headlines, but less and less rigorous analysis.

Because politics has become for too many a childish partisan game – and because it is being reported as such – less people are tuning in.

For political actors, it has become too easy to go with the nasty rhetoric and the low blows, in the process resolutely avoiding any serious debate about public policy. Attack ads work and punchy clip lines are much more effective than lengthy explanations, so there is no need to go into a substantive debate on climate change or economic policies.

All of this generates a snowball effect. Once a noble profession, politics do not attract the best our society has to offer. Although many exceptional individuals do serve as elected officials, it has become increasingly difficult to attract people at the height of their career. The ones who succeed and last are, for the most part, professional politicians.

Representative democracy was never meant to be perfect. It was never meant to reduce democracy to the simple act of voting every four years. It comes with important responsibilities for all citizens.

When our politics is ill, we delude ourselves if we fail to realize how it affects us in our daily lives. Only people who turn out to vote are taking part in the decision-making. Bad governments don't happen by accident.

There is a worrying trend: many Canadians are checking out of the political process and don't pay much interest to what is going on. One could argue many feel disempowered or left out. The nastiness of modern politics may turn away

many voters. The poor quality of the public debate may also be responsible for turning people off. The media may not help by covering politics as a perpetual horserace and not doing their homework with substantive analysis of the policy issues.

This may be all true, but it doesn't change the fact that it diminishes our democratic life. When this happens, there is little accountability left in the system.

Elected officials are there to represent their constituents and make decisions on their behalf. It only works when politicians feel their constituents are watching them closely and expect the very best of them.

Institutional reform could help achieve meaningful democratic reform.

But it won't make our politics better. It won't produce statesmanship. It won't empower us as fellow citizens. As such, institutional reforms won't bring more civility and substance into the public discourse.

The best democratic reform we could accomplish is to try to change our political culture.

A political culture where leadership is cultivated and can flourish, where public service is valued and cherished. A political culture where being a citizen comes with important civic and political duties. A political culture that punishes the ultra-partisans and rewards the ones who are courageous enough to engage in intelligent public policy debates. A political culture where the media understands it has a responsibility to educate, not just to entertain people.

In a 2011 iPolitics column, Allison Loat from Samara wrote that "Canada needs to cultivate more political citizens". I think it captures the essence of our challenge. We can't afford to see politics as something that belongs to a few insiders. Canadians can protest – and they certainly should when it is needed – but what about occupying the vehicles that can make change happen, namely the political parties? There is nothing preventing Canadians from creating new ones if they don't like the ones they have.

If we resign as fellow citizens, then we have no one but ourselves to blame for our democratic ills.

An engaged citizenry is the most important check on governments.

Some could see this as wishful thinking. How can you engage when you're busy raising a family or working ten hours a day? How do you empower people so that they feel part of the discussion? And most importantly what is the role of the government in that regard?

There have been various propositions by different parties in the last few years that suggested the solutions lie in giving more power to citizens by instituting popular referendums, recalls, etc.

All this leads to this analysis: if we give citizens a stronger voice in our democratic institutions, the trust will come back.

Nothing could be less certain. In fact, it could undermine one of the founding principles of our political system: representative democracy.

Instantaneous direct democracies are a very bad idea. We don't like a minister anymore? Easy: we just throw him out. Bridges fall? We get rid of the government in place.

This is not democracy in action: it is populism at its worst. What we shouldn't be implying is that our elected officials no longer have the ability to fulfill the popular mandates we are giving them.

It's more or less a form of abdication of the most important responsibilities of an elected official: represent the citizens who elected him, take decisions on their behalf and be accountable to them.

What is causing most of the cynicism is the way politics is being conceptualized and practiced on a day-to-day basis.

I would argue there is a supply and demand issue here.

If we are asking citizens to raise the demand line, we need the supply side to its part so that the two can meet in the middle. This means for elected officials doing politics differently. A new generation of politicians is coming to the fore. There is an opportunity to change how politics is practised, and to raise the bar on transparency and accountability.

At the end of the day, our common objective should be to promote deliberation and compromise, mutual respect and understanding, long-term thinking and informed engagement.

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About the Author

Robert Asselin serves as Vice President of Policy & Research at Canada 2020. Previously, Robert Asselin was the Associate Director of the Graduate School of Public and International Affairs at the University of Ottawa from October 2007 to January 2015. In 2014, he was appointed Visiting Public Policy Scholar at the Woodrow Wilson International Center for Scholars in Washington. Robert previously served as Advisor and Speechwriter to the Prime Minister of Canada and worked as a policy advisor with three Cabinet ministers.

Rebuilding Public Trust in Government

Dr. Don Lenihan, PhD
Senior Associate, Policy & Engagement at Canada 2020

Hon. Carolyn Bennett, PC
Member of Parliament, Toronto-St. Paul's

Open Government and Open Dialogue in the Government of Canada

Foreword

The time is right for open government. We live in a fast-paced, interconnected world and we face increasingly complex challenges that require not only a whole of government, but a whole of society approach.

At the same time, we are in the midst of a fundamental shift in policy making with a citizenry that has high expectations of government in the modern age.

Citizens want paperless, fast and secure services – all available online 24/7 from the comfort of their home, office or wherever is convenient.

Citizens also have high expectations in terms of their relationship with government and their involvement in the policy and decision making process. No longer content to be passive recipients of services and programs, citizens want more than a voice; they want a role in developing and improving those services and programs. In this new world, governments need help tackling some very complex challenges and citizens are ready to provide it. Open government is an enabler of the collaboration and innovation that is essential if we are to make progress on some of our more complex issues.

In Ontario, we have started a truly transformational journey to change the way we do government and to chart a new, more open course.

Open government means open information and strengthening transparency and accountability, so Ontarians have access to the information they want and need about their government. It means open data and improving access to government data, in order to help businesses grow, spur innovation and unearth solutions to the problems we face. Most importantly, it means open dialogue and giving people the opportunity to weigh in on government decision -making and on the programs and policies that affect their daily lives.

As Don Lenihan and the Hon. Carolyn Bennett will argue in this chapter, Open Dialogue is an integral part of Open Government. By reaching out and engaging with the people using our services, we get better policy, better programs and services and better outcomes for people.

To get there, we need to modernize the way we engage with the people of Ontario and expand consultation beyond the town hall; we need to increase collaboration with citizens and make better use of digital tools to reach a broader and more diverse audience.

We are taking an important step toward Open Dialogue with the development of a public engagement framework – something Don and Carolyn advocate for in this chapter. This is one of the forty-five recommendations from Ontario's Open Government Engagement Team – a group of public engagement and digital experts who provided advice on how to make open government a reality – that we are moving forward on.

We will also launch a series of demonstration projects based on the new framework to engage Ontarians in how to move forward on some of our core priorities. Our goal is to ensure that the public engagement framework is delivering a more engaged group of Ontarians who are part of the policy development process.

I am excited about the power of building a more modern and collaborative public service using Open Dialogue, and I would encourage other jurisdictions to seriously consider this approach.

by the Honourable Deb Matthews
MPP (London North Centre)
Deputy Premier of Ontario

Trust in Government

A long list of polls and studies tells us that people are turning away from politics and that public trust in politicians has plummeted, but do we know why or how to fix it?

When people watch newscasts or check out political debate online, what do they actually see or hear about politics? Increasingly, it is little more than the shrill and hyper-partisan tone of the "constant campaign," from cynical negative ads to the barrage of talking points and political spin.

Nor is it clear how or why important policy decisions are made. Too often, they emerge from a black hole or reflect short-term political gain, rather than the public interest. Looked at through this lens, it is not hard to see why people are questioning what politics has to offer them.

This disconnect between citizens and politics appears to be part of a long-term trend that may be reaching a critical point, as the following slide by Frank Graves from Ekos Research suggests:

Trust in Government

Q. How much do you trust the government in Ottawa / Washington to do what is right?

% who say MOST/ALL THE TIME
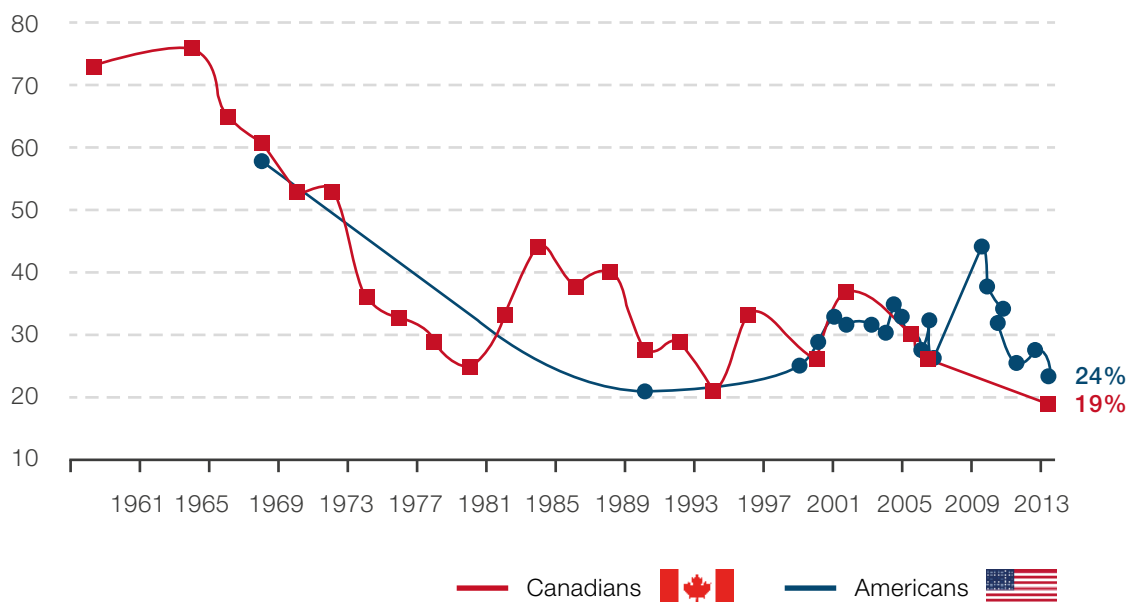
BASE: Canadians; most recent data point October 26-29, 2013 (n-1,377)
Copyright 2013. No reproduction without permission.

The blue and red lines show a stunning drop in the number of Canadians and Americans who trust their national governments to do what is right. According to these figures, over the last 50 years trust has plummeted from a high of about 78% into the low twenties here in Canada and the teens in the US.

If accurate, we think this should be of deep concern to the policy community. In a democracy, the legitimacy of governments arises from citizens' participation in the democratic process, especially elections. A collapse in public trust is likely to be followed by a collapse in participation; and that, in turn, means loss of legitimacy. There are worrying signs that this is already happening: voter turnout is falling, especially among youth; and, as Graves and others have been warning, public trust appears to be tumbling.

We think this trend is connected to two others that have unfolded over the same time period: globalization and the digital revolution. Together, these two forces have transformed our world, making it far more fast-moving and interconnected.

As a result, events and trends are increasingly difficult to predict and manage. Big shifts can happen with little or no notice, such as the terrorist attacks of 9/11, the financial crisis of 2008, or the collapse of oil prices in 2014.

Nor is anyone sure how such events—or our responses to them—will impact on other systems and trends. But if we have learned anything in recent years, it is that, in an interconnected world, they will.

So the speed of change, the interconnectedness of events, and a general volatility around public affairs are defining features of the contemporary world. Making and implementing decisions in this environment requires new ways of gauging public support and establishing legitimacy. The less engaged or trusting citizens are, the more difficult this becomes for governments.

Rebuilding public trust and reengaging citizens should be one of a government's highest priorities. We believe that Open Government is the way forward on this. It sets new standards for governance that will put an end to many of the cynical or outdated practices and establish new ones that are far better suited to our needs and to citizens' expectations.

This paper sketches the way forward for a new Parliament after the next election. It begins with an overview of Open Government and explains our reasons for focusing in on one key aspect of it: Open Dialogue. The **Open Dialogue Initiative** we propose provides a compact and cost-effective plan to build a new capacity for Open Dialogue in Parliament and across the public service, as quickly as possible. This, in turn, will ensure that a government that wants to pursue Open Government after the next election will have a plan that is fully formed and robust enough to make a major contribution to reengaging citizens and rebuilding trust.

What is Open Government?

The Open Government Partnership is an international movement of some sixty-five countries who have joined together to promote better governance through the innovative use of digital tools and a deeper commitment to transparency, openness and public engagement.

The Government of Canada joined the partnership in 2012 and in its initial Action Plan identified three streams of activity: Open Data, Open Information, and Open Dialogue. Open Data calls on departments to make their data holdings available to the public to use to develop new knowledge products, support more evidence-based decision-making, and make government more transparent.

Open Information calls on departments to advance freedom of information. Lastly, Open Dialogue recognizes the need to engage the public more directly in the policy process. Open Government results from the convergence of these three streams, as follows:

Open Government

| Making Data Available | Access to Information | Dialogue and Collaboration |

"Openness" is not a new concept. Citizens have always needed information to hold government to account and to make informed decisions. However, Open Government is taking this to a new level.

In 2014, a second Government of Canada Action Plan recognized the principle of "Open by Default" as the basis for these three streams. This implies that government information and data should be available to the public by default. When information is withheld, the onus should be on government to explain why. If fully implemented, we think the principle of Open by Default would be transformative. It implies nothing less than a reversal of the culture of secrecy and control that surrounds governments. And this, we think, is the key to renewing government for the digital age. While there is a long way to go, the principle has now been officially recognized and adopted by the Government of Canada. The challenge for a new government will be to implement it.

Focusing on
Open Dialogue

Much of the progress so far on Open Government has focused on Open Data. Many government data sets are in a format that allows them to be shared easily and their content is relatively uncontroversial, so observing the principle of Open by Default requires little change to the culture of government and, from a political viewpoint, is largely risk-free.

The Government of Canada currently has a fairly ambitious plan to advance Open Data and officials are hard at work on it. While adjustments to the program might be needed, a government that wanted to pursue a comprehensive Open Government would not need to reinvent it.

Open Information is more challenging. Documents that contain policy advice, program performance assessments or information on the state of the government's finances are usually treated as confidential and released only when a government feels ready to do so. Declaring that they should be freely available to citizens—Open by Default—would require a major reversal of the culture of secrecy that now dominates the federal government.

Nevertheless, Freedom of Information has a long history in Canada and elsewhere and has provided policymakers with lots of experience, so the risks are well known. The question for a post-election government is mainly one of leadership: will a new government be willing to take this step?

For at least one party, the Liberals, the decision to move forward on freedom has already been made. Justin Trudeau's Private Member's Bill outlines a plan to renew Canada's 1983 Access to Information Act based on the principle of Open by Default. As a result, all kinds of confidential information and documents would become accessible to the public.

Of the three streams, Open Dialogue is the least well understood and for many politicians and officials, the most worrying. They fear that it could turn over control of the policy agenda to interest groups, saddle ministers with bad decisions or degenerate into a free-for-all that paralyzes decision-making.

Such concerns leave them wondering about the upside of Open Dialogue. In our view, many of the concerns over Open Dialogue are either unfounded or relatively easily mitigated. We also see Open Dialogue as vital to the success of Open Government. Open Data and Open Information are not enough to prepare government for the digital age. As noted, policymaking today occurs in a highly interdependent, fast-moving and volatile environment, often involving many stakeholders. In this environment, dialogue processes can make a major contribution to policymaking in two basic ways:

- They can help ensure legitimacy through key "process values," such as transparency, responsiveness and inclusiveness.

- They can increase effectiveness by bringing the right mix of people, skills and resources into the policy process to ensure the best decisions are made and implemented.

But to achieve this, the processes must be well designed and well executed—something the current Conservative government has shown little interest in exploring or improving. It has been unwilling to invest time or political capital in building the capacity or skills needed for Open Dialogue. In most departments, traditional consultation (see below) remains the standard approach.

Indeed, what the government often refers to as "consultation" is barely even that. Often, it is little more than an "information session," where the government announces its plans, provides limited information about them and minimal opportunity for feedback, and then pushes ahead regardless of what others say.

We think this refusal to listen and respond to public concerns is a major contributor to the falling levels of public trust, as well as to a deeply worrying trend in which public policy increasingly conflicts with expert opinion and/or lived experience. As a result, Ottawa is falling further and further behind other national (and provincial) governments, such as the United Kingdom, which has made itself an international leader and trend-setter on Open Dialogue.

Given the Conservatives' refusal to allow the public service to experiment and evolve, a different government in Ottawa would find that within the public service the pressure to advance Open Dialogue has been building for some time. A new government must be ready with a plan that can address this deficit quickly, while ensuring the job gets done properly.

The Open Dialogue Initiative, to which we now turn, is designed to ensure that genuine capacity-building on Open Dialogue occurs within the federal public service as quickly as possible, but in a discipline way; and that the learning, skills, relationships and culture-change that result become institutionalized and are shared with the broader public policy community.

Objectives for the Open Dialogue Initiative

The Open Dialogue Initiative has five key objectives:

1. ## Make Open Government the standard for the digital age.

   Through the principle of Open by Default, Open Government sets new standards for governance in the digital age. The Open Dialogue Initiative will establish Open Government as the "brand" for improving governance in the Government of Canada and introduce the Canadian public policy community to the key ideas behind it.

2. ## Establish Open Dialogue as the indispensable third stream of Open Government.

   The Initiative will examine, test, document and demonstrate the critical contribution Open Dialogue makes to Open Government; and, in particular, to reengaging citizens and rebuilding public trust.

3. **Ensure that Open Dialogue is guided by a principled policy framework.**

   The Initiative will produce a comprehensive policy framework to guide Parliamentarians and officials in designing and delivering effective Open Dialogue processes at the federal level.

4. **Assess how digital tools can be used to support and strengthen Open Dialogue processes.**

   The Initiative will explore the contribution digital tools can make to Open Dialogue. How effective are they at overcoming distance and including large numbers of people? Can they support genuinely deliberative discussions? Are there new tools or techniques on the horizon that might prove to be "game-changers"?

5. **Build a group of Open Dialogue champions who will foster further experimentation and culture-change within Parliament and the Government of Canada.**

   The Initiative will build a group of Open Dialogue champions at both the political and public service levels, who will be informed, experienced and able to speak authoritatively about Open Dialogue processes and their role in the future of governance.

Towards an Open Dialogue Framework

A key objective of the proposed Open Dialogue Initiative is to develop a principled policy framework to guide the development of Open Dialogue processes. In fact, much work has already been done on the foundations of such a framework and, based on this, we believe the Open Dialogue Framework should rest on four distinct kinds of dialogue processes:

TRANSACTIONS: A transaction is a one-way relationship in which government delivers something to the public. This could be information, but it could also be a form of permission (licence), an object (drugs) or a service (policing). Transactions thus include not only information exchanges, but also the delivery of many public services.

CONSULTATION: Consultation provides members of the public with an opportunity to present their views on a subject to public officials. The process ensures they have a chance to make their views known to government. Once they have done so, the officials retreat behind closed doors to review the arguments, weigh evidence, set priorities, make compromises and propose solutions. Their conclusions are then presented to the government, which makes the final decisions.

DELIBERATION: Deliberation allows participants to express their views, but it also asks them to engage one another (and possibly government) in the search for common ground. Whereas consultation assigns the task of weighing evidence, setting priorities, making compromises and proposing solutions to officials, Deliberation brings the participants into this process.[1]

COLLABORATION: Collaboration involves sharing responsibility for the development of solutions AND the delivery or implementation of those solutions. A government shares these responsibilities when it agrees to act as an equal partner with citizens and/or stakeholders to form and deliver a joint plan to solve and issue or advance a goal.

Transaction	Consultation	Deliberation	Collaboration
One-way	To invite public feedback on questions, issues, analysis, alternatives or proposals	A process where different views are expressed and considered by participants in an effort to arrive at a common view	A partnership between government and the public in which the development and delivery of solutions is seen as a shared responsibility
Information sharing		Agreement by government that if a common view is reached, it will be implemented	
Examples			
Renew a driver's licence	Respond to a government survey	Participate in a planning process	Join a community policing initiative

Open Dialogue makes appropriate use of all four types of processes. At present, policymakers in the federal government tend to reply on just two approaches—information sharing (transactions) and consultation—for almost every issue. Too often, this results in a mismatch of processes and issues that leads to solutions that are ineffective, difficult to implement or that lack buy-in from citizens and stakeholders.

The motivating idea behind the Open Dialogue Framework is simply that **different kinds of issues should be approached differently.** The Framework is supposed to help officials choose the right kind of process for the issue at hand.

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[1] There is also an aspect of "depth" to this kind of participation, which is represented by the two-way arrows in the diagram. Depth refers to how far the public's role in the deliberation stage is intended to go. For example, it might be limited to providing a first draft of a list of goals for a strategy. Alternatively, government could ask the participants to push the discussion as far as they can, possibly even promising them that if they reach full agreement on a decision or a plan, it will abide by their decision. And there are many degrees in between.

However, if Open Dialogue rests on recognition of these four generic types of processes, we should not lose sight of the fact that every government is different. The challenge in developing an Open Dialogue Framework is not just to identify the four types and provide criteria to match them with the right kinds of issues. It is also to provide guidance on how to design processes that incorporate or respect the special or unique characteristics of the community in question.
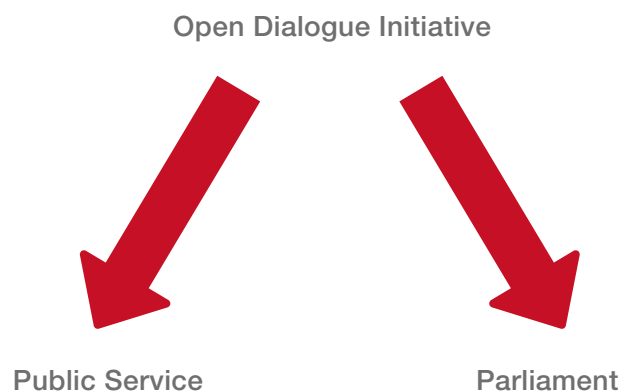
The Open Dialogue Initiative would use the demonstration projects to produce a "made in Canada" approach to Open Dialogue that is appropriate for the Government of Canada. For example, the new Framework would recognize and incorporate our commitment to federalism, the historical place of aboriginal peoples, and the role of official languages.

The Project:
Who are we engaging?

The Open Dialogue Initiative that we are proposing includes two distinct but complementary streams of activity: the Public Service Stream and the Parliamentary Stream. The former focuses on how Open Dialogue would transform the work of ministers and the public service; the latter on how it would make the work of Parliament and parliamentarians more meaningful.

The public service stream would include five major demonstration projects from five departments (a single project could involve multiple departments), and the parliamentary stream would include three to five projects from the House of Commons, possibly including the Senate. The two streams would proceed in parallel.

Open Dialogue Initiative

Public Service

Parliament

Canada 2020

Open Dialogue Initiative: The Public Service Stream

The Public Service Stream would be led by a new Open Dialogue Centre in the Treasury Board Secretariat. The Centre would scout out departments that were planning to launch a significant consultation initiative on an issue and then hold meetings with the officials from that department.
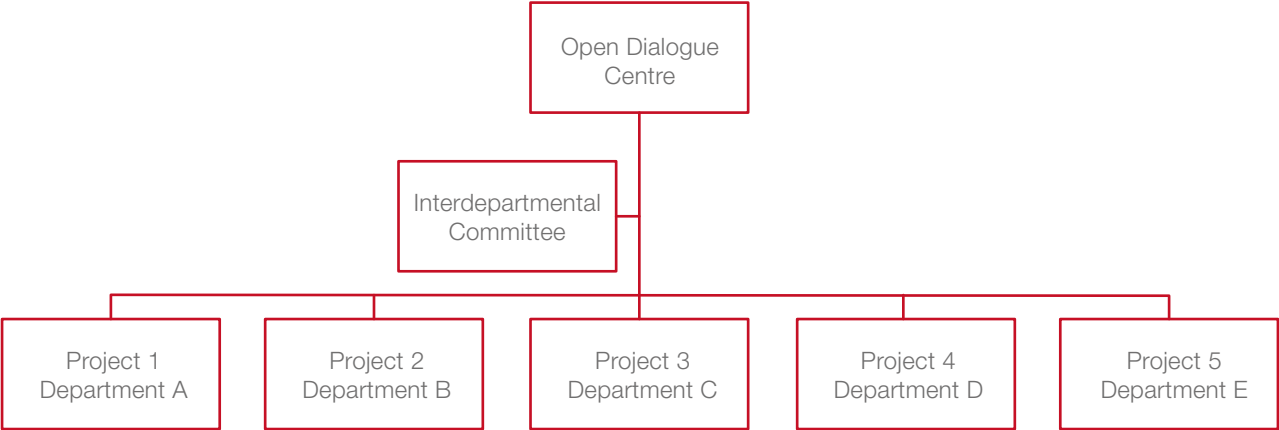
Through these meetings, the Centre would be looking for consultation processes that were also good candidates to be transformed into deliberative or collaborative processes. The Centre would discuss this with departmental staff. If the prospects were promising, staff, in turn, would discuss this with the minister.

The Centre's goal would be to identify five promising projects from various policy areas that could be completed within 18 months or less. Following discussions with the minister and his officials, the Centre would invite those five departments to participate in the Open Dialogue Initiative by redesigning their consultation processes as deliberative or collaborative ones and then allowing them to be used as demonstration projects for ODI.

Each demonstration project would still be planned, managed and executed by officials from the sponsoring department. However, the Centre would also strike and chair an interdepartmental committee, with representation from each of the departmental project teams. This committee would provide advice and oversight to all of the departmental teams to help ensure that the five projects conformed to basic principles and best practices of Open Dialogue.

The committee would also be responsible for consolidating learning from the projects and producing the new *Open Dialogue Policy Framework for TBS*. This would eventually become the official policy framework of the Government of Canada for Open Dialogue.

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In addition, the Centre would be responsible to inform and engage the public service and the broader public policy community on the progress of the projects. It would also work with the Canada School of Public Service to develop a training program and materials based on the projects.

The Open Dialogue Initiative would conclude with a national conference to educate the public service, MPs, the broader public policy community, and governments across the country on the merits of Open Dialogue and to showcase the results of the project.

Finally, development and execution of the five projects should require few new resources. The principal cost would lie in executing the demonstration projects. However, as each one would be a process that the sponsoring department had already planned to carry out, resources would have been allocated to the project through departmental budgets. In this way, ODC would leverage existing resources and commitments to carry out the work to produce the new framework.

Open Dialogue Initiative: The Parliamentary Stream

Many MPs today feel removed from decision-making, which increasingly is vested in the executive, in party leadership and, at times, among political staff.

The Parliamentary Stream of the Open Dialogue Initiative would provide an opportunity to change this by striking special committees of MPs and assigning them the responsibility of leading an Open Dialogue project.

First, House Leaders would meet to identify a list of multiparty issues that could be the focus of such a dialogue. A "multiparty issue" is one that transcends partisan lines enough that members of a special committee could reasonably be expected to work collaboratively. House Leaders would then agree to strike three to five special committees, each with a mandate to use Open Dialogue to find solutions to their respective issues.

A committee's mandate would charge its members with leading either a deliberative or collaborative discussion aimed at producing a consensus report. House Leaders would agree to a hands-off approach, as long as a committee continued to work within the boundaries and parameters defined by its mandate.

The committees would contain equal representation from each of the official parties in Parliament. Committee members would agree to engage in a non-partisan dialogue and, where the public was involved, to play a new kind of "facilitative" role through the committee.

In our view, the Library of Parliament is well positioned to assume a new and important role in helping Parliament build capacity and carry out successful engagement processes. Its value here was clearly demonstrated in a 2002/3 study on CPP (Disability), when it provided special support to the SubCommittee on the Status of Persons with Disability.

The government would make a meaningful commitment to act on consensus recommendations, as long as they remained within the boundaries of the mandate and met any special conditions set out there, such as guidelines on recommendation that involve spending.

Should the committee members fail to reach consensus on their recommendations or reach beyond the committee's mandate, the government's commitment to act on the recommendations would be invalidated.
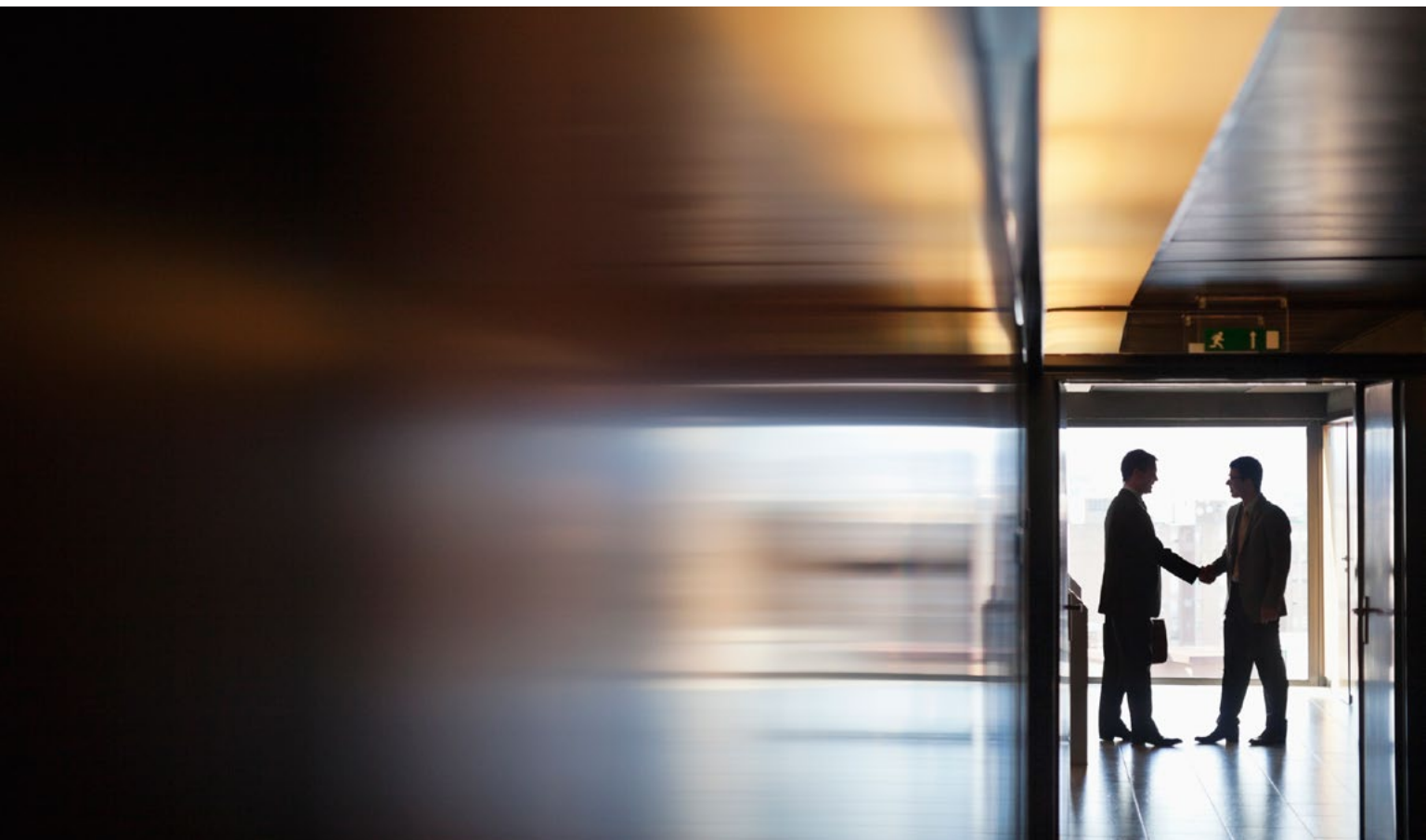
Realigning Parliament and the Executive

In the final stage of the Open Dialogue Initiative, The Open Dialogue Centre would convene a meeting with members of the parliamentary committees, ministers responsible for the demonstration projects and their senior officials, and representation from the Prime Minister's Office. Together, the group would discuss the lessons from these exercises for how Open Dialogue could be used to help realign the relationship between Parliament and the Executive.

Deliverables

The following is a list of the principal deliverables from the Open Dialogue Initiative:

- Establishment of the Open Dialogue Centre in TBS
- Completion of five Open Dialogue projects in five departments, involving stakeholders and/ or individual citizens
- Completion of three to five all-party Open Dialogue projects in the House of Commons, possibly including the Senate
- Completion of an Open Dialogue Framework that establishes an official approach to Open Dialogue for the Government of Canada
- Development of a suite of public engagement learning tools to help build capacity in the Public Service of Canada
- Establishment of a community of
- articulate and experienced champions for Open Dialogue
- Review of the lessons for realigning the relationship between the Executive and Parliament

Conclusion:
Back to Public Trust

Since the beginning, modern governments have relied almost exclusively on two basic processes to involve citizens and stakeholders in the policy process; what in the framework above we called information sessions (transactions) and consultation.

But if the engagement approach hasn't changed much in 200 years, the policy environment has. Citizens today are far less willing than their grandparents to allow governments simply to make decisions on issues of the day. They often want a say on issues that matter to them and they regard this as their democratic right.

Further, globalization and the digital revolution have transformed our world. Issues, events and organizations are often so interconnected that governments are unable to determine how the different options are likely to impact on the environment. To find the fairest and most effective solutions they must engage citizens and/or stakeholders in their deliberations, as they are often far better positioned than government to assess how a policy will impact on them.

Finally, good policymaking often requires more than public involvement to identify solutions. It also requires public involvement to implement them. Community health is an obvious example. Citizens may come together to discuss and develop a promising community health plan, but unless they also commit to acting on it little progress will be made. Engaging them in the deliberations that forge the plan is not enough. The process must go a step further and also secure a commitment from them to help deliver it—and that is a different discussion.

We believe that building the capacity for a more ambitious use of Open Dialogue processes to address issues like this would greatly enhance both the legitimacy and effectiveness of government decision-making.

Our goal is to ensure that democracy continues to work *between* elections; that citizens and organizations can meaningfully engage with government and Parliament to help shape the direction of a government *after* it has been sworn in.

As we plan for the next 150 years of Canada, we should be putting in place the processes and institutions that will assure Canadians there are better ways to participate in the policy process than yelling at their televisions or, worse, just turning them off. Meaningful participation should be palpable and therapeutic. Open Dialogue would be an effective antidote to the cynicism that is infecting our democratic institutions.

And this, in turn, would go a long way toward the essential task of rebuilding public trust.

About the Authors

Don Lenihan is the Senior Associate of Policy & Engagement for Canada 2020. He is one of Canada's leading voices on open government and open dialogue, serving as Chair of the Open Government Engagement Team for the Government of Ontario.

Don's most recent book, **Rescuing Policy: The Case for Public Engagement**, was published in January 2012 and is an introduction to the field of public engagement, as well as a blueprint for change, and a sustained argument for the need to rethink the public policy process.

The Hon. Carolyn Bennett, MD, MP for St. Paul's, was first elected to the House of Commons in the 1997 general election and was re-elected in 2000, 2004, 2006, 2008 and again in 2011 representing the electoral district of St. Paul's.

Currently Carolyn is Critic for Aboriginal Affairs. She is also Chair of the National Liberal Women's Caucus.

Prior to her election, Dr. Bennett was a family physician and a founding partner of Bedford Medical Associates in downtown Toronto.

Child Benefit Spending in Canada

This paper was originally published by the Martin Prosperity Institute.

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Mark Stabile /
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How do families who receive the Canadian Child Tax Benefit and National Child Benefit spend the money?

Foreword

Cash benefits for children were first created in 1916 in Canada. Ever since, Canadian policy-makers have grappled with big questions about the relative impact of transfers (compared to, for example, publicly-funded services) and how rich those transfers should be. If we give another dollar to families, goes the argument, how can we know that they'll use it to help their kids?

This study from Lauren Jones, Kevin Milligan and Mark Stabile, is one that will be read and referred to again and again in both policy and academic discourse. By making use of the inter-provincial variations in child benefits, Jones and her colleagues have been able to isolate the effects of increasing benefits, all else being equal. In lay terms, they've been able to separate the chicken and the egg.

This study gives clear evidence for something we've had to take as a matter of faith– parents will use new economic resources for the good of their family and children. Moreover, this study obliterates any doubt that lower-income parents do this too. This, in my view, is by far the most important finding from the study.

For low-income families, an extra dollar in child benefits means more spending on education, more money for groceries and for transportation. Those resources can make a lasting difference in outcomes for children. And across all families, the extra dollar seems to reduce consumption of alcohol and tobacco. If the cash transfers also mean healthier parents, kids benefit again.

In this federal election year, the debate about how best to help families with children is live. It's a debate that deserves to be had on the basis of evidence not ideology. This study couldn't be more timely.

by Jennifer Robson
Professor, Carleton University

Programs designed to transfer income to low-income families are common in many jurisdictions. The National Child Benefit (NCB) and Canadian Child Tax Benefit (CCTB) in Canada, the Earned Income Tax Credit in the United States, and the Working and Child Tax Credits in the UK are some examples. Each of these programs provides cash transfers that can be spent at the discretion of the recipient, and they tend to be either exclusively available to families with children or more generous for such families. While such programs often have multiple goals, one common policy aim is to improve the lives and chances of children in these families, and to lift them out of poverty.

There is an increasing amount of research that shows that these programs are successful in helping low-income families. They improve children's performance in school, they improve child (and maternal) mental health, and they even have positive benefits for kids' physical health.[1] The question of how transfer programs achieve these results remains unanswered. How, exactly, do families spend transfer income in order to improve the outcomes of children? This paper summarizes recent research that we have conducted and provides some evidence on how families actually spend the money they receive. The results give some insight into how providing money to low-income families helps improve outcomes for children.

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[1] Dahl and Lochner (2012) and Milligan and Stabile (2012) both find, for example, that these programs lead to improved outcomes for children, both in terms of math and reading skills, and in terms of mental and physical health measures. Hoynes, Miller and Simon (2015) find that the EITC improves infant health outcomes and maternal health behaviour.

Economists, sociologists, and child psychologists have suggested two ways in which children can benefit from these types of transfers. On the one hand, families may use the income to purchase those goods and services that are directly related to improving education and health outcomes. If families use additional income to purchase direct inputs to education or health, such as tuition, reading materials, health care or nutritious food, improvements in these areas are likely to occur. Previous research has labeled this the "resources channel" (Mayer 1997, and Yeung et al. 2002).

On the other hand, income transfers may improve health and education outcomes indirectly if additional income reduces stress and improves household relations, increases the chance and opportunities for employment and eases financial burdens. Spending in areas like housing, recreation, or clothing, for example, may improve general health and education indirectly by improving the conditions children face and their ability to function, learn, and improve themselves. Previous research has called this the "family process" channel (Yeung et al. 2002). Recent research by Janet Currie and

Mark Stabile has documented a strong relationship between early child mental health and both short-term educational achievement and longer-term economic outcomes such as welfare take-up. As such, the possibility that a broader set of expenditures, not necessarily immediately related to education, might also improve future educational outcomes is quite plausible.[2]

We investigate how families use income from the CCTB and NCB in Canada using twelve years of a Statistics Canada dataset, the Canadian Survey of Household Spending (SHS). The SHS is a nationally representative annual survey of Canadian families and is intended to measure spending habits. Respondents to the survey are asked to report their spending in the previous year on a wide array of spending categories. We choose to focus on categories grouped into four broad areas: education spending; health care spending; stability spending, including expenses like rent, clothing, food, transportation, child care and recreation; and spending on risky behaviour, including alcohol and tobacco purchases.

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[2] See for example, Currie and Stabile, 2009; Currie, Stabile, Manivong and Roos, 2008.

The Landscape of Benefits Programs in Canada

For readers unfamiliar with Canada's child benefit system, it consists of two main benefits. First, the Canada Child Tax Benefit (CCTB) is paid to parents of children age 0 to 17. This is a federal benefit initiated in 1993 that pays the same across the country with two small exceptions.[3] The CCTB is payable for a twelve-month period running from July to June, with the amount dependent upon the reported net income of the parents in the previous calendar year. So, the July 2014 to June 2015 maximum annual benefit of $1446 per child was based on reported family net income from 2013. Benefits do not require any earned income, so families with no income still qualify for the benefit. Take-up is high—in many provinces the application is given to families of newborns and the administration is well-integrated with the tax system so any tax filer who qualifies will be made aware of the transfer. The benefit level was constant in nominal dollars between 1993 and 1999, but has been indexed to CPI inflation since 2000. A small supplement ($101 annually in 2014) is available for a third or higher order child.

The federal benefit is therefore the same for all families with children, including non-workers, except that it varies by the number of children and begins a slow phase-out once an income threshold is reached.[4]

The second component of the child benefit system is the National Child Benefit program, begun in 1998.[5] This program is a federal-provincial initiative that features a federally-paid benefit called the National Child Benefit Supplement (NCBS) equal to $2241 for a one-child family, $1982/child for a two-child family and $1886/child for families with three or more children in 2014. The federal government provided additional funding for an expanded benefit payment, but provinces, at their discretion, could subtract the NCBS from welfare recipients in their province and use the 'savings' to fund different provincial programs targeted at children. This yielded substantial differences in benefit amounts across provinces. In addition, the province of Quebec, while it elected to stay outside the NCB program, instituted major reforms of its child benefits system in 1997 and 2005. In short, two provinces introduced new transfers that weren't related to earnings, two provinces introduced earnings-related benefits, and three provinces did both. Across provinces, there were large differences in the structure of benefits across family size. The provincial differences create variation in the flat federal benefit amount, the income threshold, and the reduction rate.

In addition, some provinces have provincially-funded and administered benefits. In particular, Manitoba and Quebec feature unique components to their system and British Columbia introduced a benefit very similar to the National Child Benefit Supplement two years before the rest of the country in 1996.

The values come from a tax and benefit simulator that calculates tax benefits and liability for different families.[6] Importantly, much of the increase over time is focused on those at $10,000 and $25,000 income levels, through the expansion of the National Child Benefit program and the associated provincial program. Figure 2 shows how benefits for the same two-child family from Ontario evolve as earnings grow. The large jump between 1994 and 1999 results from the replacement of the $500 federal Working Income Supplement with the Ontario Child Care Supplement for Working Families paying $1100 per year. The further increase in 2004 results from the more-than doubling of the federal National Child Benefit Supplement in the first half of the 2000s.[7] In short, there is significant variation in the amount of benefits for which different families are eligible.

[4] For 2014, the clawback threshold is $43,953, with a reduction rate of 2 percent for income over that threshold for one-child families, and 4 percent for two or more child families.

[5] The National Child Benefit Supplement replaced the Working Income Supplement, which was in place from 1993 to 1997. See details in the Appendix.

[6] We use the Canadian Tax and Credit Simulator (CTaCS). This is described in Milligan (2010). This is the simulation that will create the instrument used in this study.

[7] The National Child Benefit Supplement annual rate for two-child families went from $1,370 in 1999 to $3964 in 2014.

Refundable Benefits*

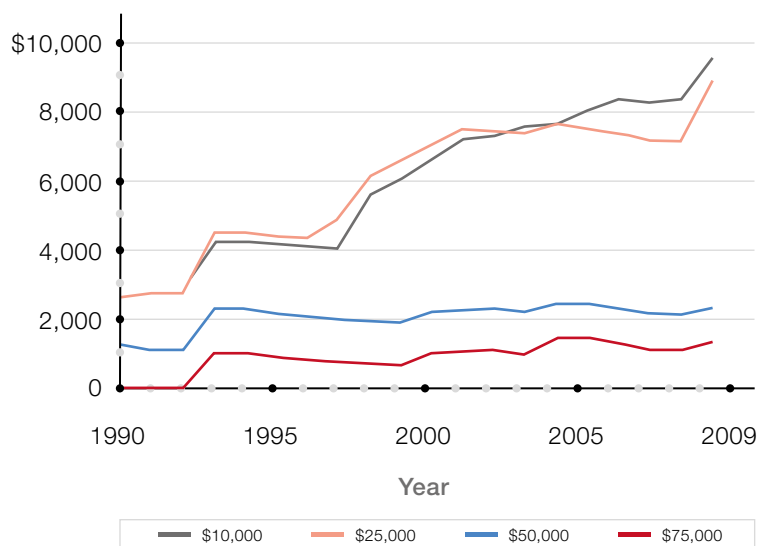*All values in 2009 Canadian dollars. Sources: Simulated using CTaCS tax calculator.

Figure 1: Total benefits for an Ontario family with two children. Simulated benefits through time.

Refundable Benefits*

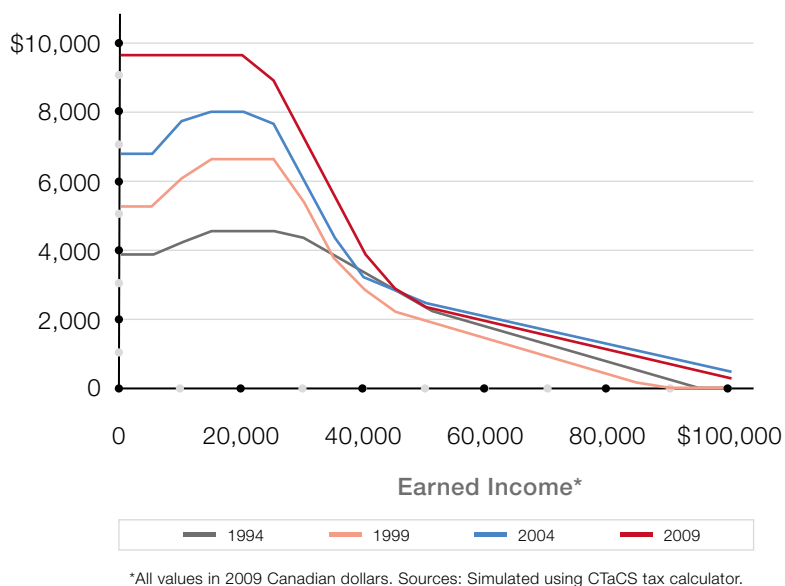*All values in 2009 Canadian dollars. Sources: Simulated using CTaCS tax calculator.

Figure 2: Total benefits for an Ontario family with two children. Simulated benefits by income levels.

Identifying How Families Spend Benefit Income

Our research explores how families spend additional income received from tax benefits. Ideally, to answer this question, we would take a sample of families and randomly assign them different levels of benefit income; we would then see how spending differed for families who received more or less benefit income, where the only determinant of their benefit income was the group to which they were assigned. This is the experimental ideal: think of it like a randomized control trial (RCT) to test the effects of a new medical treatment. Of course, the data we have does not allow us to complete a RCT of benefit income. We know the amount of benefit income a family received, and their spending, but the amount of benefit income a family receives is not randomly assigned – it is highly related to their income. Because families with less earned income receive more benefit income, using a simple analysis that relates spending to benefit income will not produce accurate results; such an analysis would simply show that families who receive more benefit income have lower spending, which is not the relationship that interests us.

Resources or Process: How do Families Spend Benefit Income?

To get around this *selection problem*, we use the fact that there is considerable policy variation over time, province and family size in the amount of benefits families receive. Importantly, this type of variation in benefit income is not related to any one family's income; it is determined by government policy. Our methodology, which is described fully in Jones, Milligan and Stabile (2015), essentially approximates the experimental ideal by relating a family's spending to the part of the variation in their benefit income that comes from government policy, ignoring the part that comes from the family's earned income. The numbers we report below show how a family spends an additional dollar of benefit income that they have received because the government made their benefit more generous, not because their earned income was reduced. This solves the selection problem because it relates spending to changes in benefit income — government mandated changes — that should only affect spending by providing families more benefit income.

Our results reveal some interesting patterns and we present the most important ones in *Table 1.* There is evidence that, among low-income families, the benefits are used across a wide variety of expenditure categories, which provides evidence consistent with both the "resource channel" and the "family process channel" hypotheses. For example, we see increases in expenditures on food bought in stores, child care and transportation – general expenditures required by low-income families. For the sample of all families we see large declines in alcohol and tobacco use. While it is not possible to say for certain how these changes in spending patterns drive improvements in child outcomes, it is likely that benefit income may be helpful in reducing financial stress (and hence reducing consumption of items like alcohol and tobacco) thereby providing an improved learning environment for children. This is consistent with the family process channel hypothesis.

We also, however, observe direct investments in education and, to a lesser extent, health. We find increases in overall spending on education by low-income families as well as increases in spending on tuition and computer equipment in particular. Overall, there is a clear pattern that some of the resources provided by benefit programs are being used to directly improve learning. This is consistent with the resource channel hypothesis.

Overall, families appear to be quite sophisticated in the way they spend their benefit income. They are purchasing more basic necessities, and as their resources increase, they are directing increasingly more of the money towards those items that directly affect learning, such as educational tools. Interestingly, they significantly cut back spending on alcohol and tobacco (in contrast to some anecdotal descriptions of how low-income families spend public money).[8] These results provide some context to the observed success of these benefits on child outcomes.

The policy implications of the current work are important. Politicians continue to debate whether families can be trusted to spend unconditional transfers "responsibly", or whether policy-makers are better off providing targeted transfer income that directs spending to certain areas. Our results imply that unconditional transfers are very well-spent: families appear to be using the income to enhance education and health production for children, and to improve the general living conditions of the family.

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[8] One political strategist in Canada was famously lambasted for suggesting that expanding cash transfers to families would cause them to "blow" the income "on beer and popcorn" (CBC News 2005).

Spending	All families		Low-income families (Bottom quartile of income)	
	Variable average	Change in amount spent	Variable average	Change in amount spent
Total spending	$48,269	-0.290	$26,627	0.376
	(25,363)	(0.411)	(13,501)	(0.253)
Nondurable spending	$23,550	-0.077	$13.879	0.446***
	(11731)	(0.195)	(6554)	(0.086)
Education Categories				
Tuition spending	$208	0.009	$141	0.060**
	(398)	(0.049)	(291)	(0.023)
Education supplies	$667	-0.003	$388	-0.001
	(2,160)	(0.007)	(1,619)	(0.005)
Computer and equipment	$415	0.003	$190	0.064***
	(843)	(0.018)	(534)	(0.018)
Reading material	$254	-0.005	$110	0.008
	(310)	(0.009)	(161)	(0.007)
Health Categories				
Dental	$313	-0.057	$145	-0.019*
	(757)	(0.022)	(403)	(0.009)
Eye care	$180	0.028*	$89	0.001
	(349)	(0.011)	(205)	(0.007)
Prescription drugs	$199	-0.018	$172	-0.004
	(479)	(0.013)	(432)	(0.011)
Stability Categories				
Rent	$6,096	0.171*	$5,369	0.147
	(3,524)	(0.085)	(2,853)	(0.103)
Child care	$917	-0.027	$414	0.067*
	(2,091)	(0.033)	(1,053)	(0.027)
Food (not at restaurants)	$6,207	0.081*	$4,469	0.230***
	(2,900)	(0.039)	(2,239)	(0.035)
Clothing	$2,967	0.008	$1,556	0.043
	(2,492)	(0.050)	(1,319)	(0.042)
Personal care items	$1,085	-0.011	$666	-0.035**
	(859)	(0.016)	(560)	(0.011)
Transportation	$2,797	0.022	$1,442	0.065***
	(2,310)	(0.036)	(1,496)	(0.025)
Recreation	$3,522	-0.050	$1,680	0.117**
	(3,079)	(0.060)	(1,493)	(0.041)
Risky Categories				
Alcohol	$615	-0.073***	$278	-0.004
	(959)	(0.021)	(573)	(0.009)
Tobacco	$710	-0.060***	$675	-0.002
	(1,286)	(0.018)	(1,070)	(0.031)
Sample Sizes	59,793		15,261	

References

CBC News. 2005. "Federal Liberals deride 'beer and popcorn' money". http://www.cbc.ca/archives/categories/politics/elections/fumbles-and-stumbles-eight-great-election-gaffes/liberals-deride-beer-and-popcorn-money.html Accessed on: April 2, 2015.

Currie, Janet and Mark Stabile. 2009. "Mental Health in Childhood and Human Capital." In The Problems of Disadvantaged Youth: *An Economic Perspective*, ed. Jonathan Gruber, 149-180. Chicago: University of Chicago Press.

Currie, Janet, Mark Stabile, Phongsack Manivong, and Leslie L. Roos. 2010. "Child Health and Young Adult Outcomes." *Journal of Human Resources*, 45(3): 517–548.

Dahl, Gordon B., and Lance Lochner. 2012. "The Impact of Family Income on Child Achievement: Evidence from the Earned Income Tax Credit." *American Economic Review*, 102(5): 1927–1956

Jones, Lauren, Milligan, Kevin, and Mark Stabile, "Child Cash Benefits and Family Expenditures: Evidence from the National Child Benefit," National Bureau of Economic Research Working Paper #21101 2015.

Mayer, Susan E. 1997. *What Money Can't Buy*. Cambridge, Massachusetts and London: Harvard University Press.

Milligan, Kevin. 2010. Canadian Tax and Credit Simulator. Database, software and documentation, version 2010–1.

Milligan, Kevin, and Mark Stabile. 2011. "Do Child Tax Benefits Affect the Well-Being of Children? Evidence from Canadian Child Benefit Expansions." *American Economic Journal: Economic Policy*, 3(3): 175-205.

Milligan, Kevin and Stabile, Mark, "The Integration of Child Tax Credits and Welfare: Evidence from the Canadian National Child Benefit Program," 2007, *Journal of Public Economics*, 91(1-2), pp. 305–326.

Yeung, W. Jean, Miriam R. Linver, and Jeanne Brooks-Gunn. 2002. "How Money Matters for Young Children's Development: Parental Investment and Family Processes," *Child Development*, 73(6): 1861–1879.

About the Authors

As a fellow at the Martin Prosperity Institute, Mark Stabile's work focuses on the state of, and factors related to, social mobility and child poverty. As the gap between rich and poor grows, and middle class incomes stay steady, issues of social mobility and "the American Dream" have never been more important.

Lauren Jones studies family and child wellbeing, particularly in the areas of health, education, and consumer decision-making. She is interested in how public policies impact outcomes among vulnerable populations and the middle class.

Kevin Milligan is an Associate Professor of Economics at the University of British Columbia.

The Case for a Carbon Tax in Canada

Nicholas Rivers
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Assistant Professor, Graduate School of Public & International Affairs,
University of Ottawa

Setting Course for a Low-Carbon Economy

Foreword

A central myth of traditional economic doctrine goes something like: "Leave the market alone, let it find equilibrium". On this view, market intervention is like 'friction', reducing efficiency and productivity. That view is a teetering edifice, based on out of date math, with little of use to say about how one might solve our climate problem.

A modern view of the economy sees it as a complex, creative and dynamic system of increasing complexity, that evolves in creative and unpredictable ways. Innovation sweeps away old ways of doing things and creates new possibilities. There's nothing like equilibrium here (except, perhaps, in the price of sugar on a Monday afternoon). On such a view, pricing carbon is akin to a force that pulls the market toward a low-carbon state without the blunt overburden of a heavy regulatory hand.

Only a price on carbon can simultaneously harness the market and unlock its unmatched creative potential. Think of water flowing in a stream. It's impossible to predict flow patterns in detail – that's the creative part. But that water will always flow downhill. We set course for a low-carbon economy by designing rules, akin to gravity, that add a force in that direction: we put a fee on carbon emissions.

Nic Rivers has long demonstrated leadership on the climate scene in Canada, showing an understanding both of the economic necessities involved along with the political realities. In this paper, Mr. Rivers provides a comprehensive analysis of the carbon pricing issue, landing squarely on the most effective path forward: putting a price on carbon.

Taking the reader through the context in which a price on carbon operates, Mr. Rivers hones in on the core properties: it's cost-effective, productive, drives innovation, is simple and largely devoid of the inefficient complexities of direct regulation. In my view, this analysis captures well the upside characteristics of pricing carbon and its role in moving the global economy most efficiently to a low-carbon state. And most importantly, he makes the point that it's politically neutral, neither right nor left – but simply the most effective tool to solve a pragmatic problem.

by Tom Rand

Senior Advisor, MaRS Discovery District Author, "Waking the Frog: Solutions for Our Climate Change Paralysis"

Introduction

Climate change is widely recognized as the preeminent environmental threat facing the world's current and future generations. A recent report by the International Energy Agency suggests that with current climate policies, global mean temperature is likely to increase by between 3.6 and 5.3 ºC, with most of that increase occurring this century. This is far outside the temperature range experienced in the history of humanity.[1]

A temperature increase of this magnitude would cause significant hardship, in the form of rising sea levels, reduced freshwater and food availability, increased disease spread, reduced biodiversity, increased conflict, reduced productivity, and other factors.[2] The highly-cited *The Economics of Climate Change: The Stern Review* by Nicholas Stern estimates that the costs of unchecked climate change could be as much as 20 percent of gross world product.[3]

Globally, annual emissions of carbon dioxide, the primary greenhouse gas, reached 32 billion tonnes (gigatonnes, or Gt) in 2012, their highest level ever. In fact, during the last decade worldwide annual emissions growth was higher than at any time in the past, as Figure 1 illustrates. As a consequence, in May of 2013, the atmospheric concentration of carbon dioxide eclipsed 400 parts per million – its highest level in at least several hundred thousand years.

It has been estimated that to avoid "dangerous anthropogenic interference with the climate system" – generally defined as a global mean surface temperature increase of more than 2 ºC relative to pre-industrial levels – the atmospheric carbon dioxide concentration should be stabilized at no higher than 450 parts per million. Calculations by climate modellers suggest that meeting this target will be extremely challenging. In order to have a relatively high probability of not exceeding the 2 ºC "dangerous" threshold, the Intergovernmental Panel on Climate Change estimates that total cumulative emissions from CO_2 should not exceed 2900 Gt.[4] Through 2011, humans have emitted about 1890 Gt CO_2, leaving about 1000 Gt CO_2 as a remaining worldwide carbon budget. Comparing this to Figure 1 helps to illustrate the scope of the climate mitigation challenge. At today's emission levels, the carbon budget will be exhausted in approximately 30 years. To maintain within the 450 ppm limit, emissions would need to fall to zero (or even to negative values) after that point. Even achieving less ambitious climate targets, such as seeking to limit temperature change to 3 ºC with just 50 percent probability, requires significant reductions in carbon emissions both in the near and long term.[5] Given that annual emissions are currently growing, the scale of the challenge is evident.

So far, the world has not effectively responded to this challenge. Because of the global nature of climate change, most countries have been reluctant to undertake significant effort to reduce emissions without a guarantee that others will do the same, perceiving that the majority of benefits from such an effort will accrue to other countries. The sentiment is expressed recently by Canada's Environment Minister at a climate change conference in New York, where she stated: "we want a fair agreement that includes all emitters and all economies. It's not up to one country to solve [global climate change]."[6] The resulting stalemate hurts all countries, and is unlikely to change without a new approach.

There is, however, some recent optimism around an (old) approach that turns the historic approach to climate change negotiations on its head: rather than waiting for a worldwide agreement before undertaking significant emission reductions at home, an alternative approach would use domestic climate policies as a springboard for coordinating international action. Under such an approach, some countries would unilaterally implement modest but meaningful climate change mitigation policies. These policy statements would include escalators – promises to increase the ambition of

the policy under the condition that other countries also undertake meaningful policies to reduce emissions.[7] Such an approach would focus on the actions which government is directly able to control – its policies – and de-emphasize commitments focused on the level of emissions, over which government has less direct control.[8] Additionally an approach beginning with unconditional unilateral emission reductions could help to foster increased trust in international climate negotiations, and could encourage other countries to follow suit. If escalation clauses were built into domestic climate policies, the result could be a gradual tightening of global emissions constraints. Such a bottom-up approach may help to ease the deadlock in international climate negotiations.

Worldwide CO2 emissions (Gt CO2)

Annual increase in emissions per decade (Gt/yr):
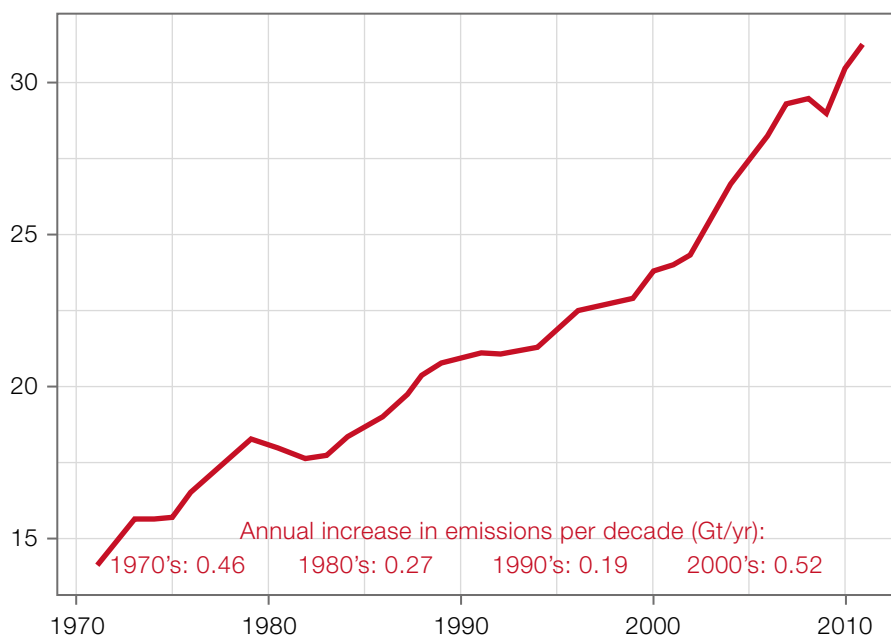1970's: 0.46   1980's: 0.27   1990's: 0.19   2000's: 0.52

Figure 1: Annual global emissions of carbon dioxide. Source: International Energy Agency

Indeed, this bottom-up type of approach already complements the formal negotiations over emission reduction targets and timelines that occur through the United Nations. The European Union, for example, has implemented an emission trading system as well as renewable energy targets, and conditions the stringency of its domestic emission reduction targets on action

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by other countries. The United States, Canada, and other countries have also taken modest steps to reduce emissions. As a result of recently-implemented policies, it appears that the US is on pace for meeting its 2020 emission reduction target. However, Canada is increasingly falling behind other countries in the ambition and scope of its climate policies, and appears almost certain to miss (by a significant margin) its 2020 emission reduction target. Limited action on climate change in Canada helps to provide a foil for other countries seeking to delay or weaken domestic emission reduction efforts.

Canada has repeatedly affirmed its commitment to avoiding dangerous climate change during its participation at conferences to the United Nations Framework Convention on Climate Change. However Canadian domestic action has so far fallen significantly short of international promises, such that Canada has failed to achieve its prior commitments, including at the World Conference on the Changing Climate and the Kyoto Protocol. Its recent commitment, made at the Copenhagen United Nations conference in 2010, is likewise incompatible with current policies and emission trends.[9]

Canada produced around 700 Mt of greenhouse gas emissions in 2012. Although Canadian emissions have fallen slightly since 2005 – due especially to phase-out of coal fired power plants in Ontario – the long-term trajectory of emissions in Canada is upwards. Emissions have increased by about 15 percent since 1990, and a recent government forecast suggests that emissions are likely to increase through at least 2020 under current climate policies.[10]

[1] International Energy Agency. Redrawing the energy-climate map. World Energy Outlook Special Report. International Energy Agency, 2013

[2] CB Field et al. IPCC, 2014: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. 2014

[3] Nicholas Herbert Stern, Great Britain, and HM Treasury. Stern Review: The Economics of Climate Change. Vol. 30. HM treasury London, 2006

[4] O Edenhofer et al. IPCC, 2014: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Text Assessment Report of the Intergovernmental Panel on Climate Change. 2014.

[5] Michael R Raupach et al. "Sharing a quota on cumulative carbon emissions". In: Nature Climate Change 4.10 (2014), pp. 873–879.

[6] http://www.theglobeandmail.com/news/politics/us-china-vow-climate-action-canada-seeks-fair-deal/

[7] David G Victor. Global warming gridlock: creating more effective strategies for protecting the planet. Cambridge University Press, 2011.

[8] One government policy - a cap on all sources of emissions with provision for trading permits - allows government to control emissions, but this policy is rarely implemented in its pure form.

[9] Environment Canada. Canada's emission trends, 2013. Tech. rep. Government of Canada, 2013.

[10] Ibid.

The increase in emissions in Canada and the consequent failure to meet international commitments reflects the absence of strong policies to curb greenhouse gases. At the federal level, climate change policy essentially consists of four regulations, governing the greenhouse gas intensity of the new light duty and heavy duty vehicle fleets, the greenhouse gas intensity of new coal-fired power plants, and the renewable fuel content in gasoline and diesel. In each case, these regulations are more costly than necessary, and the total amount of greenhouse gases that will be reduced by the policies is small, especially in the near- to mid-term. Most importantly, the limited set of policies covers only a small amount of emissions in the economy, allowing emissions in the remainder of the economy to increase unabated (see Figure 2).
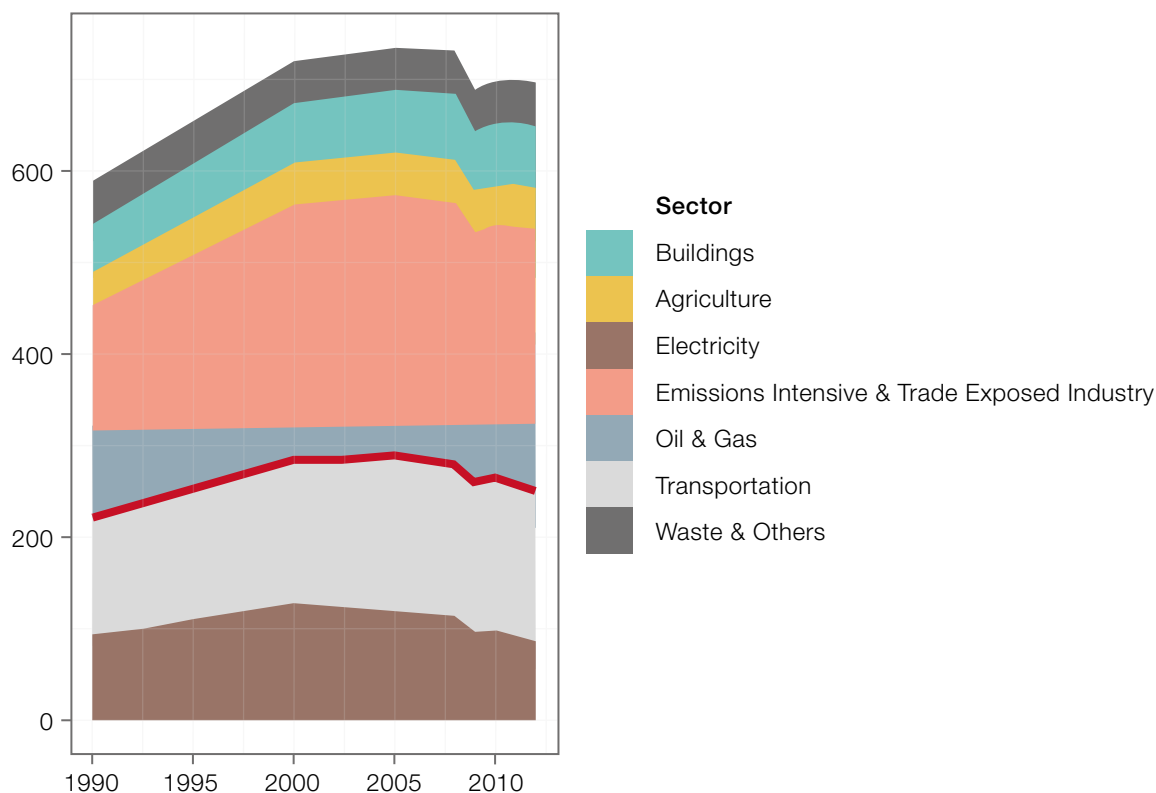
Greenhouse gas emissions (Mt CO2eq)

Figure 2: Greenhouse gas emissions by sector in Canada. Source: Canada's emissions trends, 2013, Environment Canada. Sectors currently regulated at the federal level are below the dark line. Only a portion of total emissions in regulated sectors are subject to federal emission regulations.

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This paper suggests an alternative approach to domestic greenhouse gas policy is required. I begin by outlining a set of key objectives that should confront any effort to develop a domestic greenhouse gas policy. I then contrast these objectives with current Canadian climate change policies, and show how a new approach is required. Finally, I articulate a policy that can meet federal climate change objectives. The policy I favour – an emission pricing policy such as a carbon tax – is not novel; environmental taxes have been economists' recommended policy approach for solving environmental problems for close to a century and carbon pricing has recently been promoted by a wide range of stakeholders as a necessary policy to address climate change. My aim is to articulate the possibility for a carbon tax to efficiently and effectively contribute to significantly reducing

greenhouse gas emissions in Canada. I explain the particular strengths associated with carbon taxes relative to the existing regulatory approach for reducing emissions, and provide evidence to show that implementation of such a policy could reduce emissions at very low cost to the economy. Indeed, relative to the current approach for reducing emissions, a carbon tax would be associated with significant cost savings. Adopting such a policy could achieve Canada's domestic greenhouse gas targets, help to salvage our international reputation as a responsible environmental steward, encourage global mitigation of emissions, and help to reduce costs associated with reducing emissions. Clearly implementing a meaningful carbon tax is a political challenge, but the potential rewards to such an approach are large.

Goals to structure an approach to climate change

Reducing greenhouse gas emissions has proven to be one of the thorniest public policy problems the world has faced; William Nordhaus refers to it as "the granddaddy of public goods problems."[11] Difficulties arise in particular because of the long-term and global nature of the problem, as well as the lack of a simple and low-cost technological fix. For public policy makers, this means designing a policy that minimizes costs imposed on current generations since benefits accrue mostly to future generations, that recognizes the global context for reducing greenhouse gas emissions, and that recognizes that an approach focused on particular technologies will be insufficient. In Canada, policy makers face the additional challenge associated with navigating issues associated with division of powers and distribution of costs and benefits across the federation. Given these constraints, an effective policy should aim to satisfy a number of goals.

Encourage mitigation by the rest of the world

Canada produces just 2 percent of the world's emissions.[12] As a result, even substantial reduction of emissions in Canada will have a trivial impact on the atmospheric concentration of carbon dioxide

and other greenhouse gases, which are the result of cumulative emissions over time by all countries. Meaningful mitigation of climate change can be achieved only through the combined efforts of all major emitters.

Yet cooperative global action on climate change has so far proven extremely elusive. Since the costs of reducing greenhouse gases are borne by the individual country taking action, while the benefits accrue to all countries, climate change mitigation has all the features of the famous 'prisoner's dilemma': it is in each country's interest to free-ride off the efforts of others, such that none take serious action. Countries, in other words, avoid cooperating. And just as the two prisoners end up with more jail time than they would each prefer as a result of their failure to cooperate, in the absence of cooperation all countries end up with more climate change than they would each prefer.

In the case of climate change, it is hard to see a way around this fundamental difficulty of the problem. International environmental agreements (IEAs), which have productively been employed to address other transboundary environmental problems, have so far not encouraged significant effort.[13] The lack of success from IEAs like the Kyoto Protocol and the Copenhagen Agreement results from the lack of central authority to compel states to reduce emissions. Without a central authority forcing each state to limit its emissions (as occurs in the case of domestic environmental policy), each state can defect from the treaty or participate but agree to only trivial cuts in emissions. A recent review summarizes IEAs as follows: "Overall, the thrust of the IEA literature is that cooperation, even in simplified settings where countries are viewed as individual, rational actors, is difficult and achievable only under specific conditions."[14] Economic theory and real world practice suggest that this pessimistic result holds especially in the case of climate change, where the costs of reducing emissions are non-trivial.[15]

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[11] William D Nordhaus. "Reflections on the economics of climate change". In: The Journal of Economic Perspec- tives (1993), pp. 11–25, p.18.

[12] http://www.epa.gov/climatechange/ghgemissions/global.html

[13] There is reason to believe that future climate treaties will be equally ineffective. See Scott Barrett. Environment and Statecraft: The Strategy of Environmental Treaty-Making. Oxford University Press, 2003.

[14] Gary Libecap. "Addressing global externalities: Transaction cost considerations". In: Journal of Economic Literature 52.2 (2014), pp. 424–479.

[15] Barrett, Environment and Statecraft: The Strategy of Environmental Treaty-Making.

Yet some hope can perhaps be derived from other similar public goods problems, albeit on a much smaller scale. Elinor Ostrom received the 2009 Nobel Prize in Economics for her work in examining the emergence of self-government institutions in similar prisoner's dilemma-type environments.[16] For example, she carefully documents a number of small-scale community fisheries that – lacking outside government or defined property rights – were over-exploiting their fishery and experiencing significant hardship as a result. She shows how in some cases these communities were able to develop institutions to effectively govern the fishery – even in the absence of a centralized institution. Drawing from a large body of evidence, she writes: "The prediction that resource users are led inevitably to destroy [the environment] is based on a model that assumes all individuals are selfish, norm-free, and maximizers of short-run results. . . However, predictions based on this model are not supported in field research or laboratory experiments . . . "[17] In particular, there is evidence that reciprocal cooperation can be established if the proportion of participants that act in a narrow, self-interested manner is not too high.[18]

There are a number of challenges associated with scaling up from the examples of community-scale resource management that are central in Ostrom's work, but it seems reasonable to suggest that if countries do act as narrowly self-interested norm-free maximizers of short-run results, little cooperation will emerge on climate change mitigation. Conversely, if a country takes a concrete step to reduce emissions, at least some other countries will likely be a little more willing to reduce emissions. Unilateral action by a country may help contribute to increased trust and action by other countries, and as a result create additional benefit for the original country. In the same vein, inaction on the part of a country is likely to undermine trust and limit the willingness of other countries to pursue mitigation efforts. Global action on climate change is likely to begin with domestic action, not the other way around.

It needs to be said that there is little evidence on the global level that supports this assertion – it could be that other countries will continue to pursue narrow self-interested strategies even if one or several countries take a lead in reducing

emissions. There are two rebuttals. First, if pursued efficiently the cost of modest but meaningful unilateral action on climate change is low, as I will document later in the paper. Canada can afford to, and has a moral obligation to, take a step to reduce emissions. Second, if all countries do continue to behave in a narrow, self-interested manner, we can be virtually sure that the climate change problem will remain intractable. Solving the climate change problem requires some countries to act first. As a high-emitting wealthy country, Canada has the moral obligation and the capacity to be one of those countries.

Importantly, since one of the major goals of domestic action should be encouraging other countries to increase the level of their effort, one of the key features of domestic policies should

be the ability to clearly communicate to other countries the concrete steps that a country is taking to reduce emissions. Complicated policies, which contain a large number of provisions and technology-specific mandates, are not straightforward for other countries to understand, and will likely do little to foster reciprocity by other countries. In contrast, simple policies that clearly communicate the level of emission abatement effort are more likely to communicate policy ambition to other countries, and potentially encourage reciprocity.

[16] Elinor Ostrom. Governing the commons: The evolution of institutions for collective action. Cambridge University Press, 1990.

[17] Elinor Ostrom et al. "Revisiting the commons: local lessons, global challenges". In: Science 284.5412 (1999), pp. 278–282.

[18] Robert M. Axelrod. The evolution of cooperation. Basic books, 1984.

Contribute a fair share to global emission reductions and set goals commensurately with domestic policies

In addition to encouraging other countries to reduce their emissions, Canada's greenhouse gas reduction effort should be commensurate with its global ambitions for climate change mitigation. Canada has repeatedly affirmed its commitment to avoiding "dangerous" climate change, which – as described previously – requires dramatically reducing global emissions today through mid-century. Determining how to allocate the global emission reduction effort across emitting countries is not scientific, but is instead the domain of ethics and economics. A large literature describes alternative philosophical principles for sharing a joint burden, and has informed different proposals for sharing the worldwide greenhouse gas abatement challenge between countries.[19] Potentially important factors for determining an appropriate division of effort between countries include the relative contribution to historic emissions, the relative population, the relative capacity to reduce emissions, and the relative cost of reducing emissions. As a high-emitting wealthy country, Canadian action on climate change should be greater than the worldwide average, suggesting a moral imperative for aggressive Canadian climate action.[20]

Of course, Canada should not and will not naively implement the aggressive policies consistent with achieving a 2 ºC target, since this would ignore the global nature of the climate change problem, where benefits of policy implementation accrue mostly to other countries. Instead, Canada should implement a modest but meaningful emission reduction policy that shows its willingness to productively engage on reducing emissions. It should accompany this policy with a promise to significantly increase the stringency of domestic emission reductions given other countries also undertake similar efforts to reduce emissions. Such an approach helps to both minimize the cost of action as well as promote global engagement on reducing emissions.

Importantly, Canadian domestic policy on greenhouse gas reductions should be commensurate with its international stance on emission reductions. It undermines the international consensus for a country to call for stringent action abroad while implementing weak policies at home. Likewise, it reduces the goodwill and trust of other countries when

internationally-promised emission reduction targets are repeatedly jettisoned. Coordination of domestic and international positions would improve Canada's moral standing on climate change. A sensible manner for this coordination to take place is for implementation (or planning) of emission reduction policies to precede the establishment of emission reduction targets. Governments have direct control over policy implementation, but generally have substantially less control over total emissions in a country. International commitments should be made over the elements over which governments have control.

Reduce emissions cost effectively

Reducing greenhouse gas emissions need not be expensive. The recent report from the Intergovernmental Panel on Climate Change, which summarizes evidence on mitigation of greenhouse gas emissions, suggests that the deep greenhouse gas reductions required throughout the 21st century to limit warming to 2 ºC would cost around 2 percent of global world product over the course of the century.[21]

Although deep greenhouse gas mitigation is required for stabilizing climate change, the modest reductions in emissions that would comprise a first meaningful step can be extremely low cost. For example, Canadian studies suggest that reducing emissions by 20 percent is likely to cost less than one percent of GDP. If these emission reductions were achieved over the course of a decade, they might cause a reduction in the growth rate of GDP by less than one tenth of a percent per year. Additionally, there are likely to be co-benefits to reducing greenhouse gas emissions, such as improved air quality, which have the potential to render action on climate change cheaper and potentially cost-free, even when undertaken unilaterally.[22]

[19] Adam Rose and Snorre Kverndokk. "Equity in environmental policy with an application to global warming". In: Handbook of environmental and resource economics (2002), p. 352.

[20] Raupach et al., "Sharing a quota on cumulative carbon emissions".

[21] Edenhofer et al., IPCC, 2014: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

[22] The Global Commission on the Economy and Climate. Better growth, better climate: The new climate economy report. Tech. rep. World Resources Institute, 2014.

There is also scope for substantially reducing the cost of climate policy through effective policy instrument choice and design. If reductions in carbon emissions are pursued through a revenue-neutral tax swap, as I will describe later, then the net cost of climate policy can be significantly reduced. Some studies suggest that with a tax-shifting approach, the net costs of modest climate policy might even be negative.[23]

Prior experience with carbon policies in other jurisdictions suggests similarly that reducing greenhouse gas emissions can be done without significant economic cost. For example, a recent analysis of British Columbia's carbon tax suggests that no discernible impact on aggregate economic output can be attributed to the carbon tax.[24] Macroeconometric modelling of the European carbon taxes suggests similarly that the effects on aggregate economic output of modest carbon taxes are small.[25]

However, while reducing emissions need not be expensive, it can be expensive, if policies are not designed efficiently. And just as we know what makes reducing greenhouse gas emissions relatively cheap, we have a good idea of what makes reducing emissions relatively expensive. Expensive policies are likely to be those that:

1. provide different incentives for reducing emissions to different sectors of the economy, or even for emission reductions within a sector;
2. overlap with existing policies in a way that aggravates costs; and
3. pick technological winners.

These elements are precisely what characterize the current Canadian approach to reducing greenhouse gas emissions. The current "sector by sector regulatory approach" uses different targets for different sectors, and leaves a substantial portion of the economy with no incentive at all to reduce emissions, favours incumbents over new entrants, features policies that overlap and sometimes directly contradict one another at federal and provincial levels, picks technological winners, and generally adopts features that likely significantly aggravate costs compared to a more efficient approach. While the excess costs for such an approach are not easily apparent when the stringency of policies is limited, the use of inefficient policies essentially prohibits the pursuit of deep greenhouse gas reductions, for which a cost-effective approach is required.

Avoid inter-governmental conflicts

Canada's constitution is silent on environmental protection. As a result, constitutional authority over environmental protection is divided between federal and provincial governments through other provisions in the constitution. The resulting division of powers renders the environment "an abstruse matter which does not comfortably fit within the existing division of power without considerable overlap and uncertainty", according to former supreme court Justice La Forest.[26]

Partly as a result of the ambiguous status of environmental protection in the constitution, past efforts to reduce greenhouse gases in Canada have resulted in conflict between the two levels of government. For example, prior to the signature of the Kyoto Protocol in 1997, the Canadian federal and provincial governments negotiated extensively regarding the appropriate target for national greenhouse gas reductions. When the federal government committed internationally to a more stringent target than it had agreed to with provincial counterparts, federal-provincial discussions on climate change became strained.[27] More recently, divisions have emerged between emissions-intensive Alberta and Saskatchewan and relatively low-emissions provinces such as Quebec and British Columbia. Indeed, determining how to allocate the emission reduction effort across provinces in the federation may be as important to securing an acceptable climate policy in Canada as the overall target.[28]

Given this reality, any federal-led greenhouse gas mitigation policy in Canada needs to place a high importance on maintaining cohesion within the federation. Policies that place one or some provinces at a perceived disadvantage relative to others are likely to face stiff opposition. Potential for such disadvantage is high as a result of the uneven distribution of greenhouse gas emissions within the country. As shown in Figure 3, per capita emissions in Alberta and Saskatchewan are roughly seven times as high as in Quebec and Ontario. Unless it is modified somehow, a traditional carbon pricing policy risks imposing high costs in Alberta and Saskatchewan relative to these other provinces, and as a result will likely be impossible to implement.[29] A successful federally-led climate change policy will need to effectively address federal-provincial issues to be relatively palatable to all provinces.
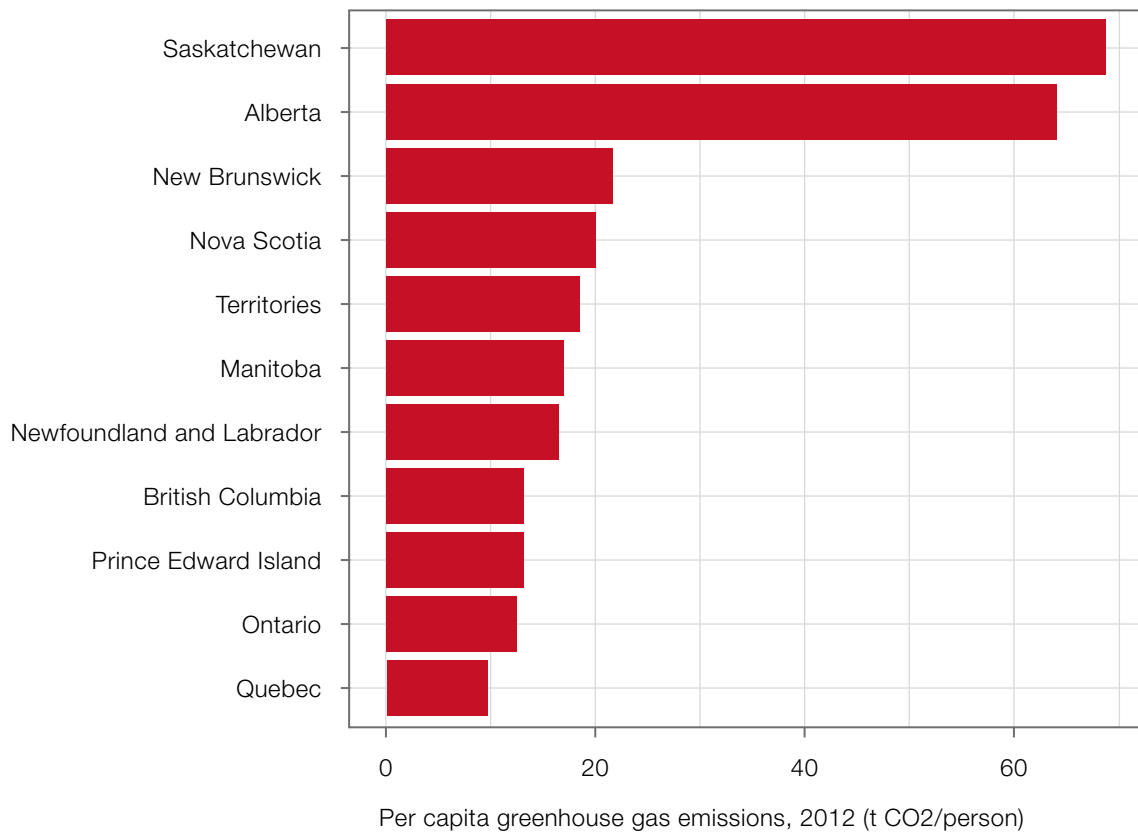
Figure 3: Provincial per capita greenhouse gas emissions, 2012. Greenhouse gas emissions from Environment Canada. Population from Statistics Canada.

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[23] Ross McKitrick. "Double dividend environmental taxation and Canadian carbon emissions control". In: Canadian Public Policy/Analyse de Politiques (1997), pp. 417–434.

[24] Stewart Elgie and Jessica McClay. "Policy Commentary/Commentaire BCs Carbon Tax Shift Is Working Well after Four Years (Attention Ottawa)". In: Canadian Public Policy 39 (2013), S1–S10.

[25] Mikael Skou Andersen and Paul Ekins. Carbon-energy taxation: lessons from Europe. Oxford University Press, 2009.

[26] In Friends of the Oldman River Society v. Canada (Minister of Transport) (Benidickson, 2002).

[27] Jeffrey Simpson, Mark Jaccard, and Nic Rivers. Hot air: Meeting Canada's climate change challenge. Random House LLC, 2011; Douglas Macdonald and Heather A Smith. "Promises made, promises broken: Questioning Canada's commitments to climate change". In: International Journal (1999), pp. 107–124.

[28] Christoph B̈ohringer et al. "Sharing the burden for climate change mitigation in the Canadian federation". In: Canadian Journal of Economics/Revue canadienne d'économique (2015). Forthcoming.

[29] Ibid.

Current approach to climate change is inconsistent with criteria

At the federal level, the government's current approach to climate change is based on a sector-by-sector regulatory approach, under which regulations have been implemented to address emissions from coal-fired electricity generating plants, and heavy- and light-duty vehicles.[30] In each case, the main purpose of the regulation is to reduce the greenhouse gas intensity of new capital stock. In addition to these regulations, government has implemented regulations requiring the blending of renewable fuels in diesel and gasoline, and it maintains a number of modest financial incentive programs aimed at improving energy efficiency.[31]

It hardly needs to be said that Canada's current approach to climate change mitigation is lacking, as the limits of the policy approach have been the subject of significant media attention. Here, I briefly outline the key shortfalls. First, the level of ambition embodied in Canada's policies is inconsistent with stated commitments to reducing greenhouse gases. The key federal climate regulations are estimated (by the federal government) to reduce emissions by around 27 Mt by 2020.[32] This compares poorly to the 250 Mt gap between a no-measures counterfactual and Canada's current 2020 emission reduction target.[33, 34]

Second, the cost effectiveness of existing policies is poor. A cost effective policy should seek out the cheapest sources for reducing emissions throughout the economy. By contrast, the existing federal policy focuses on just a small subset of the economy, leaving a large majority without regulation, even though costs of achieving reductions in this uncovered portion of the economy may be low. Even within regulated sectors, the regulations seek emission reductions from some measures, but not others. For example, purchasing a more fuel-efficient vehicle helps to meet the Light Duty vehicle regulation, but driving an existing vehicle less intensively does not, even though both actions contribute to emission reductions. Likewise, regulations govern the operation of coal-fired power plants, while natural gas-fired power plants are free to emit greenhouse gases. The regulations additionally focus only on emissions from new capital stock, leaving the existing capital stock free to produce greenhouse gases.

All of these features worsen the cost effectiveness of the sector-by-sector regulatory approach. Cost effectiveness is also hampered by policy overlap. In a number of cases, there are overlapping regulations at federal and provincial levels, which can aggravate costs. As an example, both provinces and the federal government require blending of biofuels in gasoline and diesel (with differing amounts between federal and provincial governments), and neither level of government recognizes the other's policy for compliance purposes.

A number of other more subtle disadvantages are also associated with the sector-by-sector regulatory approach. One important one is that they are complicated, with their design requiring specialized knowledge of the trends and technologies available in the regulated sector. Their complexity leaves government bureaucrats at an informational disadvantage relative to industry insiders, who can play a large role in shaping the regulations. This likely helps explain the structure of the regulations, which leave incumbent firms relatively unregulated and focus effort on reducing emissions from future capital stock (e.g., in the case of coal-fired power plants). Their complexity also means that they are opaque to the average Canadian, which

hampers a meaningful engagement on climate change policy. Finally, their complexity means that it is difficult for other countries to easily measure the strength of Canada's domestic greenhouse gas mitigation agenda.

These features of the policies are directly related to policy design. Sector-specific regulations by their nature only cover emissions from a subset of the economy (a sector). Designing sector regulations to cover a substantial portion of the economy takes significant time; recent regulations have taken multiple years to develop and implement and regulations governing oil and gas emissions were first proposed eight years ago. Different regulations in different sectors implies different stringencies in different sectors which increases costs of compliance.

Just as the federal approach to climate change is wanting domestically, so it is internationally. Canada is widely viewed as an impediment to the securing of a more robust international agreement on mitigating emissions. The international environmental community has been especially critical of Canada's international positions, awarding it with five "fossil of the year" awards to single it out as the largest impediment to environmental action. Particular critique

was focused on Canada's abrupt withdrawal from the Kyoto Protocol, immediately following the conclusion of a large meeting in Durban where diplomats were working on shaping an international agreement for reducing emissions in the years following 2012. Canada's confrontational approach on climate change is also evident in an open letter written by the Prime Minister to his Australian counterpart in 2014, congratulating him on eliminating his country's carbon tax. In general, the flippant nature with which Canada regards its international commitments to reduce greenhouse gases – it appears to most observers that Canada's Copenhagen commitment to reduce emissions by 17 percent from 2005 levels by 2020 will not be met – undermines the international process aimed at securing collaborative emission reductions between countries.

Overall, the existing approach to tackling climate change is significantly disconnected from the goals I suggest should guide climate policy. The limited ambition, poor coverage, and lack of transparency associated with the sector-by-sector regulatory approach causes Canada to be perceived as a laggard on climate change, and helps to provide license for other countries to follow suit. The approach also significantly exacerbates domestic costs of achieving emissions reductions. On the international front, Canada has made commitments with no plan to meet them, snubbed the established international process, and encouraged other countries to reduce the ambition of their own climate policies. Rather than promoting worldwide effort to reduce emissions, Canada's actions – both at home and abroad – have undermined it.

[30] See http://climatechange.gc.ca/default.asp?lang=En&n=4FE85A4C-1

[31] See http://www.nrcan.gc.ca/ecoaction

[32] Auditor General of Canada. Report of the Commissioner of the Environment and Sustainable Development. Chapter 1. Mitigating climate change. Tech. rep. Office of the Auditor General of Canada, 2014.

[33] Environment Canada, Canada's emission trends, 2013.

[34] Emission reductions associated with the policies are expected to significantly increase by 2030 and beyond, but still remain small relative to total emissions.

A rising carbon tax can achieve objectives efficiently

Adoption of an economy-wide carbon tax, at a modest but meaningful level, is much better aligned with Canada's climate change goals than the existing sector-by-sector approach. Through such an approach, Canada could cost-effectively reduce emissions as well as signal to other countries its commitment to reduce emissions. In this section, I articulate the particular strengths of the carbon tax approach to reducing emissions and international engagement.

While I single out the carbon tax as the optimal policy for reducing emissions, there are a number of close similarities between a carbon tax and other policies that put a uniform price on carbon emitted from different sources in the economy. In particular, cap and trade policies have been implemented in a number of jurisdictions to reduce emissions of greenhouse gases, including California, Europe, and Quebec. Likewise, so-called "benchmark-and-credit" systems have been used to reduce greenhouse gas emissions in Alberta. While each of these systems offer different advantages and disadvantages, these are of second-order importance in comparison to the difference between any of these emission

pricing systems and the current sector-by-sector regulations that form the core of Canada's current emission reduction strategy. Indeed, when actually implemented, the various emission pricing systems can be designed to be very similar to one another. For example, the price level of a carbon tax can be adjusted over time, just as a cap and trade system can be implemented with price collars on the trading price, such that the difference in practice between various emission pricing policies is at least in part semantic. As a result, in this article, I focus on the implementation of a domestic carbon tax, but note that many of the same advantages could result from appropriate design of other emission pricing policies – most notably an economy-wide cap and trade system.[35]

Why carbon taxes

Amongst policy analysts, international organizations, many large companies, and academics, there is a nearly universal acknowledgment that a carbon tax represents the optimal policy instrument for reducing greenhouse gases. For example, a recent International Monetary Fund report suggests that countries should implement energy taxes that reflect environmental externalities,[36] and a recent World Bank initiative aims to encourage countries around the world to adopt carbon pricing to stimulate greenhouse gas reductions.[37] The highly-respected bipartisan US Congressional Budget Office claims that "a tax on emissions would be the most efficient incentive-based option for reducing emissions and could be relatively easy to implement."[38] Major corporations also support a carbon tax; for example, a recent statement by major institutional investors, together managing $24 trillion in assets, calls for "stable and economically meaningful carbon pricing."[39] In a similar vein, a recent survey of top US economists found near unanimity on the optimality of a carbon tax as an instrument for reducing greenhouse gas emissions.[40] This high degree of consensus is also echoed in the academic literature, which affirms the significant economic efficiency benefit of market-based emissions reduction programs such as a carbon tax.[41]

There are a number of reasons for the near-universal support of a carbon tax (or other emission pricing policy) amongst economists and other policy analysts, amongst the most important of which are:

Carbon taxes are cost-effective

The primary asset of a carbon tax (which is shared with other market-based instruments, such as cap and trade) is that it minimizes the cost of reducing emissions.[42] Since sources of emissions are heterogeneous, attempts to control emissions using a technology or performance standard cause some sources to be forced to undertake relatively costly abatement activities, and leaves other sources relatively under-regulated or un-regulated altogether. The advantage of a carbon tax is that it provides the same incentive to all firms and households to reduce emissions, resulting in an optimal allocation of emission reductions across the economy. The cost savings that result from this optimal allocation of emission reductions can be significant. Costs for a market-based instrument are estimated to be half of a comparable technology standard that controls emissions of nitrogen oxides from power plants in the US.[43] In a variety of other contexts, Tietenberg finds costs of market-based policies are 40 to 95 percent lower than conventional regulatory instruments.[44]

Carbon taxes raise revenue that can be used for productive purposes

A defining feature of carbon taxes, compared to other policy instruments aimed at reducing pollution, is that they raise revenue. This revenue can be used for a number of purposes, but economists have focused in particular on the potential for carbon tax revenue to be used in a revenue-neutral tax swap.[45] In this arrangement, carbon tax revenue funds a reduction in other taxes in the economy, such as taxes on personal or corporate income, or payroll taxes. Since these other taxes also impose costs on the economy, reducing their rates can offset some or all of the costs of a carbon tax, rendering emission reductions cost-free or nearly so at an economy-wide level. Sometimes the approach is neatly summarized as: "tax bads [i.e., pollution], not goods [i.e., jobs, investment]," or more graphically: "tax what you burn, not what you earn."

Carbon taxes can drive innovation

For deep greenhouse gas mitigation over the long term, it is important to consider how and whether emission reduction policies stimulate innovations in low carbon technology, which offers the potential to dramatically reduce the cost of achieving reductions in emissions. Because carbon taxes raise the cost of emitting

carbon, they can direct both the rate and direction of technological change, as suggested by Hicks nearly a century ago: "a change in the relative prices of the factors of production is itself a spur to invention, and to invention of a particular kind – directed to economizing the use of a factor which has become relatively expensive." More recent studies have confirmed Hicks' induced innovation hypothesis, showing that high energy prices cause innovations in energy efficient technologies.[46] Theoretical work suggests that carbon taxes are likely the most effective policy instrument at government's disposal for spurring technological change.[47]

Carbon taxes are transparent and simple to design

Legislation to support a carbon tax could be short and simple. In a recent interview, Henry Jacoby, an economist at MIT, says that carbon tax legislation could fit on a single page.[48] Actually, implemented carbon tax legislation runs somewhat longer than a page,[49] but both in theory and in practice a carbon tax is extremely straightforward to design: fuels are taxed in proportion to carbon content. The necessary tax infrastructure is already in place, since fuels are already subject to other taxes. In contrast, other types of policies to reduce emissions are much more complex. Canada's regulations on passenger and heavy duty vehicles are long and

difficult to understand, and the (failed) US cap and trade bill of 2009 famously was well over 1,000 pages long. The simplicity of a carbon tax makes it easy to understand, both for individuals within the country – which facilitates engagement and understanding – and for other countries – which makes it straightforward to explain the stringency of policy being pursued to other countries. British Columbia is widely considered a leader on climate change primarily as a result of implementing a carbon tax, even though other policies it has implemented may contribute as much or more to recent emission reductions.[50]

Carbon taxes minimize information requirements

A carbon tax is a market-based instrument, meaning that it creates incentives for market participants to reduce emissions. When firms and individuals face a cost for reducing emissions, they can make informed choices to reduce emissions that are both in their own best interests and collectively achieve reductions in emissions. Government's role is limited to setting an appropriate price for emissions, and monitoring and enforcing the policy. In contrast, with conventional environmental policy instruments, government's role is much broader, and typically involves choosing particular emissions targets or technology requirements

that are differentiated by sector, as well as selecting particular promising green technologies to promote. As such, conventional policy instruments require significant information on the part of government, which it likely does not possess (what emission reductions are possible in the oil and gas sector at low cost? Are electric vehicles ready for widespread adoption? How much can the efficiency of natural gas power plants be increased?).

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[35] Having said this, I believe that a carbon tax does offer a number of small advantages relative to these other emission pricing policies, including (1) somewhat lower transaction and administrative costs, (2) more transparent design, which better communicates policy stringency to other countries, (3) less price volatility, which encourages a more predictable level of mitigation effort, (4) the fact that carbon taxes raise revenue, which can be used for productive purposes. In contrast, the transparency of a carbon tax likely makes it more difficult to obtain the necessary political support for implementation compared to other more complicated emission pricing strategies.

[36] See: http://www.imf.org/external/pubs/ft/survey/so/2014/POL073114A.htm

[37] World Bank, Statement, "Putting a price on carbon", June 3, 2014. http://www.worldbank.org/en/programs/ pricing-carbon

[38] US Congressional Budget Office. Policy Options for Reducing CO2 Emissions. CBO Study 2930. US Govern- ment, 2008, p.7.

[39] 2014 Global Investor Statement on Climate Change, available at http://investorsonclimatechange.org/wp-content/uploads/2014/09/ GlobalInvestorStatement2014_Final.pdf

[40] The survey asked the economists to agree or disagree with the following statement: A tax on the carbon content of fuels would be a less expensive way to reduce carbon-dioxide emissions than would a collection of policies such as "corporate average fuel economy" requirements for automobiles. Between 90 and 95 percent of the economists surveyed agreed with this statement - an unusual degree of professional consensus especially for a public policy area normally seen as divisive. See http://www.igmchicago.org/igm-economic-experts-panel/poll-results?SurveyID=SV_9Rezb430SESUA4Y. The range reflects different weighting schemes for survey responses according to the confidence of the respondent.

[41] Robert N Stavins. "Experience with market-based environmental policy instruments". In: Handbook of environmental economics 1 (2003), pp. 355–435.

[42] William J Baumol and Wallace E Oates. "The use of standards and prices for protection of the environment". In: The Swedish Journal of Economics (1971), pp. 42–54.

[43] Richard G Newell and Robert N Stavins. "Cost heterogeneity and the potential savings from market-based policies". In: Journal of Regulatory Economics 23.1 (2003), pp. 43–59.

[44] Tom Tietenberg. "Tradable permits in principle and practice". In: (2006).

[45] Lawrence H Goulder, Ian WH Parry, and Dallas Burtraw. "Revenue-Raising versus Other Approaches to Environmental Protection: The Critical Significance of Preexisting Tax Distortions". In: RAND Journal of Economics 28.4 (1997), pp. 708–731.

[46] Richard G Newell, Adam B Jaffe, and Robert N Stavins. "The Induced Innovation Hypothesis and Energy-Saving Technological Change". In: Quarterly Journal of Economics (1999), pp. 941–975.

[47] Scott R Milliman and Raymond Prince. "Firm incentives to promote technological change in pollution control". In: Journal of Environmental Economics and Management 17.3 (1989), pp. 247–265.

[48] http://www.npr.org/blogs/money/2013/06/28/196355493/economists-have-a-one-page-solution-to-climate-change

[49] http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_08040_01

[50] Ekaterina Rhodes, Jonn Axsen, and Mark Jaccard. "Does effective climate policy require well-informed citizen support?" In: Global Environmental Change 29 (2014), pp. 92–104.

Myths associated with a carbon tax

Despite the obvious academic appeal of a carbon tax, there is certainly limited political appetite for implementation of such a policy. In part, this is a result of several myths which are commonly associated with carbon taxes. Here, I briefly identify and attempt to counter some of the more prominent of these.

Carbon taxes are regressive

A frequently articulated concern associated with carbon taxes is that they could be regressive, having a substantial impact on the disposable income of poor households compared to wealthy households. This concern is based on the relative expenditure shares of households across the income distribution, where households at the bottom of the income distribution spend a larger share on carbon-intensive products like gasoline, electricity, and natural gas compared to wealthy households.[51, 52] A number of recent contributions to the literature, however, assert that carbon taxes can be progressive or only mildly regressive when differences in both household expenditure sources and income sources are accounted for.[53] In a recent analysis, my colleagues and I find that the carbon tax in British Columbia is progressive across the income distribution even before taking into account the specific tax measures that accompanied introduction of the carbon tax that favour low-income households.[54] In any case, the revenues from a carbon tax are easily large enough to compensate lower-income households enough to leave them at least as well off as prior to the tax.[55]

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[51] For example, in Canada, households in the lowest income decile spend over 10 percent of income on energy goods, compared to less than 5 percent for those in the highest income decile.

[52] Nicholas Rivers. "The distribution of cost of a carbon tax among Canadian households". In: Canadian Tax Journal 60.4 (2012), pp. 899–915.

[53] Abdelkrim Araar, Yazid Dissou, and Jean-Yves Duclos. "Household incidence of pollution control policies: A robust welfare analysis using general equilibrium effects". In: Journal of Environmental Economics and Management 61.2 (2011), pp. 227–243; Sebastian Rausch, Gilbert E Metcalf, and John M Reilly. "Distributional impacts of carbon pricing: A general equilibrium approach with micro-data for households". In: Energy Economics 33 (2011), S20–S33; Don Fullerton, Garth Heutel, and Gilbert E Metcalf. "Does the indexing of government transfers make carbon pricing progressive?" In: American Journal of Agricultural Economics 94.2 (2012), pp. 347–353.

[54] Marisa Beck et al. "Carbon Tax and Revenue Recycling: Impacts on Households in British Columbia". In: Available at SSRN 2492766 (2014).

[55] Rivers, "The distribution of cost of a carbon tax among Canadian households".

Carbon taxes are ineffective if other countries don't do anything

The global nature of the climate change problem makes securing international action the central challenge to tackle for addressing the problem. However, an even more pernicious aspect of the global nature of climate change is the potential for unrestricted trade in goods to undermine the emission reductions undertaken by a country acting alone. The concern is this: if a country undertakes a policy to reduce emissions, it could increase the cost associated with producing emissions-intensive goods in that country, causing facilities to become uncompetitive compared to those operating in countries without comparable carbon-reduction policies. Unless trade is restricted, there is potential that emissions intensive goods production will simply relocate to the unregulated region, and that the increase in emissions in the foreign facility could offset the reductions in the domestic facility, leading to no net change in emissions. If the foreign factory is less efficient, there is even potential that a unilateral policy in a country could increase global emission levels. Fortunately, extensive empirical investigation provides little support for this narrative. A recent review of more than fifty studies suggests that emissions leakage associated with unilateral regulation is likely between only 10 and 25 percent of the

emission reductions associated with the policy, even if no additional measures are taken to curb leakage.[56]

Carbon taxes kill jobs

Carbon taxes are often seen as a challenge to economic growth, and particular concern has been voiced by policymakers around the potentially negative impact of a carbon tax on employment. Indeed, when carbon taxes have been discussed in recent House of Commons debates, they are almost always referred to as "job-killing." Yet, there is very little evidence that supports the idea that carbon taxes harm employment – in fact the available evidence suggests the opposite. A useful recent analysis is based on the UK's Climate Change Levy (CCL), which is a tax on industrial fuel use that raises prices of energy by an average of about 15 percent.[57] The study finds that the CCL reduced energy intensity in manufacturing plants by about 18 percent, but that there was no measurable effect on employment, total factor productivity, or plant exit. A similar study examines the impact of the European Union's Emission Trading System on German manufacturing firms, and finds the policy reduced emissions intensity by about 20 percent but had no identifiable effect on employment, gross output, or exports.[58] Preliminary evidence from British Columbia

likewise suggests that overall employment in that province increased as a result of the carbon tax.[59]

Carbon taxes are unpopular

In Canada and the US, "tax" is often considered a four-letter word, such that it is politically toxic to consider increases in the rate of any tax. Some consider carbon taxes to be especially divisive, since they are highly salient and are aimed at tackling climate change, which is not a goal universally considered important. Indeed, one of the political lessons drawn from Stephane Dion's failed election campaign in 2008 seems to be that support for a carbon tax renders a candidate unelectable. Of course, anecdotal evidence is a poor basis for important decisions, and at any rate, points both ways: Gordon Campbell was re-elected in British Columbia following his introduction of a carbon tax.[60] Polling results are perhaps more useful. The polling firm Environics has tracked stated support for carbon taxes in annual public opinion surveys since at least 2008, and finds that carbon taxes are supported by the strong majority of Canadians.[61] Support is not limited to individuals either. Carbon taxes have been supported in a number of open letters from industry associations to government. For example, in 2010, the Canadian Council of Chief Executives wrote that "governments at all levels should commit to a national approach to GHG

reductions and carbon pricing." This sentiment is echoed by 13 out of 14 industry associations in Canada surveyed for a report by Sustainable Prosperity.[62] A national carbon tax even receives strong support from major oil and gas companies in Canada, who see it – like others – as the most efficient solution to reducing greenhouse gas emissions.[63] This isn't to say that the politics of carbon taxation is uncontroversial, merely that support for such policies is stronger than commonly assumed.

[56] Jared C. Carbone and Nicholas Rivers. Climate policy and competitiveness: Policy guidance and quantitative evidence. Working paper. Colorado School of Mines, Division of Economics and Business, 2014.

[57] Ralf Martin, Laure B de Preux, and Ulrich J Wagner. "The impact of a carbon tax on manufacturing: Evidence from microdata". In: Journal of Public Economics 117 (2014), pp. 1–14.

[58] Sebastian Petrick and Ulrich J. Wagner. The impact of carbon trading on industry: Evidence from German manufacturing firms. eng. Kiel Working Paper 1912. Kiel, 2014. url: http://hdl.handle.net/10419/94357.

[59] Akio Yamazaki. "On the employment effects of climate policy: The evidence from carbon tax in British Columbia". In: (2014).

[60] Kathryn Harrison. The Political Economy of British Columbia's Carbon Tax. Tech. rep. OECD Publishing, 2013, In a study of the political economy of British Columbia's carbon tax, Kathryn Harrison writes that: "it is unlikely that the carbon tax had much impact on the outcome of the 2009 election".

[61] The Environics Institute. Focus Canada 2012: Climate Change: Do Canadians Still Care? Tech. rep. The Environics Institute, 2012.

[62] http://www.sustainableprosperity.ca/dl329&display

[63] See, for example: http://www.businessweek.com/articles/2013-03-07/canadas-oil-industry-begs-to-be-taxed

Carbon taxes are ineffective at reducing emissions

Discussion of carbon taxes eventually turns to their effects on emissions. One concern that is raised is that carbon taxes will have no effect on emissions. The concern is based on the notion that energy demand is inelastic – that is, demand does not change much in response to a price change. However, while it is true that energy demand is relatively price inelastic (especially in the short term), changes in price, such as due to a carbon tax, do affect consumption. For example, Figure 4 shows the relationship between per capita gasoline consumption and gasoline price in twenty-two large high-income countries. There is a clear negative relationship between prices and gasoline consumption, both within a country and between countries. Evidence from British Columbia's carbon tax likewise suggests a reduction in emissions

attributable to the policy, with a reduction in emissions likely around 10 percent.[64] Similar evidence is available from the UK Climate Change Levy (which reduced emissions intensity in manufacturing plants by about 18 percent)[65] and from European carbon taxes,[66] and the EU emission trading system.[67]

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[64] Elgie and McClay, "Policy Commentary/Commentaire BCs Carbon Tax Shift Is Working Well after Four Years (Attention Ottawa)"; Beck et al., "Carbon Tax and Revenue Recycling: Impacts on Households in British Columbia"; Nicholas Rivers and Brandon Schaufele. "Salience of Carbon Taxes in the Gasoline Market". In: SSRN Scholarly Paper ID 2131468 (2013).

[65] Martin, Preux, and Wagner, "The impact of a carbon tax on manufacturing: Evidence from microdata".

[66] Andersen and Ekins, Carbon-energy taxation: lessons from Europe.

[67] Petrick and Wagner, The impact of carbon trading on industry: Evidence from German manufacturing firms.

The design of a carbon tax

The basic design of an efficient carbon tax could be very simple, consisting of a uniform charge on coal, refined oil products, natural gas, and other fuels in proportion to the amount of carbon embodied in each fuel. The necessary tax infrastructure is already in place, since fuel retailers already collect and remit to government existing taxes on fuel. Such a tax would cover between 70 and 80 percent of total greenhouse gas emissions in the country (the remainder are not related to fuel combustion, and would need to be addressed with other policies or extensions to the carbon tax). The policy would provide all emitters with a uniform incentive to reduce emissions, resulting in a cost effective distribution of mitigation activities.

As with most types of government policy aimed at reducing emissions, the first-order concern for a domestic carbon tax relates to the stringency of the policy: how much will it reduce emissions?
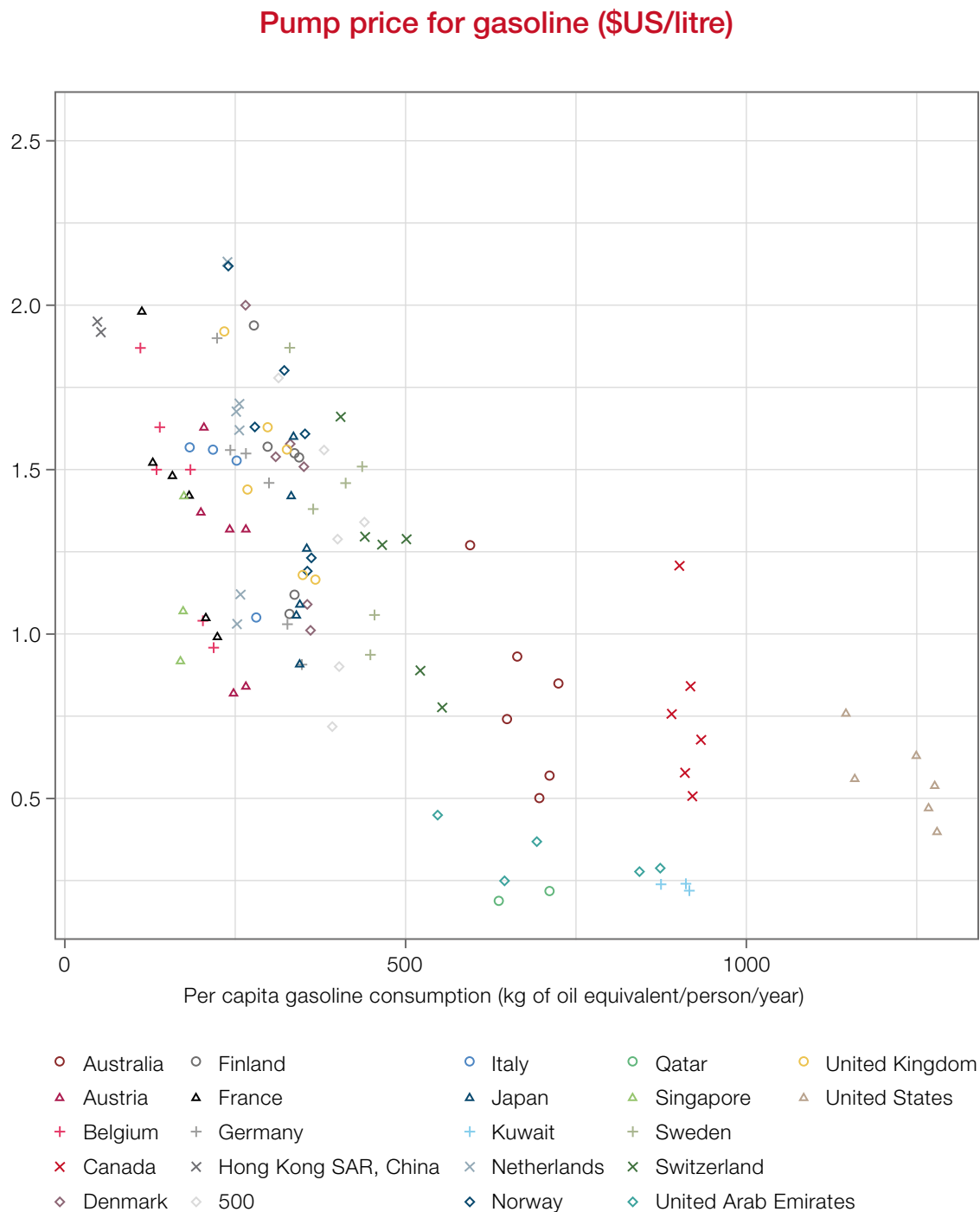
Pump price for gasoline ($US/litre)

Figure 4: Gasoline taxes and per capita gasoline consumption in large, wealthy countries (greater than 1 million inhabitants, and greater than $30,000 US per capita GDP). Data from the World Bank. Using this data in a cross-country regression yields a price elasticity of gasoline consumption of -0.79. Controlling for country fixed effects (i.e., using a within-country regression) yields a price elasticity of gasoline consumption of -0.37. Both estimates are statistically significant at the 1% level.

In the case of a carbon tax, the stringency is measured as the level of the tax, with higher carbon taxes providing larger incentives to households and firms to reduce their emissions, as well as larger incentives for innovation of low-carbon products. It is likely that a carbon tax would have to be quite high to produce deep greenhouse gas reductions. For example, analysis for the National Roundtable on the Environment and Economy suggests that reducing greenhouse gas emissions by 70 percent by 2050 would require a carbon price between \$200 and \$350/t CO_2.[68] (For reference, each litre of gasoline produces about 2.4 kg of CO_2, so a \$200/t CO_2 tax would increase gasoline prices by almost \$0.50/L.) Similarly, the most recent Intergovernmental Panel on Climate Change report suggests a global carbon price increasing to around \$200/t CO_2 by mid-century would be required to have a high likelihood of avoiding dangerous climate change.[69] At the same time, there are concerns that high carbon prices could damage the economy, particularly if they are imposed without adequate time for transition. Likewise, since the benefits from reducing greenhouse gas emissions are global, while the costs are local, it would be both poor strategy and poor politics to implement a highly aggressive carbon tax without some promises about equivalent action from other countries. Choosing the appropriate level of stringency requires balancing the desire for deep greenhouse gas reductions with concern relating to transitory and longer term disruptions to the economy, as well as with the aim of stimulating other countries to implement similar policies.

Given these concerns, one potential choice for the level of carbon tax would be the social cost of carbon (SCC) as calculated by Environment Canada and counterparts at the US Environmental Protection Agency.[70] The SCC is a measure of the present and future damage associated with emissions of greenhouse gases. Although there are significant uncertainties associated with the calculation of the SCC, it reflects our best current understanding of the external costs associated with activities that generate greenhouse gas emissions. By setting a carbon tax at the level of the SCC, Canada could cost effectively internalize the external costs associated with its greenhouse gas emissions.[71]

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[68] National Roundtable on the Environment and the Economy. Getting to 2050: Canada's transition to a low-emission future. Tech. rep. Government of Canada, 2008.

[69] Edenhofer et al., IPCC, 2014: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

[70] http://www.epa.gov/climatechange/EPAactivities/economics/scc.html

[71] Canada already uses the SCC as an input to cost benefit analysis of new environmental regulations. See Anthony Heyes, Dylan Morgan, and Nicholas Rivers. "The Use of a Social Cost of Carbon in Canadian Cost-Benefit Analysis". In: Canadian Public Policy 39 (2013), S67–S79.

The current best estimate for the social cost of carbon is about $40/t CO_2, and this value increases over time in real terms to about double that value by mid-century (at a rate of about $1/t annually).[72] Setting a carbon tax at this level would be efficient, supported by the best available evidence, and consistent with a "polluter pays" approach to environmental regulation. Importantly, it would be possible to signal to other countries our willingness to increase the stringency of domestic carbon tax conditional on reciprocal action by other countries. Adopting a modest carbon tax such as described would contain abatement costs to very manageable levels (see below), while conditionally promising a more ambitious domestic policy would leave open the possibility of more significant emissions reductions, such as would be required to reach the 2 ºC goal to which Canada subscribes.

Canada's key diplomatic failure on climate change has been to make extravagant international promises to reduce emissions, but then fail to implement policies commensurate with the commitments and as such to reach the promised levels of emissions. This divergence between promises and action has generated antipathy towards Canada, and reduced incentive for other countries to implement meaningful greenhouse gas mitigation policies of their own. By adopting a carbon tax set at the level of the social cost of carbon domestically, Canada would be able to estimate future levels of emissions to credibly commit to help forge international collaboration of climate change. Importantly, in this model, the policies adopted at home would be used as inputs for setting international goals, rather than the other way around. Internationally, adopting the carbon tax at the level of the SCC could also be an independent signal of Canada's emission reductions. Increasingly there is pressure for the international climate change process to move away from its traditional focus on "targets and timetables" towards international coordination of emission reduction policies.[73] For Canada, an international approach based on policy coordination rather than coordination of emission reduction obligations could be especially beneficial, since Canadian emissions are likely to increase faster than those in other developed countries absent GHG mitigation policies, especially as a result of faster population growth and structural change in the economy.

A key challenge associated with federal implementation of a carbon tax is its potentially heterogeneous impacts on the provinces. In particular, Alberta and Saskatchewan, with per capita emissions five to seven times as high as other provinces, are likely to resist implementation

of a new federal government carbon tax, since they would pay a significantly larger amount per capita than other provinces.[74] A federal carbon tax could be made more acceptable to all provinces if it was structured to permit equivalent carbon taxes in a province to override the federal tax. This type of equivalency agreement is relatively common in federal environmental policy making (indeed, current federal regulations on coal fired power plants permit equivalency agreements). In this case, the federal government would set a national carbon tax at the level of the SCC, and agree to eliminate the tax in any province that implemented its own carbon tax at a level equal to or greater than the federal level. This approach would maintain the benefits associated with uniformly pricing carbon, and also be more acceptable to provinces than a federal carbon tax without equivalency provisions. Simulation suggest that under such an approach, the cost to provinces would be small and distributed relatively evenly across provinces.[75]

An important consideration associated with the implementation of a carbon tax concerns what to do with the revenues that are raised. A $40/t CO2 carbon tax would raise on the order of $25 billion per year. Since under an equalization scheme as described above, provinces would keep all carbon tax revenues, this decision would

be made at the provincial level. A few options present themselves for provinces to disburse this additional revenue. One widely discussed option involves using carbon tax revenues to reduce pre-existing taxes elsewhere in the economy (for example, on personal or corporate income). Following this approach, the net burden of taxation is not increased at all, taxes are merely switched from one base (income) to another (pollution). Because of the revenue-neutral character of this tax-swap, most studies find minimal total economic costs (or even benefits) associated with a carbon tax swap.[76] Another option is for government to earmark a portion of carbon tax revenue for investment in green technology, such as public transit or renewable energy. While the efficiency of this approach is likely worse than for a tax-swap, some polling results suggest that respondents are more likely to favour a carbon tax if a portion of the revenue is re-invested in green projects.[77]

[72] http://www.epa.gov/climatechange/EPAactivities/economics/scc.html
[73] Victor, Global warming gridlock: creating more effective strategies for protecting the planet.
[74] Bohringer et al., "Sharing the burden for climate change mitigation in the Canadian federation".
[75] Ibid.
[76] Goulder, Lawrence H. Environmental taxation and the double dividend: a reader's guide." International Tax and Public Finance 2.2 (1995): 157-183.
[77] Matt Horne, Kevin Sauve, and Tom Pederson. British Columbians' perspectives on global warming and the carbon tax. Tech. rep. Pembina Institute, 2012.

The effect of a carbon tax

A simulation model-based estimate of the domestic effect of a carbon tax as described above is given in Figure 5. In this analysis, a carbon tax of $40/t CO_2 is adopted in 2015 and gradually increased by $1/t CO_2 every year. The modest tax described here is estimated to reduce emissions by about 20 percent – roughly consistent with Canada's current target for greenhouse gas reductions. The cost of reducing emissions is calculated at about 0.2 percent of income – for an average individual or household earning $50,000 per year, this works out to about $100 per year. (These costs are consistent with other estimates of the cost and effectiveness of carbon price policies.) Aggregate costs could be lower still if the revenue from the carbon tax was used to reduce other distortions in the economy, such as income or payroll taxes. Likewise, if co-benefits, especially from reduced air pollution, were taken into account, the cost of the policy would likely be lower than estimated here.
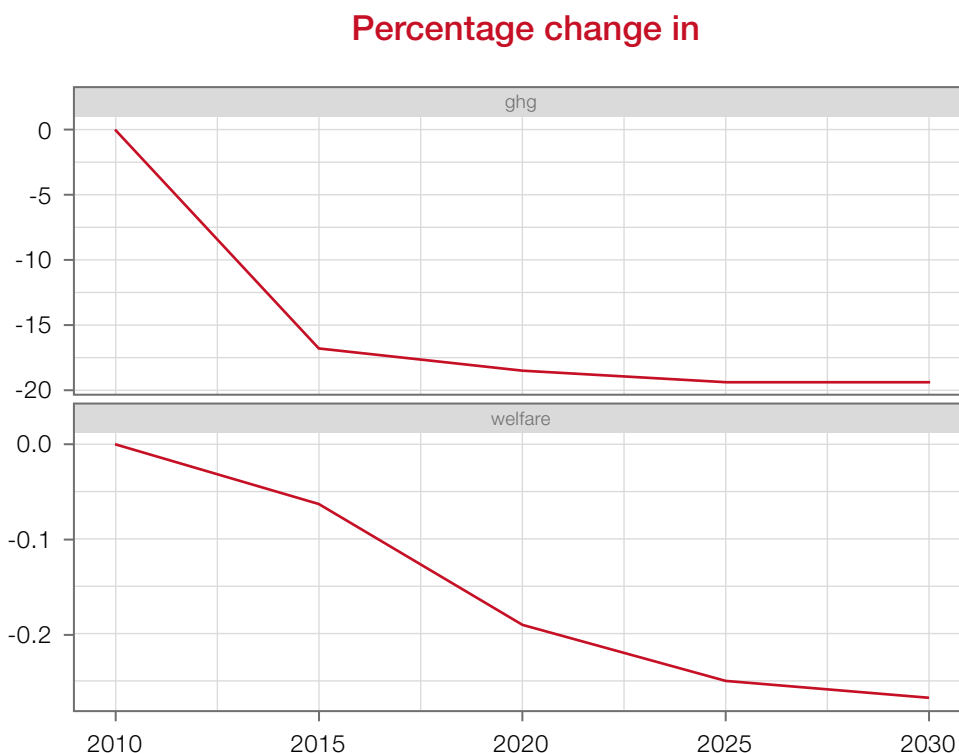
Percentage change in

Figure 5: Simulation of a carbon tax in a recursive-dynamic computable general equilibrium model of Canada. A carbon tax of $40/t CO_2 is imposed in 2015 and increased by $5/t CO_2 every five years through 2030. Revenues from the carbon tax are returned in lump sum to households.

Conclusion

Obviously, there are clear political impediments to implementation of a carbon tax. However, just as obviously, the current sector-by-sector approach to reducing emissions is much less efficient than a carbon tax. For significant reductions in greenhouse gas emissions, the difference in the cost of these approaches could easily be in the billions or even tens of billions of dollars. In addition to domestic benefits, the adoption of a carbon tax could offer global benefits. First, it would help to improve Canada's tarnished international reputation as a responsible environmental citizen. Second, it would advance global greenhouse gas reductions, especially if paired with an escalation clause.

This is the leadership challenge surrounding a carbon tax – convince voters to accept a greenhouse gas reduction policy that implements a price on greenhouse gas emissions, and collectively make Canadians better off by a significant margin.

About the Author

Nicholas Rivers earned his PhD in Resource and Environmental Management at Simon Fraser University in Vancouver, British Columbia. He holds a Master's degree in Environmental Management and a Bachelor's degree in Mechanical Engineering. His research focuses on the economic evaluation of environmental policies, and has been published in economics and energy journals as well as in other popular publications. Additionally, he is co-author of a recent book on climate change policy, Hot Air: Meeting Canada's Climate Change Challenge. Mr. Rivers has worked for all levels of government, industry, and non-governmental organizations as a consultant on issues related to energy efficiency and climate change program evaluation, policy analysis and development, and economic modelling. He has received awards for his research from the Trudeau Foundation, the Social Science and Humanities Research Council, and the National Science and Engineering Research Council.

Skills &Higher Education in Canada

Daniel Munro
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Towards Excellence and Equity

Foreword

Canada's performance in higher education and skills development has been fairly strong for many years. On key measures we are at or near the top of international rankings and our highly skilled people contribute to economic competitiveness, social innovation, and political and community well-being.

But there are troubling indications that Canada's skills and education performance is deteriorating, that not enough is being done to address a range of economic and social problems, and that opportunities and benefits have been poorly distributed across regions and groups. In short, there are signs that we are not doing enough to achieve the high levels of skills excellence and equity we need. Action is needed to sustain and enhance the performance of higher education and skills development in Canada.

In this paper, Dan Munro explores two central needs to Canada's skills problem: excellence, and equity. Excellence means asking the question: Is Canada producing graduates with the right skills to sustain and enhance the country's economic competitiveness and social well-being? And Equity means asking: Are some regions and groups being left behind? On these questions, Munro provides compelling options to consider.

by Tom Pitfield
Co-Founder, Canada 2020

Introduction

Canada's performance in higher education and skills development has been fairly strong for many years. On key measures we are at or near the top of international rankings and our highly skilled people contribute to economic competitiveness, social innovation, and political and community well-being. But there are troubling indications that Canada's skills and education performance is deteriorating, that not enough is being done to address a range of economic and social problems, and that opportunities and benefits have been poorly distributed across regions and groups. In short, there are signs that we are not doing enough to achieve the high levels of skills *excellence* and equity we need. Action is needed to sustain and enhance the performance of higher education and skills development in Canada.

But why should we act? Skills and education are essential to Canada's economic prosperity and social well-being, and to the health and welfare of individuals. Canadians who have acquired advanced skills and education are able to make greater contributions to the economy, society, their communities and their own well-being than those without such skills and credentials. Moreover, the economy is becoming more technology and knowledge-intensive, and addressing persistent and emerging policy challenges—such as innovation and productivity, climate change, health, inequality, and the fairness and effectiveness of our political institutions—require ever-increasing levels of scientific, economic, cultural and political literacy. Succeeding in the new economy and addressing key policy challenges will require greater excellence and equity in skills and higher education.

Admittedly, the challenges and opportunities we face cannot be addressed through a skills and higher education strategy alone. Improving innovation and productivity, addressing inequality and climate change, and achieving social and economic justice for all, require thinking and action on many levels. Still, without a highly skilled and educated population we cannot even begin to address these issues adequately, nor tackle new challenges as they arise.

Recognizing the importance of skills, Canada spends enormous sums on their development. Combined private and public spending on higher education alone was over $40 billion in 2012.[1] At $22,475 (USD), Canada's per student spending on higher education is second in the OECD and well above the average of $13,528 (USD).[2] As a result, over 51 percent of Canadians hold a university or college credential—versus an OECD average of 32 percent—and another 12 percent hold trades certificates.[3] And Canadians perform well in international assessments of skills such as literacy, numeracy, and problem-solving. But we need to do much better.

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[1] M. Grant, *The Economic Impact of Post-Secondary Education in Canada* (Ottawa: The Conference Board, forthcoming 2014).

[2] OECD, *Education at a Glance 2013: Country Note—Canada* (Paris: OECD, 2013). http://www.oecd.org/edu/Canada_EAG2013%20 Country%20Note.pdf

[3] OECD, Education at a Glance 2013: Country Note—Canada.

Excellence

Is Canada is producing graduates with the *right skills* to sustain and enhance the country's economic competitiveness and social well-being? Although we lead the world in higher educational attainment and score well in international skills assessments, performance is weakening and competitors are catching up. Additionally, we have too few people with advanced degrees (particularly PhDs), insufficient graduates from the STEM disciplines, deficits in essential, innovation and commercialization skills, and a poor track record on workplace training—all necessary to support an innovative economy and society.

Equity

Are some regions and groups being left behind? Despite strong performance overall, the *distribution* of skills and education opportunities and achievements is uneven across regions and groups. While provinces like British Columbia, Alberta, and Ontario perform well, other provinces and territories struggle to keep up, and looking through the lenses of Aboriginal status, immigration status and gender we see an uneven distribution of opportunity and achievement. In too many cases, participation and achievement are determined not by choice, but by circumstances over which individuals have little control.

After briefly discussing how skills and higher education contribute to economic, social, and individual well-being, this paper examines two key challenges—excellence and equity—and concludes with six policy options to improve Canada's performance.

A Foundation for Health, Wealth and Well-Being

A highly skilled and educated population is essential to achieving a range of economic and social outcomes, as well as to improving the health and welfare of individuals themselves. These provide the basic motivations to improve Canada's skills and higher education performance.

1. *Skills and education are key determinants of economic productivity and growth.* Differences in average literacy skills explain 55 percent of the variation in economic growth among OECD countries since 1960.[4] With very high skills and higher education attainment rates, it is not surprising to find Canada among the most developed and prosperous countries in the world. But with fewer advanced degree-holders (e.g., Masters and PhDs)[5], and weak performance on workplace education and training[6], it is also not surprising to find that Canada has been lagging key international peers in innovation and productivity growth for many years.[7]

2. *Individuals with strong foundational skills are more likely to complete high school and post-secondary education, and to go on to good careers*. The *Youth in Transition* Survey reveals a "strong association between reading

proficiency and educational attainment."[8] Fifteen year old Canadian students who took the OECD's Programme for International Student Assessment (PISA) test and who scored in the bottom quartile on reading proficiency "were much more likely to drop out of secondary school and less likely to have completed a year of postsecondary education than those in the highest quartile of reading scores." Moreover, Canadian students who scored in the top level on reading performance "were 20 times more likely to go to university than those in the lowest PISA level."[9]

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[4] S. Coulombe, J.F. Tremblay and S. Marchand, *Literacy Scores, Human Capital and Growth Across Fourteen OECD Countries, International Adult Literacy Survey Series* (Ottawa: Statistics Canada, 2004).

[5] *The Conference Board of Canada, Advanced Skills and Innovation* (Ottawa: The Conference Board, 2011) http://www.conferenceboard.ca/hcp/hot-topics/innovation.aspx

[6] D. Munro, Developing Skills: *Where Are Canada's Employers?* (Ottawa: The Conference Board, 2014). http://www.conferenceboard.ca/topics/education/commentaries/14-03-20/developing_skills_where_are_canada_s_employers.aspx

[7] The Conference Board of Canada, *Advanced Skills and Innovation.*

[8] CMEC, *Measuring Up: Canadian Results of the OECD PISA Study* (Toronto: CMEC, 2013).

[9] CMEC, *Measuring Up*, 10.

3. *Individuals with advanced skills and education do better in the labour market than those without.* Canadians with university, college and/or trade credentials have higher employment rates and lower unemployment rates than those who have only a high school diploma or less.[10] (See "Unemployment rates aged 15 and over, by educational attainment").

While those without high school have an employment rate of only 55 percent, those with university or college credentials have employment rates of 82 and 81 percent, respectively.[11] There are differences across disciplines and regions but, on average, higher education credential holders aged 25 to 64 earn 39 percent more than high school graduates.[12]

Unemployment rates aged 15 and over, by educational attainment, Canada, 2005 to 2012 (percent)

Source: Statistics Canada (81-582-X), 2013.

Less than high school
High school
College or trade
University
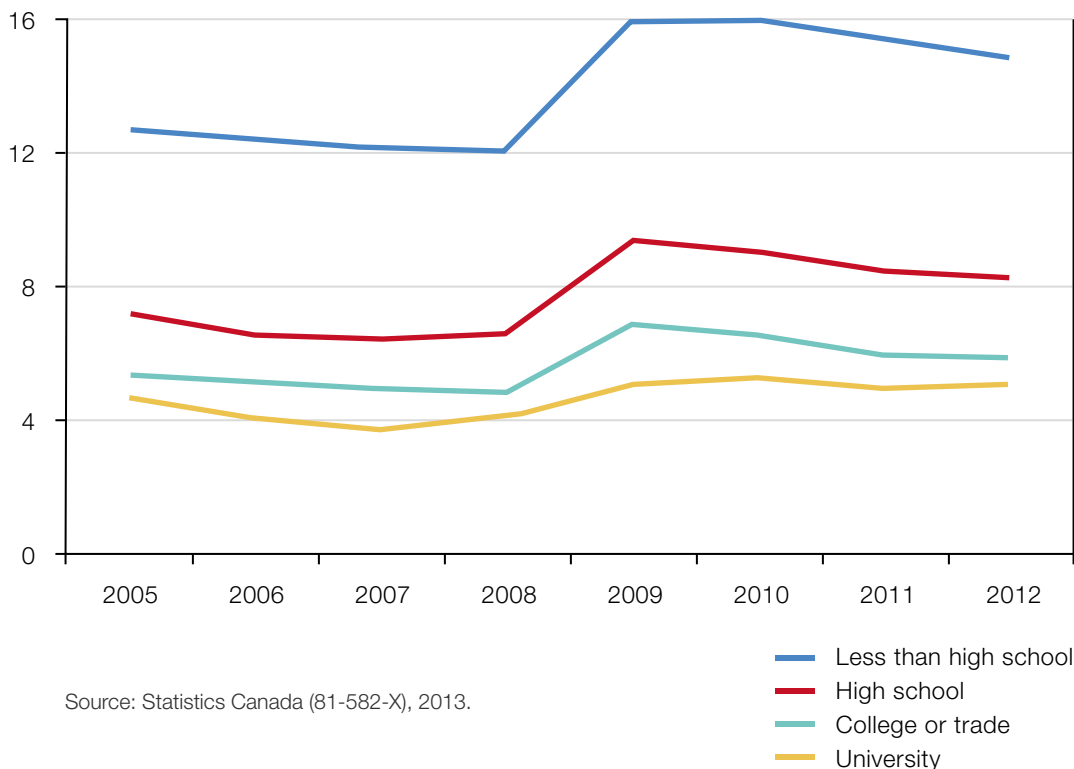
4. *Highly educated Canadians are more active in their communities and politics.* Canadians with a university or college education are much more likely to volunteer in their communities than those with a high school education or less. In 2010, 58 percent of adults with a university degree and 45 percent with a post-secondary diploma or certificate reported doing volunteer work, compared to 43 percent with a high school education and only 37 percent of adults with less than high school.[13] Similarly, an analysis of the 2011 federal election shows that while 78 percent of people with a university degree voted, those with a high school education or less voted at rates of only 60 percent or less.[14]

5. *Advanced skills and higher education are associated with better physical and mental health.* As skills and educational attainment increase, so does the ability to find secure, well-paid employment; find, understand, and follow health information; navigate the health system; and acquire the resources needed to lead a healthy lifestyle.[15] Given Canada's high rate of tertiary educational attainment, it is not surprising to find that Canadians are among the world's healthiest citizens.[16]

Skills and higher education have additional benefits which are harder to quantify, but no less important to individual and community well-being. The artistic and cultural contributions of those who have studied and developed skills in the fine arts enrich our communities. The capacity of experts and citizens to address difficult policy issues, such as homelessness, public health, multiculturalism and integration, and transportation infrastructure, is enhanced through higher education and skills development. And individuals with higher levels of skills and educational attainment are also better equipped to pursue knowledge of self and the world, and to engage in critical reflection about oneself, one's community, and the world.

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[10] Statistics Canada, "Unemployment rates of population aged 15 and over, by educational attainment, Canada, 1990 to 2012."

[11] Ministry of Training, Colleges, and Universities, *Ontario Labour Market Statistics for January 2012*, 2.

[12] OECD, *Education At a Glance 2013: Country Note—Canada.*

[13] M. Vézina and S. Crompton, *Volunteering in Canada* (Ottawa: Statistics Canada, 2012), 41,42.

[14] S. Uppal and S. LaRochelle-Côté, *Factors associated with voting* (Ottawa: Statistics Canada, 2012), 6.

[15] Chief Public Health Officer of Canada, *Report on the State of Public Health in Canada 2008 - Addressing Health Inequalities* (Ottawa: Public Health Agency of Canada, 2008). See chapter 3.

[16] World Health Organization, *Canada: Health Profile* (Geneva: WHO, 2013). www.who.int/gho/countries/can.pdf.

Excellence

The benefits of skills and higher education are clear. But are Canadians skilled and educated enough to experience the full range of benefits? Is Canada producing graduates with *the right skills* to sustain and enhance the country's economic competitiveness and social well-being?

Higher Education Attainment

More than half of Canadians (aged 25 to 64) held a university or college credential in 2011—the highest rate among OECD countries, and well above the average of 32 percent.[17] An additional 12 percent of Canadians hold trade certificates, bringing the proportion of Canadians with some form of PSE credential to nearly two thirds.[18] Canada's proportion of university graduates (27 percent) is slightly higher than the OECD average (23 percent) and our proportion of college graduates (25 percent) is world-leading and more than twice the OECD average (10 percent).[19]

Overall, the rate of tertiary education attainment in Canada is 11 percentage points higher now than it was in 2001—primarily the result of higher PSE participation among younger Canadians.

- 57 percent of 25 to 34 year-old Canadians hold a higher education credential versus an OECD average of 39 percent. This includes university (32 percent), college (22 percent), and other non-trades related credentials (3 percent).[20]

- 43 percent of the 55 to 64 year-old population in Canada hold such credentials—including those with university (20 percent), college (18 percent), and other (4.5 percent) credentials.[21] Thus, a more educated population is set to replace Canada's retiring workers.

- Only 10.7 percent of Canadians aged 25 to 34 hold trades certificates versus 12.8 percent of those aged 55 to 64.[22] As the latter cohort retires, Canada may face shortages in key skilled trades—though this will depend on the level and specific kinds of industry demand.

[17] OECD, *Education at a Glance 2013: Country Note—Canada*.

[18] Statistics Canada, *Education in Canada: Attainment, Field of Study and Location of Study* (Ottawa: Statistics Canada, 2013). http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-012-x/99-012-x2011001-eng.pdf

[19] Statistics Canada, *Education Indicators in Canada: An International Perspective* (Ottawa: Statistics Canada, 2014). Table A.1.3. http://www.cmec.ca/Publications/Lists/Publications/Attachments/322/Education-Indicators-Canada-International-Perspective-2013.pdf

[20] Statistics Canada, *Education in Canada; Statistics Canada, Education Indicators in Canada.* Table A.1.3.

[21] Statistics Canada, *Education in Canada; Statistics Canada, Education Indicators in Canada.* Table A.1.3.
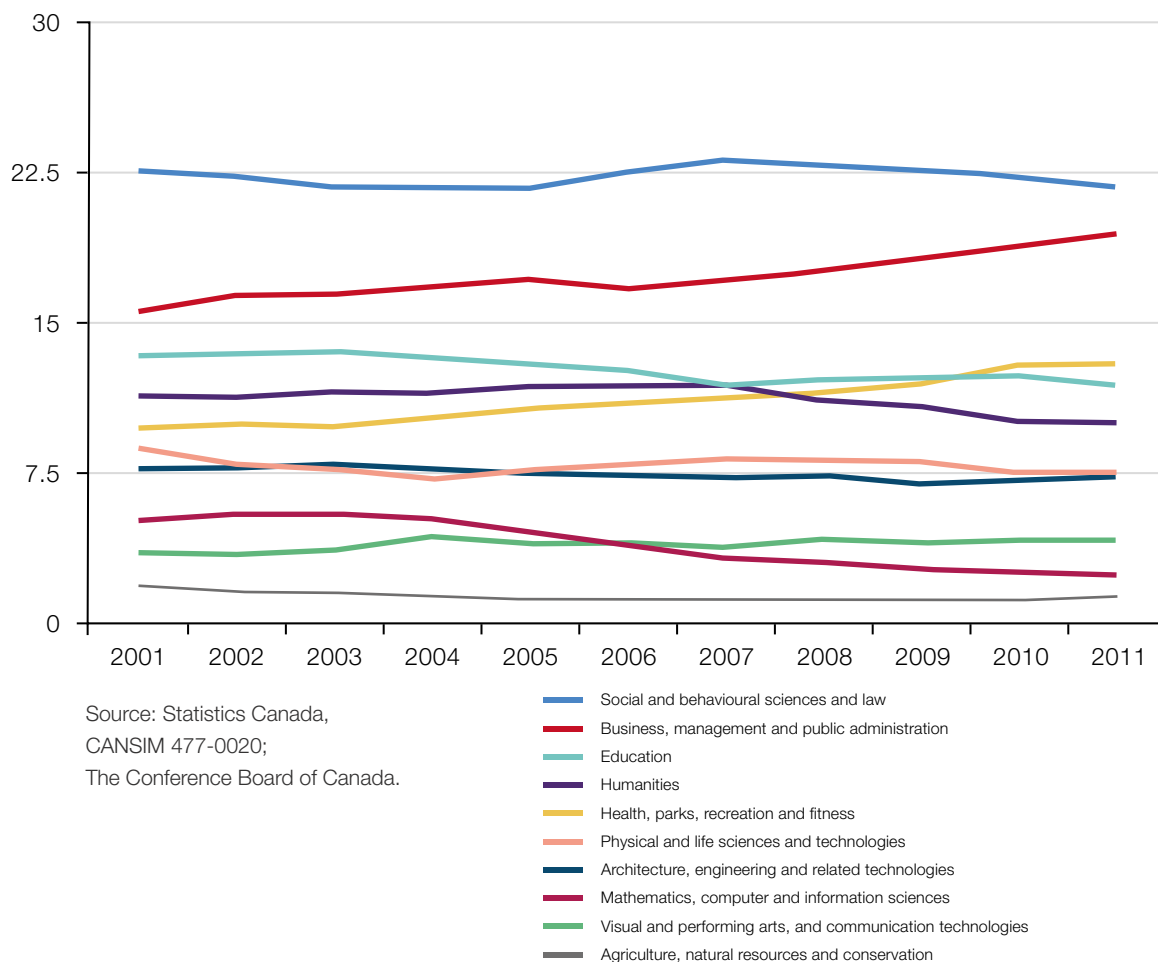
[22] Statistics Canada, *Education Indicators in Canada*. Table A.1.3.

Fields of Study

Canadians earn credentials in a wide range of subjects. In the 25-64 year old population, the majority of degrees are held in business, management and public administration (20 percent); social and behavioural sciences and law (17 percent); education (13 percent); architecture, engineering, and related technologies (12 percent); humanities (11 percent); and health and related fields (9 percent).[23] Recent graduates are most likely to hold credentials in the social and behavioural sciences; business, management and public administration; and health and related fields. (See "Proportion of undergraduate university degrees awarded annually, by discipline, 2001 to 2011").

Proportion of undergraduate university degrees awarded annually, by discipline, 2001 to 2011 (percent)

Source: Statistics Canada,
CANSIM 477-0020;
The Conference Board of Canada.

- Social and behavioural sciences and law
- Business, management and public administration
- Education
- Humanities
- Health, parks, recreation and fitness
- Physical and life sciences and technologies
- Architecture, engineering and related technologies
- Mathematics, computer and information sciences
- Visual and performing arts, and communication technologies
- Agriculture, natural resources and conservation

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STEM Degrees

Nearly 25 percent of all degrees are in the STEM disciplines—science, technology, engineering, and mathematics. Twenty six percent of master's and 53 percent of PhDs are held in a STEM discipline.[24] Although Canada has a higher share of university graduates in STEM fields than the OECD average[25], we lag key international competitors, like Finland and Germany, who have made science a fundamental part of their educational cultures.[26]

Moreover, immigrants hold more than half of all STEM credentials in Canada (51 percent) despite representing only a quarter of adults.[27] This suggests that Canada relies more on a strategy of international recruitment than domestic development for STEM degree-holders. Given the importance of these disciplines to innovation—including business innovation and innovation in health, education, social services, and other public sectors—and the rising global competition for STEM graduates, Canada must do better on domestic development.

Advanced Degrees

Canada also needs more advanced degree holders to contribute to innovation—both business innovation and social innovation. A Conference Board study on advanced skills and innovation, found associations between the number of PhDs per 100,000 population and both patents per population and business R&D spending—important indicators of innovation performance.[28] And a study focused on Ireland found that "R&D active firms employing PhD researchers have rates of patenting 2.5 times greater than similarly active firms which do not employ PhD researchers." [29] Because they value research and understand research methods, graduate degree holders in both the private and public sectors constitute an important support and receptor community for research and development—a key weakness in Canada's innovation performance.

While the number of master's and doctoral degrees earned annually by Canadians has doubled over the past two decades, we still lag international peers.[30] Canada ranks below the OECD average in graduate degrees awarded annually per capita[31] and ranks 15th of 16 key competitor countries in PhDs per capita.[32] In light of Canada's poor performance in innovation over the past two decades,[33] increasing the number of advanced degree holders and employing their skills more effectively in private and public organizations is a strategy Canada cannot afford to neglect.

23 Statistics Canada, *Education in Canada,* 7.

24 Statistics Canada, *Education in Canada*, 14.

25 C. Cheung, Y. Guillemette and S. Mobasher-Fard, "Tertiary Education: Developing Skills for Innovation and Long-Term Growth in Canada." *OECD Economics Department Working Papers,* No. 991. (Paris: OECD, 2012), 26.

26 The Conference Board of Canada, *Percentage of Graduates in Science, Math, Computer Science, and Engineering* (Ottawa: Conference Board, 2014). http://www.conferenceboard.ca/hcp/details/education/graduates-science-math-computer-science-engineerin.aspx

27 Statistics Canada, *Education in Canada*, 15.

28 The Conference Board of Canada, *Advanced Skills and Innovation*.

29 Advisory Science Council, *The Role of PhDs in the Smart Economy* (Dublin: Forfas, December 2009), ix.

30 Statistics Canada, Table 477-0020.

31 Cheung, Guillemette and Mobasher-Fard, "Tertiary Education," 8.

32 The Conference Board of Canada, *PhD Graduates* (Ottawa: Conference Board, 2014). http://www.conferenceboard.ca/hcp/details/education/phd-graduates.aspx

33 The Conference Board of Canada, *How Canada Performs—Innovation* (Ottawa: Conference Board, 2014).

Skills Attainment

Canadians' higher education attainment is world-leading but our development of key skills is less impressive than our education success would predict.

Literacy, Numeracy and Problem-Solving Using Technology

The OECD's Programme for the International Assessment of Adult Competencies (PIAAC) shows that Canadians, on average, score:

- *at* the OECD average in *literacy*;
- *below* the OECD average in *numeracy*; and
- *above* the OECD average in *using technology to solve problems.*[34]

While the last result is positive, Canada should be doing better given that adults with PSE credentials generally score higher than those without and there are proportionally more PSE graduates in Canada than in other countries.

(See "Top Skills Proficiency by Educational Credential"). In fact, Canadians with higher education credentials score lower than higher education graduates in other countries. For example,
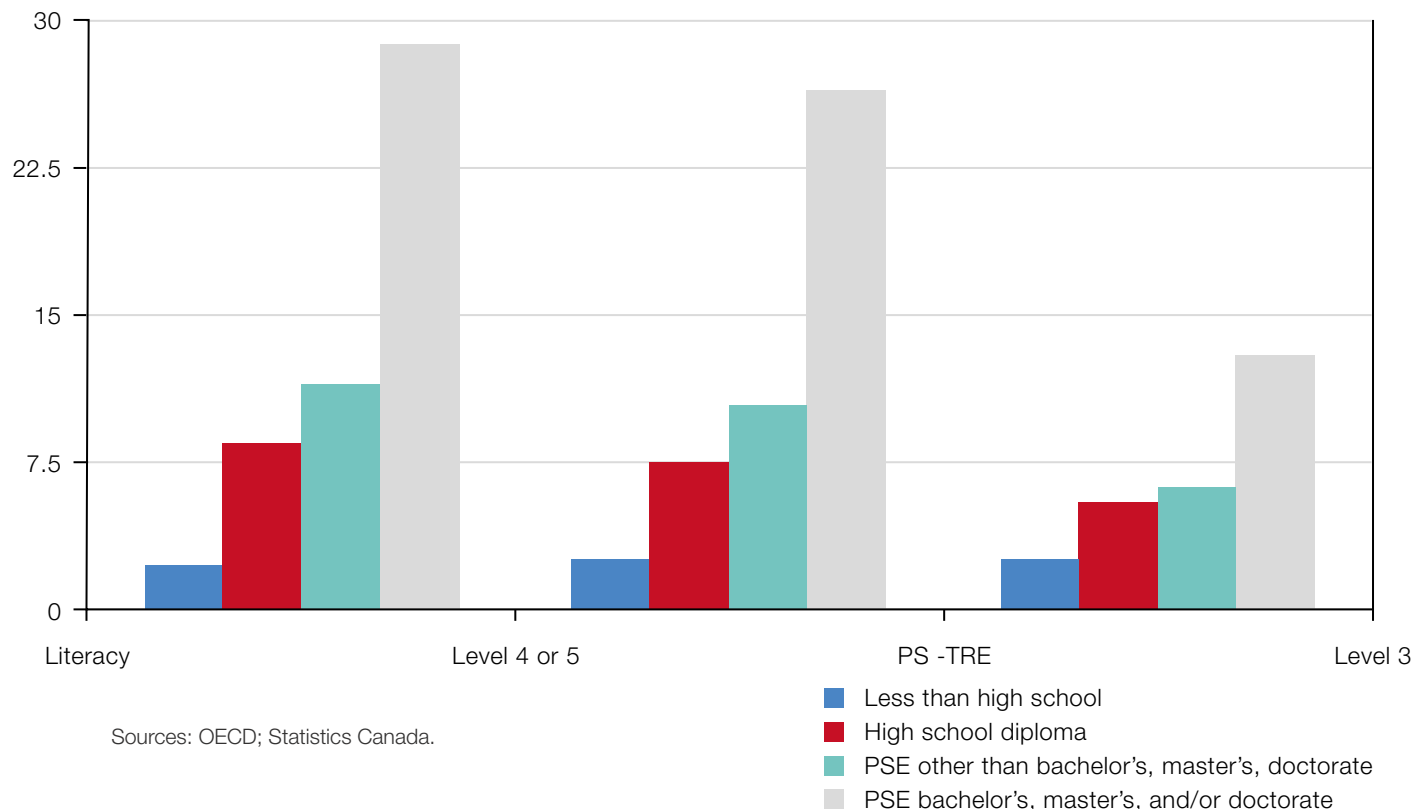
- Canadians with tertiary credentials scored only 290 (out of 500) in *literacy,* which is below the OECD average of 297. Only three countries had lower scores.[35]

- 47 percent of Canadians with tertiary credentials scored at Level 3 or higher *using technology to solve problems*, versus the OECD average of 52 percent, putting Canada behind 14 of the 19 countries surveyed.[36]

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[34] Statistics Canada, *Skills in Canada: First Results from the Programme for the International Assessment of Adult Competencies (PIAAC)* (Ottawa: Statistics Canada, 2013). http://www.statcan.gc.ca/pub/89-555-x/89-555-x2013001-eng.pdf

[35] OECD, *OECD Skills Outlook 2013*, 119. See Table A3.9 (L) and data at http://dx.doi.org/10.1787/888932901011.

[36] OECD, *OECD Skills Outlook 2013*. See Table A3.10 (P) and data at http://dx.doi.org/10.1787/888932901030.

Top skills proficiency by educational credential (percent)

Sources: OECD; Statistics Canada.

Legend:
- ■ Less than high school
- ■ High school diploma
- ■ PSE other than bachelor's, master's, doctorate
- ■ PSE bachelor's, master's, and/or doctorate

The Impact of Immigration

Part of the explanation emerges from the differences in scores between immigrant and non-immigrant credential-holders. While "native-born, native-language" *university* graduates in Canada score 313 in literacy—above the OECD mean of 307—"foreign-born, foreign-language" university graduates in Canada score 275—versus the OECD mean of 273. Taking immigrants' scores out of the picture would see Canada ranking 7th (rather than 13th) in literacy. By contrast, "native-born, native language" college graduates score 281—below the OECD mean of 287—while foreign-born, foreign-language graduates score 251—versus the OECD mean of 253).[37]

Canada's higher proportion of immigrants explains some of the lower than expected performance on literacy among university graduates and suggests that the higher education system may be performing better than initially thought. But from the perspective of skills held in the workforce and their contribution to economic and social outcomes, the fact that so many Canadians and permanent residents have less than ideal literacy, numeracy and problem-solving skills is something that must be addressed.

Essential Skills

Essential skills are those that "provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change."[38] Unfortunately, Canadians appear to have weaker essential skills than economic and individual success require. A 2013 survey of over 1,500 Ontario employers, for example, revealed serious concerns about the essential skills of Ontario workers.[39]

Over 70 percent of employers reported gaps in the critical thinking and problem-solving skills of current and prospective employees. Nearly half also reported insufficient oral communication (46 percent) and literacy skills (42 percent) in the workforce. (See "Essential Skills Gaps"). Canadian firms and individuals cannot expect to excel in the face of such deficits.

Essential Skills Gaps
(percentage of employers observing gaps)
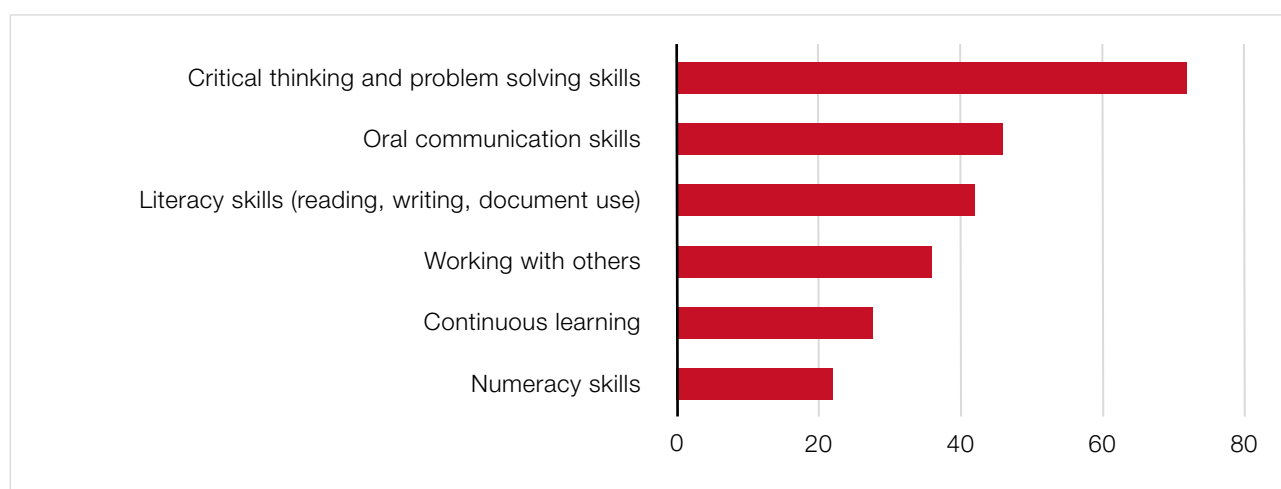
Source: The Conference Board of Canada, Ontario Employers Skills Survey.

[37] All results in this paragraph from A. Parkin, "Is Canada's Post-Secondary System Prepared for the Challenges of the 21st Century?" Presentation at the *Skills and Post-Secondary Education Summit 2013*. Toronto, November 5-7, 2013.

[38] ABC Life Literacy Canada, *9 Essential Skills.* 2013. http://abclifeliteracy.ca/nine-essential-skills

[39] D. Munro and J. Stuckey, *The Need to Make Skills Work: The Cost of Ontario's Skills Gap* (Ottawa: Conference Board, 2013).

Innovation Skills

Canadians are highly educated and we rank very well in international comparisons of research output and quality.[40] But the innovation performance of Canadian businesses is weak—scoring a "D" and ranking 13th of 16 peer countries in the Conference Board of Canada's *Report Card on Innovation*.[41] While many factors contribute to weak innovation performance, inadequate innovation and commercialization skills are a key piece of the puzzle.[42]

Canadian firms consistently rank skills among the top three or four factors *necessary* for innovation success. In the Conference Board's *Survey on Innovation Metrics and Management*, 40 percent of firms cited employees' skills, attitudes, and behaviours as a "critical competitive attribute" for innovation, placing it fourth among 19 factors necessary for innovation success.[43]

In Statistics Canada's *Survey of Innovation and Business Strategy*, lack of skills was cited by over a quarter of firms as an obstacle to innovation—the second most frequently cited barrier.[44]

To improve Canada's innovation performance, we need to improve innovation skills. A number of PSE institutions have taken important steps to integrate innovation skills development into their programs, but there is considerable room to offer more, as well as to conduct systematic assessments of outcomes to determine what works best in developing innovation skills.[45]

University Graduates' Views of Skills Attainment

University graduates' views reinforce many concerns about skills. A 2012 survey of 15,000 graduating undergraduate students found that a quarter did not feel that university contributed much or very much to their knowledge of their subject area, and only 45 percent felt prepared for further study in a graduate or professional program.[46] On other skills, graduates' views about the contribution of university to their development are underwhelming. (See Chart "Contribution of university education to skills development"). Subjective measures of skills attainment are problematic, but the fact that so many graduates believe that their university education did not contribute to their development raises pressing questions about higher education quality.

Contribution of university education to skills development
(per cent of graduates responding "much" or "very much")

Source: Canadian University Survey Consortium.

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[40] Expert Panel on the State of Science and Technology in Canada, *The State of Science and Technology in Canada, 2012* (Ottawa: The Council of Canadian Academies, 2013).

[41] The Conference Board of Canada, *How Canada Performs—Innovation* (Ottawa: Conference Board, 2014).

[42] The Conference Board's *Innovation Skills Profile 2.0* identifies the skills, attitudes and behaviours employees and managers need to contribute to innovation—including creativity, problem-solving, risk assessment and risk-taking, relationship-building, communication, and implementation skills. *Innovation Skills Profile 2.0* (Ottawa: Conference Board, 2014). http://www.conferenceboard.ca/Libraries/PUBLIC_PDFS/InnovationSkillsProfile.sflb

[43] D. Watt and D. Munro, *Skills for Business Innovation Success: It's People Who Innovate* (Ottawa: Conference Board, 2014), 15.

[44] Industry Canada, *Survey of Innovation and Business Strategy* (Ottawa: Statistics Canada, 2009). www.ic.gc.ca/eic/site/eas-aes.nsf/eng/ra02097.html

[45] D. Watt and D. Munro, *Skills for Business Innovation Success*.

[46] Canadian University Survey Consortium. *2013 First-Year University Student Survey*. (CUSC, 2013).

Lifelong Learning and Workplace Skills Development

PSE institutions are central to developing the skills that contribute to economic, social, and individual well-being, and there are opportunities for improvement. Workplace training and lifelong learning are also important, but Canada's track record in these areas is weak. In 2009, only 31 per cent of Canadian adults participated in some form of non-formal job-related education. This was slightly higher than the OECD average (28 percent), but behind leading countries such as Sweden (61 percent), Norway (47 percent), and Finland (44 percent).[47] (See "Adult participation in non-formal job-related education").

Although more Canadians participated in 2009 (31 percent) than in 2003 (25 percent), our performance relative to international peers has slipped. In 2003, the average participation rate for 13 comparator countries for whom data was available was 23 percent—a rate that Canada exceeded by 2 percentage points. But by 2009, those same 13 countries had an average participation rate of 33 percent—a rate that Canada *lagged* by 2 percentage points.[48] In fact, other evidence shows that employer spending on training and development has declined by about 40 percent over the past two decades.[49]

To be fair, employers who invest in employee skills development face an investment risk—specifically that employees whose training they support may be "poached", and there is some evidence that this occurs.[50] Even where poaching is a low risk, the widespread *belief* that it occurs perpetuates a collective action problem. When employers do invest, the perceived risks encourage investments in *specific* skills for particular tasks and jobs rather than more *general and transferable* skills.[51] This situation persists despite the fact that larger investments in employee training can improve employee retention. (See "Turnover rates, by per employee TLD spending").

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[47] OECD, *LSO network special data collection on adult learning activities*. Tables C5.1a and C5.2a.

[48] The Conference Board of Canada, *Adult Participation in Education* (Ottawa: The Conference Board, 2014). http://www.conferenceboard.ca/hcp/details/education/adult-participation.aspx

[49] D. Munro, *Developing Skills: Where Are Canada's Employers?* (Ottawa: The Conference Board, 2014). http://www.conferenceboard.ca/topics/education/commentaries/14-03-20/developing_skills_where_are_canada_s_employers.aspx

[50] Nordicity, *Labour Supply/Demand Dynamics of Canada's Information and Communications Technology (ICT) Sector* (Toronto: Nordicity, 2012), 22.

[51] C. Halliwell, *No Shortage of Opportunity: Policy Ideas to Strengthen Canada's Labour Market in the Coming Decade.* IRPP Study 42 (Montreal: Institute for Research on Public Policy, 2013), 27.
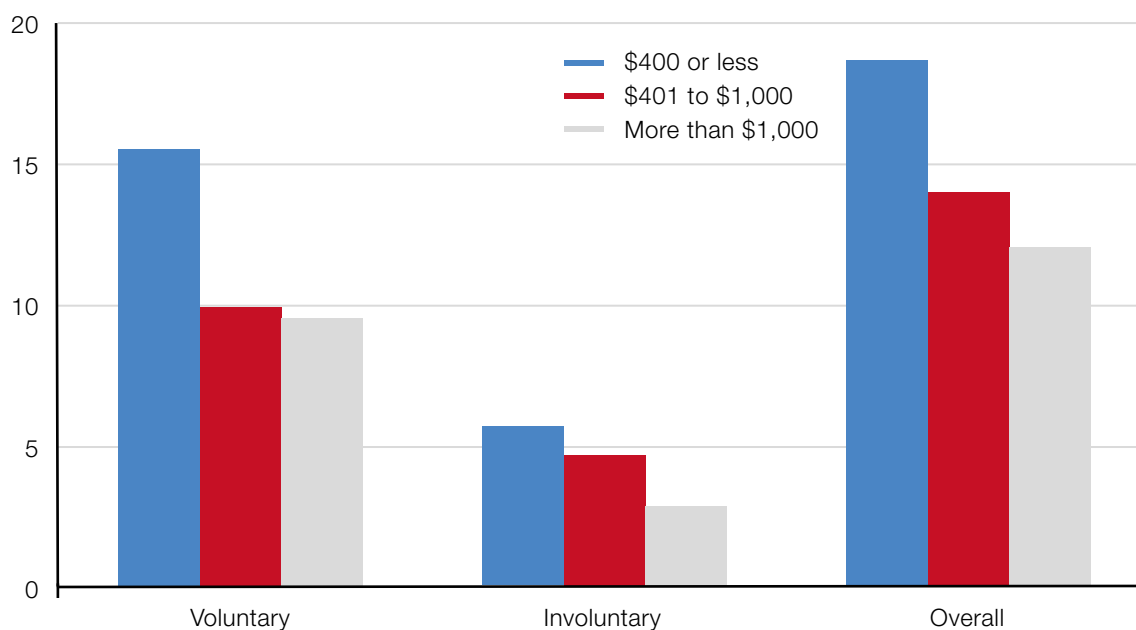
Adult Participation in Non-Formal Job-Related Education, 2009 or Most Recent Year (percent)
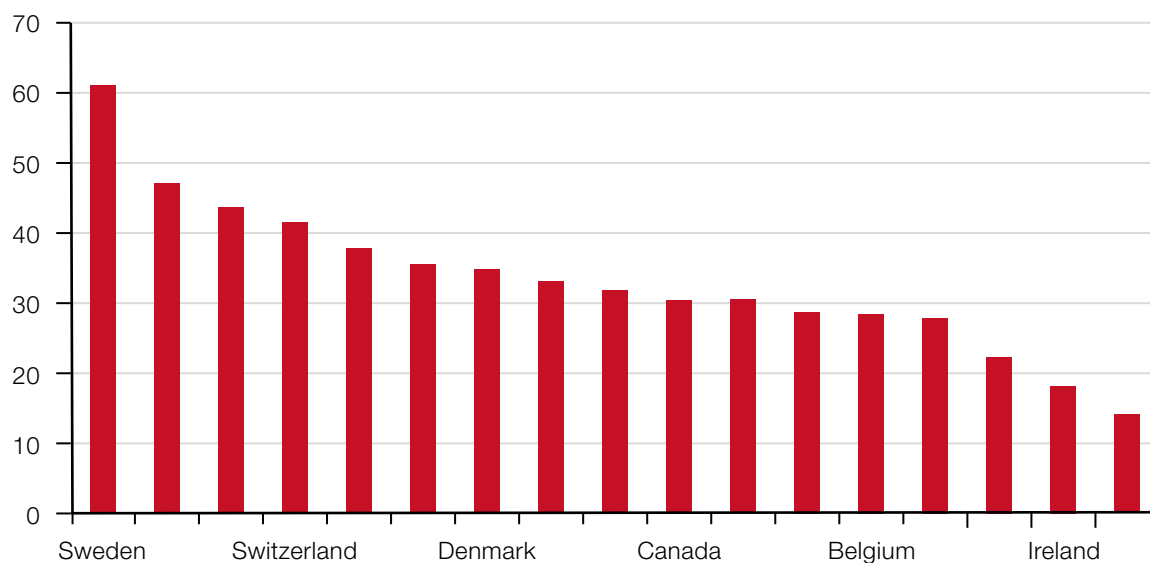
Source: OECD, Education at a Glance 2011 (Indicator C5).

## Turnover Rates, by per employee TLD spending, 2008 (percent)

Source: The Conference Board of Canada, Learning and Development Outlook, 2009.

Even when workplace training is offered, many potential participants face barriers to participation. Many are hampered by limited time and resources, geography, health and confidence.[52] And those who participate in employer-sponsored skills development are more likely to already have relatively high educational attainment and skills compared with those who do not participate. In 2008, "more than two-thirds of workers with university degrees took part in formal work-related training, while only 22 percent of workers without a high school diploma took part."[53] Results from PIAAC show that participation in job-related training increases with literacy proficiency. (See "Participation of Canadians in Job-Related Education or Training by Literacy Level").

Simply put, the more educated and skilled an individual is, the more likely she is to receive even more skills training, while those who most need training are least likely to get it. This can have pervasive, life-long effects.

Participation of Canadians in Job-Related Education or Training by Literacy Level (percent)

Participation in Job-Related Education or Training by Literacy Level
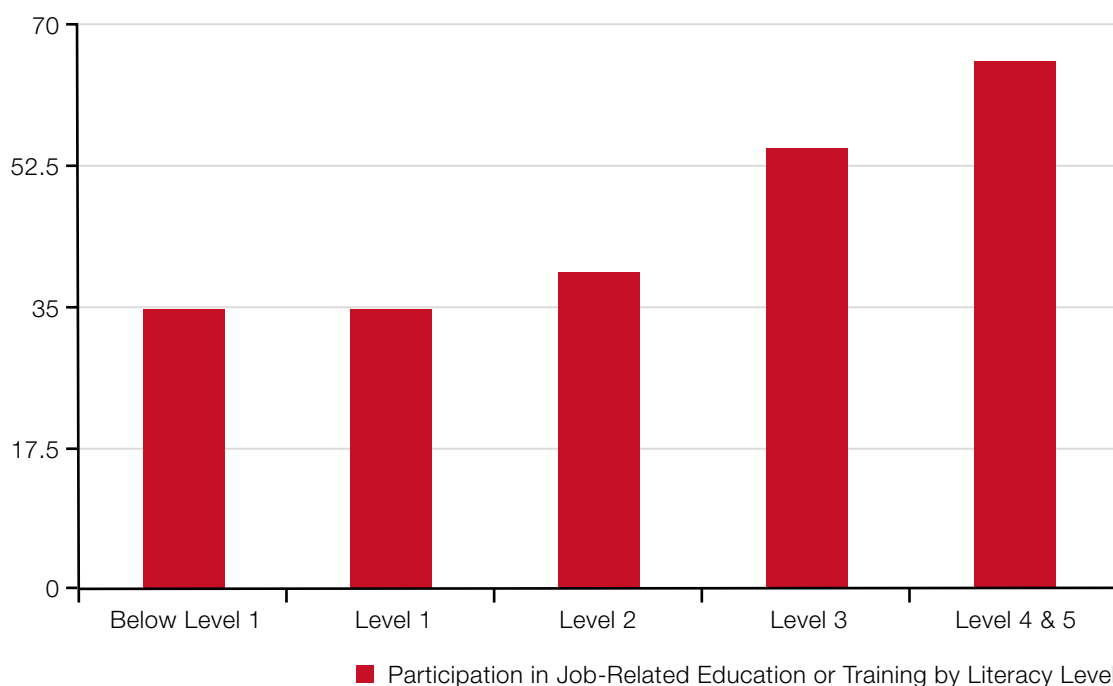
Source: OECD, PIAAC (Figure 5.7 (L)).

Recognizing that successful workplace training depends not only on the behaviour of employers, but on employees and other stakeholders, it is nevertheless the case that employers' weak investment in training exacerbates skills pressures and prevents businesses and individuals from becoming more competitive. Even as many employers raise concerns about skills shortages, not enough are taking steps to address the challenge. As part of an excellence agenda for skills and higher education in Canada, employers need to take more responsibility for the training that, ultimately, produces great benefits for them.[54] And all stakeholders should take action to reduce the barriers faced by Canadians who would benefit from skills development opportunities.

Foundational Skills

Proficiency in certain skills—including reading, mathematics, and science skills—among students in the K-12 system shapes and constrains future skills development opportunities and helps to explain advanced skills outcomes.

These skills provide a foundation upon which further learning depends, and achievement by age 15 helps to explain future skills development performance. Although the K-12 system is beyond the scope of this paper, a brief look at the skills proficiency of Canada's 15 year olds provides a useful picture of the preparedness of Canada's future higher education attendees and workers.

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[52] *V. Peters, Results of the 2003 Adult Education and Training Survey*; OECD, *Thematic Review on Adult Learning—Canada: Country Note* (Paris: OECD, 2002); D. Munro, *Job-Related Training: Barriers to Learner Participation* (Ottawa: The Conference Board, 2014). http://www.conferenceboard.ca/topics/education/commentaries/14-04-10/job-related_training_barriers_to_learner_participation.aspx

[53] Canadian Council on Learning, *Securing Prosperity Through Canada's Human Infrastructure: The State of Adult Learning and Workplace Training in Canada* (Ottawa: CCL, 2009), 26.

[54] Canadian Council on Learning, *Securing Prosperity Through Canada's Human Infrastructure*, 27.

The PISA scores of Canadian 15 year olds in mathematics, reading, and science are, on average, strong by international standards. But Canada's scores and international rankings have slipped in recent years, and there is significant variation across the country.

- *Mathematics.* Canadian students scored 24 points above the OECD average in mathematics, ranking 10th among 65 participating countries and 4th among OECD countries.[55] But recent trends are troubling. Scores have declined by 14 points across the country as a whole over the past nine years, with very large declines in Manitoba (36 points), Alberta (32 points) and Newfoundland and Labrador (26 points).[56] (See "Canadian PISA Results in Mathematics, Reading and Science Over Time").

  Sixteen per cent of Canadian students scored at level 5 or 6—indicating high level performance—but an almost equal proportion (15 percent) scored at or below the level of basic proficiency needed to participate in modern life.[57] Wide variation across provinces is also evident, with Quebec leading all provinces and, along with BC, scoring higher than both the Canadian and OECD averages, while students in Prince Edward Island score well below both the Canadian and OECD averages.[58] Finally, boys performed better than girls in Canada (by 10 points on average), but this was only statistically significant in four provinces – Quebec, Ontario, Alberta, BC.[59]

- *Reading.* Canadian students scored 27 points above the OECD average in reading, ranking 6th among 65 participating countries and 5th in the OECD.[60] Reading scores in Canada have declined, but the Council of Ministers of Education in Canada maintains that the decline is not yet statistically significant. Still, Canada has slipped from 2nd to 6th among participating countries and the decline is significant in some provinces, ranging from a 16 point drop in Quebec to a 34 point drop in Manitoba.[61] (See "Canadian PISA Results in Mathematics, Reading and Science Over Time").

With the exception of Prince Edward Island, all provinces were at or above the OECD average.[62] Additionally, girls performed significantly better than boys in reading in Canada (by 35 points on average)—ranging from 26 points better in British Columbia to 53 points better in Newfoundland and Labrador.[63]

- *Science.* Canadian students scored 24 points above the OECD average in science and ranked 8th among PISA participants and 6th among OECD peers.[64] Science scores in Canada have declined by 9 points over the past six years and Canada has slipped from 3rd to 8th place. The largest declines occurred in Newfoundland and Labrador (11 points), Quebec (15 points), Prince Edward Island (18 points) and Manitoba (21 points).[65] (See "Canadian PISA Results in Mathematics, Reading and Science Over Time").

Alberta and British Columbia scored higher than both the Canadian and OECD average while Prince Edward Island scored below the OECD average and well below the Canadian average.[66] There were no statistically significant gender differences in science performance among Canadian 15 year olds who took the PISA test.

Canadian PISA Results in Mathematics, Reading and Science Over Time (Score)
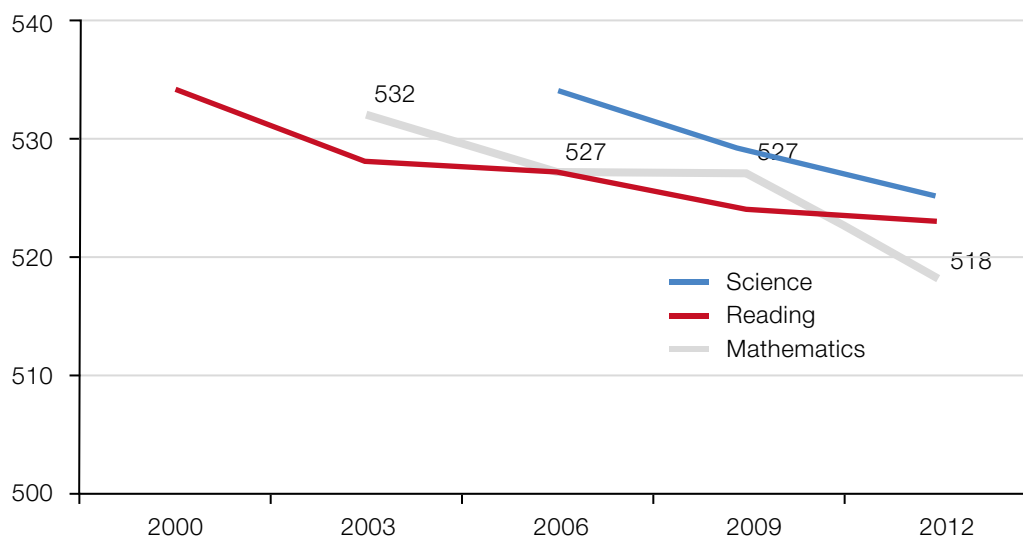
Source: CMEC.

55 CMEC, *Measuring Up,* 18.

56 CMEC, *Measuring Up,* 30.

57 CMEC, *Measuring Up,* 24-5.

58 CMEC, *Measuring Up,* 19-21.

59 CMEC, *Measuring Up,* 27.

60 CMEC, *Measuring Up,* 34-5.

61 CMEC, *Measuring Up,* 40

62 CMEC, *Measuring Up*, 37.

63 CMEC, *Measuring Up*, 40.

64 CMEC, *Measuring Up*, 36.

65 CMEC, *Measuring Up*, 41.

66 CMEC, *Measuring Up*, 37.

From Expansion to Excellence

Canada's performance on skills and higher education is impressive on many levels, but we may not be achieving the level of excellence we require to sustain and enhance economic prosperity and social well-being. Simply producing more graduates of lower quality is not an ideal strategy for economic competitiveness, nor social and individual well-being. We need to focus on the quality of education, the mix of disciplines, the number and quality of advanced degree holders, and opportunities to sustain and enhance skills through workplace training and life-long learning.

In particular, we should consider ways to assess learning outcomes more directly, encourage and incentivize institutions to improve skills outcomes, and hold them accountable for performance. We should be much more attentive to the quality of graduates' skills—including literacy, numeracy, critical thinking, problem-solving, communication, and innovation and employability skills—and support initiatives that enhance those skills. And we should think about ways to encourage more students to pursue degrees in the STEM disciplines and advanced degrees such as master's and PhDs in order to support both business and social innovation.

Equity

While many Canadians have developed advanced skills and completed higher education and enjoy the associated economic and other benefits, many others face barriers to participation and completion, leaving them and the country economically and socially less secure and successful than they could be. Differences in skills and educational attainment track characteristics that include Aboriginal status, gender, and immigration, as well as region. In some cases, these disparities harm both those left out and the economic and social well-being of Canada overall.

Higher education and the development of advanced skills are not for all Canadians. Some may simply choose to pursue other paths. But in too many cases, participation and achievement are determined not by choice, but by circumstances over which individuals have little control. Where communities and governments have power to shape those circumstances it is imperative that we discuss whether and how to do so. In addition to designing and pursuing an excellence agenda for skills and higher education, we need to design and pursue an equity agenda.

Aboriginal Achievement

Many who identify as Aboriginal have earned university, college and/or trades credentials and many exhibit advanced skills that contribute to economic, social, and individual well-being. But there is a large achievement gap between Aboriginal and non-Aboriginal individuals that contrasts sharply both with Canada's egalitarian values and responsibilities to Aboriginal peoples.

Higher Education Attainment

By 2011, 48 percent of those who self-identify as Aboriginal held a post-secondary credential. This was higher (55 percent) for those reporting Métis as their single identity, but lower (36 per cent) for those reporting Inuit as their single identity.[67] Overall, there is an attainment gap of 16 percentage points between the Aboriginal and non-Aboriginal populations in Canada.

- Fewer than 10 percent of Aboriginals held a university degree (versus 27 percent of non-Aboriginals) and 21 percent held a college diploma (versus 25 percent for non-Aboriginals).
- Notably, 14.4 percent of those who identify as Aboriginal held a trades certificate—a rate that is more than two percentage points *higher* than the non-Aboriginal attainment of 12 percent.[68]

Gaps in Skills Development

There are also substantial gaps between Aboriginals and non-Aboriginals in the development of core skills. PIAAC results show that, on average, the Aboriginal population scores below the non-Aboriginal population in both literacy and numeracy.

- On average, the Aboriginal population scored 260 (out of 500) in *literacy* versus 274 for the non-Aboriginal population.

- The average *numeracy* score for the Aboriginal population was 244 versus 266 for the non-Aboriginal population.[69]

The size of the gaps varies across provinces and territories, and it narrows or widens in different age cohorts. But across all provinces, territories and age groups tested, the Aboriginal population consistently scores below the non-Aboriginal population.

Skills Development by Educational Attainment

However, comparing the skills attainment of Aboriginal and non-Aboriginal populations with similar levels of education reveals an interesting picture. Similarly educated cohorts of Aboriginal and non-Aboriginal individuals achieve nearly identical literacy scores and similar numeracy scores.[70] Among those with Bachelor's degrees or higher, Aboriginal graduates score slightly higher on literacy (305) than non-Aboriginal graduates (300).

At first glance, it appears that skills levels relate more to educational attainment than to Aboriginal status which would suggest that improving PSE access and completion rates for Aboriginal people could lead to enhanced skills. But it is not clear how much of a contribution education makes to skills development (versus serving as a selection and sorting mechanism for already highly skilled people). Nor is it clear that enough has been done to prepare more Aboriginal students to succeed in higher education. The high proportion of Aboriginal students who do not complete high school (nearly 30 percent) is a glaring indicator of the challenge and highlights that the issue is much broader than the PSE system alone.

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[67] Statistics Canada, *The educational attainment of Aboriginal peoples in Canada* (Ottawa: Statistics Canada, 2013), 7.

[68] Statistics Canada, *The educational attainment of Aboriginal peoples in Canada*, 4.

[69] CMEC, "PIAAC in Canada." Slide Presentation. 2013.

[70] CMEC, "PIAAC in Canada." Slide Presentation. 2013.

Educational Attainment and Literacy Scores, Aboriginals (off-reserve) and Non-Aboriginals (percent educational attainment; PIAAC literacy score out of 500)
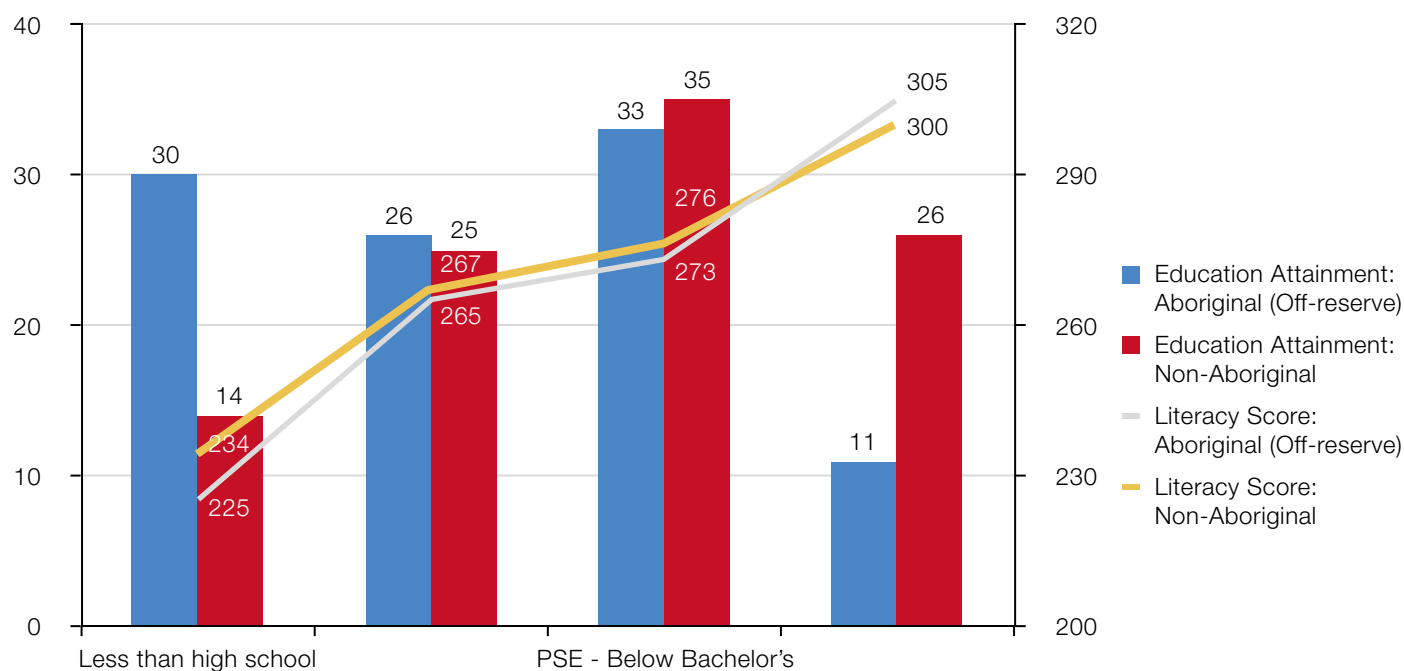
Sources: CMEC, OECD.

Educational Attainment and Numeracy Scores, Aboriginals (off-reserve) and Non-Aboriginals (percent educational attainment; PIAAC numeracy score out of 500)
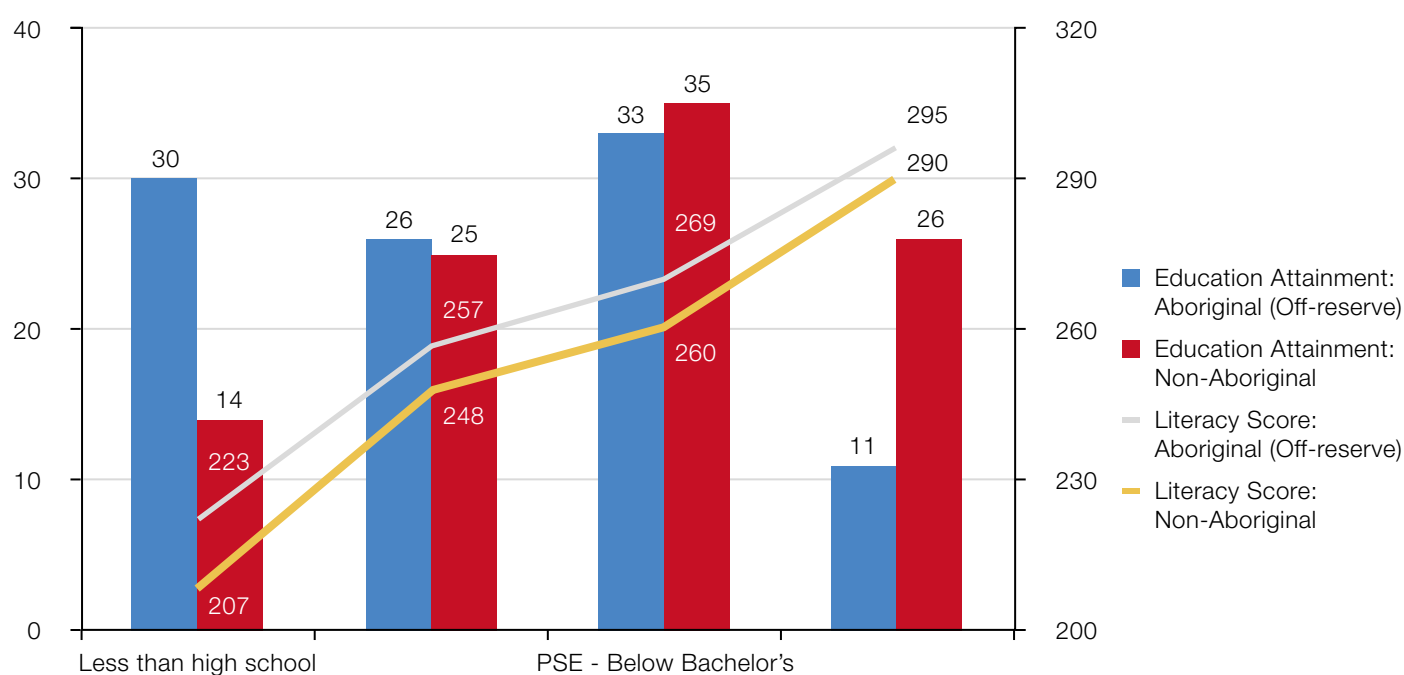
Sources: CMEC, OECD.

Labour Market Outcomes

Higher education and skills attainment for Aboriginals is not always associated with better labour market outcomes. Aboriginals with PSE credentials have lower employment and participation rates, and higher unemployment rates, than non-Aboriginals with PSE credentials. And although Aboriginal graduates earn higher incomes than Aboriginal non-graduates, there is persistent income inequality between Aboriginal and non-Aboriginal graduates.[71]

All of this suggests that while PSE completion can improve the economic and social well-being of Aboriginal graduates, addressing persistent socio-economic inequalities between Aboriginal and non-Aboriginal populations will require more than an education strategy. Still, given how critical skills and education are to various social and economic outcomes, supporting higher participation and achievement among Aboriginals in Canada must be a key goal.

Employment Outcomes of Aboriginal and non-Aboriginal populations, aged 25-54, with PSE

	Aboriginal with PSE credential (percent)	Non-Aboriginal with PSE credenial (percent)
Unemployment Rate	9.5	5.7
Employment Rate	76.0	84.5
Participation Rate	84.0	90.0

Source: Statistics Canada (71-588-X, no.3).

[71] TD Economics, *Employment and Education Among Aboriginal Peoples: A New Perspective From the 2011 National Household Survey* (Toronto: TD Economics, 2013).

Gender Gaps

Differences in skills and higher education achievement between Canadian men and women are another challenge. On some measures, men outperform women, while in others the reverse is true. Notable differences in the kinds of higher education paths men and women pursue and the benefits they experience are another issue to examine.

Educational Attainment

Canadian women are more likely to have a university or college credential, but much less likely to have a trades certificate, than Canadian men.

- Among adults aged 25-64, university credentials are held by 28 percent of women and 26 percent of men, while college credentials are held by 28 percent of women and 21 percent of men.

- Overall, there is a gap of nearly 10 percentage points between women and men in terms of university and college completion—placing Canada 9th among 16 peer countries in the Conference Board of Canada's analysis of gender gaps in tertiary education.[72]

In the younger 25 to 34 age cohort, the gap is even wider.

- Sixty-five percent of women and 49 percent of men aged 25 to 34 hold a university or college credential—a gap of 16 percent.[73] For this age cohort, Canada ranks 12th among 16 peer countries on gender equity in tertiary education.[74]

As the Conference Board notes, "just 20 years ago, a smaller proportion of women than men had a tertiary education, and a key challenge was to make higher education more accessible and welcoming to women. While the challenge remains in some of the mathematics, computer, and engineering disciplines, the overall gender imbalance tipped in women's favour in Canada in the early 1990s."[75] Some are now asking whether there is a "boy crisis" in education and wondering what can be done to address it.[76]

In the skilled trades, however, men aged 25 to 64 are almost twice as likely to have achieved certification (15 percent) as women (8 percent). In the younger 25 to 34 age cohort, 79 percent of those who hold a Registered Apprentice certificate are men.[77] Moreover, a high proportion of trade certificates earned by women tend to be in fields such as personal services (e.g., hairstyling, esthetics) and cooking where labour market outcomes are weaker.[78]

Literacy, Numeracy and Problem-Solving Skills

A similarly mixed story emerges when we examine the literacy, numeracy, and problem-solving skills of Canadian men and women.

- The *literacy* and *problem-solving* skills of Canadian men and women, as measured by the OECD's PIAAC, are essentially the same—though in the 55 to 64 age group, men score slightly higher than women in literacy and more men (19 percent) than women (14 percent) score at the highest levels in problem-solving in technology-rich environments.[79]

- However, PISA scores for Canadian 15 year olds highlight a gap in *reading* achievement. Girls performed better than boys in reading in Canada by 35 points on average—ranging from 26 points better in British Columbia to 53 points better in Newfoundland and Labrador.[80] Given the importance of reading as a foundation for future education and lifelong learning, that gap requires attention.

With respect to numeracy, the situation is reversed.

- PIAAC results show a gap of nearly 15 points between men (273) and women (258) in *numeracy*. The gap is largest in the 55-64 age group—with men scoring 262 and women scoring 242—and smallest in the 16-24 age group—with men scoring 273 and women scoring 264.[81]

- PISA *mathematics* scores of 15 year old Canadians indicate that things are not likely to improve anytime soon. Canadian boys outperformed girls by 10 points on average—though this was only statistically significant in four provinces (Quebec, Ontario, Alberta, B.C.).[82] Given how important math skills are in the STEM disciplines, and given our need to improve STEM participation and performance—especially among women—there is a need to take action on the numeracy gap.

Individuals will choose different education paths for a variety of personal reasons, but we must ensure that all paths are open to both men and women. If women freely choose STEM pathways less often than men, or if men freely choose trades rather than college or university more often than women, that is fine. But if, in reality, those choices are constrained by differences in early-life acquisition of foundational skills and/or by inhospitable educational or occupational cultures, then attention is needed.

[72] The Conference Board of Canada, *Gender Gap in Tertiary Education* (Ottawa: Conference Board, 2014). http://www.conferenceboard.ca/hcp/details/education/gender-gap-tertiary.aspx

[73] Statistics Canada, *Education in Canada,* 9.

[74] The Conference Board of Canada, *Gender Gap in Tertiary Education*.

[75] The Conference Board of Canada, *Gender Gap in Tertiary Education*.

[76] Paul Cappon, *Exploring the "Boy Crisis" in Education* (Ottawa: Canadian Council on Learning, 2011), 1.

[77] Statistics Canada, *Education in Canada,* 9.

[78] D. Boothby and T. Drewes, *Returns to Apprenticeship in Canada* (Ottawa: C.D. Howe Institute, 2010).

[79] Statistics Canada, *Skills in Canada,* 29.

[80] CMEC, *Measuring Up,* 40.

[81] Statistics Canada, *Skills in Canada,* 86. Table B.2.3.

[82] CMEC, *Measuring Up*, 27.

Immigrant Achievement and Recognition

To meet its skills needs, Canada relies to a great extent on immigrants. Given the way Canada selects immigrants, on average, they tend to have higher educational attainment than other Canadians. The 2006 census showed that while 19 percent of all Canadians held a university degree, more than half (51 percent) of recent immigrants had attained a university degree.[83]

At the same time, many immigrants have weaker literacy and communication skills (as noted above) and their educational and occupational credentials are often not recognized by Canadian institutions and employers. Consequently, labour market outcomes for immigrants are weaker than similarly educated and skilled Canadians. The employment rate of university-educated immigrants (as of March 2014) stood at 68.8 percent, versus a rate of 78 percent for university degree-holders born in Canada. The unemployment rate for university-educated immigrants stood at 7 percent, versus a mere 3.1 percent for those born in Canada with university degrees.[84] This is all the more remarkable when one considers that immigrants hold the majority of STEM degrees in Canada which tend to be in higher demand than some other disciplines.

If Canada is going to rely on highly educated immigrants to meet skills and occupational needs, then a better system of credential recognition will be needed. Additionally, given the integration challenges many immigrants face, additional essential and other skills training should be provided to ensure that they are able to use their full range of skills to contribute to Canada's economy and society, as well as their own well-being.

Regional Differences

There are substantial differences between provinces and territories in higher education attainment and skills development. Many factors help to explain the differences—including demographics, funding, institutional structures, regional labour markets and others—but there are complex interactions among these factors and focusing on only one or even a few is unlikely to repair the gaps. Recognizing that more investigation will be required, a good start is simply to understand where we are in terms of higher educational attainment and skills development.
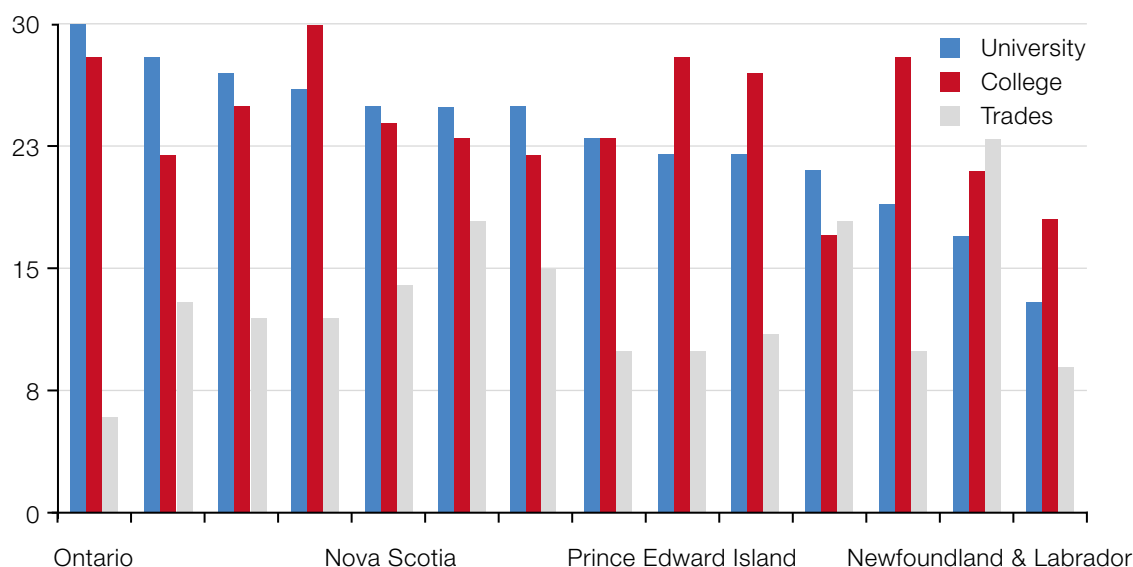
Higher Education Attainment

With 58 percent of its population (aged 25 to 64) holding university or college credentials, Ontario leads all provinces and territories in higher education, but has the lowest rate of residents with trade credentials (6 percent) in the country. By contrast, Nunavut lags all Canadian jurisdictions in higher education attainment (31 percent university), while Newfoundland and Labrador lags all provinces (38 percent). But Newfoundland has the highest rate of residents with trades credentials (23 percent).[85] (See "PSE attainment, provinces and territories, 2011")

PSE attainment,
provinces and territories, 2011 (percent)

Source: Statistics Canada, Education Indicators, Table. A.1.1.[86]

[83] Employment and Social Development Canada, *Learning: Educational Attainment* (Ottawa: ESDC, 2014). http://www4.hrsdc gc.ca/.3ndic.1t.4r@-eng.jsp?iid=29#M_5

[84] Statistics Canada, Table 282-0105. http://www5.statcan.gc.ca/cansim/a05

[85] Statistics Canada, *Education Indicators in Canada*, 85. Table A.1.1.

[86] To be precise, the data is collected according to the OECD's classification of credentials which roughly, but not exactly, aligns with institutional type. For ease of understanding, we refer to ISCED 4 as trades credentials, ISCED 5B as college credentials and ISCED 5A/6 as university credentials, but recognize that this is not entirely accurate. Statistics Canada, *Education Indicators in Canada,* 18-19.

Without examining the nature of labour market demand or investigating the preferences of students themselves, it is not possible to say whether the differences in attainment and credential distribution are unfair or misaligned with labour market needs. For example, the fact that Saskatchewan has three times the proportion of trades certificate holders (18 percent) as Ontario (6 percent), but only nearly 20 percent fewer college and university graduates (38 percent) likely reflects both regional differences in labour markets and unique barriers for certain kinds of learners in Saskatchewan. Whether action is needed to address these differences requires further research.

Skills Attainment

Unlike educational attainment where the issues are more complicated, differences in core skills like literacy, numeracy, and problem-solving like literacy, numeracy, and problem-solving are clearly cause for concern and a handful of provinces and territories have residents with substantial deficits.

- PIAAC *literacy* scores show a 13 point difference between the highest and lowest provinces—Alberta and Newfoundland and Labrador—while adults in Nunavut scored, on average, 54 points below the Canadian average and 59 points below Alberta.[87] (See "Average PIAAC literacy and numeracy scores, provinces and territories").

- In *numeracy*, no Canadian jurisdiction scored above the OECD average (269) while some provinces and territories scored well below both the OECD and Canadian average (265)—including Newfoundland and Labrador, Northwest Territories and Nunavut (200).[88]

Average PIAAC literacy and numeracy scores, provinces and territories (percent)
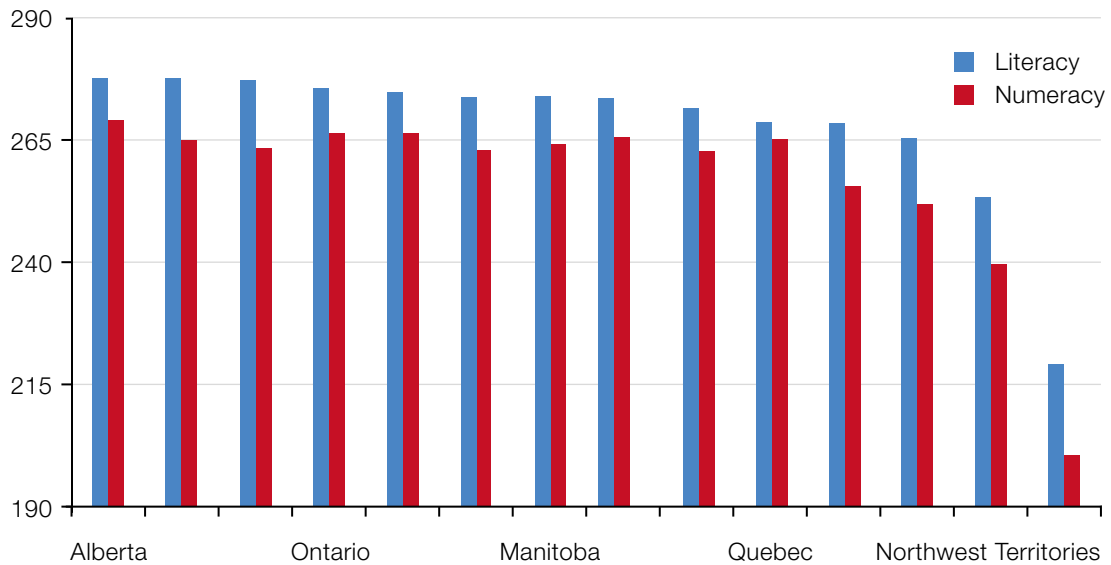
Source: Statistics Canada, Skills in Canada. Charts 1.1, 1.3.

In sum, even as Canadians, on average, perform at or below the OECD averages on literacy and numeracy—thereby raising concerns about overall performance—some provinces and territories show striking deficits. Understanding and addressing the weaker literacy and numeracy skills in, specifically, Newfoundland and Labrador, Nunavut, Northwest Territories and New Brunswick should be part of an equity agenda for skills and higher education.

[87] Statistics Canada, *Skills in Canada,* 14.

[88] Statistics Canada, *Skills in Canada*, 19.

Policy Options

On average, Canada performs well in terms of higher education attainment and on some skills measures. But there are ongoing and emerging challenges with respect to graduates' skills (both quality and kinds), insufficient advanced and STEM degree attainment, and inadequate opportunities for workplace training. As the economy becomes more technology- and knowledge-intensive, and our ability to address emerging and persistent policy challenges requires ever-increasing levels of scientific and cultural literacy, it is imperative that governments and PSE institutions in Canada adopt an excellence agenda for skills and higher education.

Additionally, skills and higher education opportunities and outcomes differ by Aboriginal status, gender, immigrant status, and region. Many individuals and communities are being left out of the economic, social, and individual benefits that skills and higher education bring—and often left out not by choice, but by circumstances beyond individual control. Along with an excellence agenda, then, Canada must adopt an equity agenda for skills and higher education.

As a federal state in which responsibility for education rests with provincial governments and responsibility for skills training is shared by federal and provincial governments, the ability to pursue an excellence and equity agenda on a national scale is constrained. The federal government is not without levers to influence the direction of skills and higher education in Canada, but policy options must be sensitive to and work within the constitutional realities of Canada. With that in mind, the following six policy options could help governments, institutions, employers and individuals advance the excellence and equity agenda that Canada needs.

1. Create a National Learning Outcomes Assessment Program

To track and improve the skills development performance of higher education institutions, the federal and provincial governments should work together to establish a national learning outcomes assessment program.

Many institutions and provinces participate in programs that track so-called key performance indicators and initiatives like the National Graduates Survey and the National Survey of Student Engagement. These programs improve PSE planning and performance but they provide, at best, only indirect measures of the actual skills acquired by graduates.

The federal government, working with the provinces, should create a program which directly measures the skills students develop—including literacy, numeracy, critical thinking, problem-solving, communication, and innovation and employability skills—and the contribution PSE institutions actually make to that development. Institutional participation should be incentivized, but voluntary, and institutions should receive incentives for achieving improvements in students' skills relative to their baseline performance. Models worth exploring include the *Collegiate Learning Assessment* (CLA) created by the Council for Aid to Education in the United States[89] and the OECD's *Assessment of Higher Education Learning Outcomes* (AHELO) feasibility study.[90] Some Canadian institutions have participated in pilots of both programs which would provide lessons for adapting parts of these assessment approaches for the country as a whole.

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[80] Council for Aid to Education, *CLA+ Overview*. http://cae.org/performance-assessment/category/cla-overview/.

[90] OECD, *Measuring Learning Outcomes in Higher Education: Lessons Learnt from the AHELO feasibility study and next steps* (Paris: OECD, 2013). http://www.oecd.org/site/ahelo/.

2. Create a Canadian Council on Skills and Higher Education

To ensure that Canadian PSE institutions, employers, policy-makers and other stakeholders have access to independent expertise, research and advice on skills and higher education, the federal government should establish an independent, arms-length Canadian Council on Skills and Higher Education (CCSHE).

There are a number of organizations that aim to improve and coordinate skills and higher education performance in Canada including, notably, the *Council of Ministers of Education, Canada* (CMEC). Institutions like the *Higher Education Quality Council of Ontario* (HEQCO) serve an important research function for individual provinces. And the Conference Board's *Centre for Skills* and *Post-Secondary Education* is currently pursuing a broad research agenda and developing a national strategy for skills and PSE. What Canada needs, in addition to these organizations, is a Council independent of federal and provincial governments, supported by a research staff and independent skills and education experts (serving on a "scientific committee") who can:

- Convene expert panels to assess the state of knowledge and best practices in skills development and educational achievement and provide independent advice on how to tackle challenges in skills and higher education;
- Coordinate and report regularly on learning and skills outcomes in all provinces and territories (i.e., act as the coordinating body for a national learning outcomes assessment program);
- Conduct and share research and analysis on Canadian and international best and promising practices in skills development and pedagogy, with special attention to addressing concerns about excellence and equity;
- Convene meetings and summits of international experts to share experiences and promising strategies for improving skills and higher education outcomes; and
- Serve as a repository of knowledge and expertise from which educational institutions, employers and training organizations, governments, and other stakeholders could draw.[91]

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[91]Those familiar with education in Canada may think this is a proposal to re-create the now-defunct Canadian Council on Learning. While the CCL performed an important function during its tenure, the current proposal differs in emphasizing the role of expert panels and advice and in providing a more comprehensive of inventory of practical knowledge and initiatives for use by Canadian institutions, governments and stakeholders. With respect to its funding and operation, a newly created CCSHE would be more like the Council of Canadian Academies (http://www.scienceadvice.ca/en/about.aspx), which has a science assessment mandate, but with a stronger in-house research capacity, knowledge collection and sharing mandate than the CCA.

3. Make significant new investments in education and skills for Aboriginal peoples

To ensure that current and future generations of Aboriginal peoples in Canada achieve equitable skills and higher education opportunities and outcomes, the federal government should make substantial investments in foundational skills programs for Aboriginal youth and address barriers faced by Aboriginal peoples to higher education participation and completion.

Persistent gaps in skills and educational achievement between Aboriginal and non-Aboriginals in Canada can be narrowed if all parties are willing to invest resources, effort and political will in identifying and addressing the various circumstances that contribute to gaps. Specific investments and programs should be the result of consultation between Aboriginal peoples, governments, educators, and other stakeholders. But a first step must be a commitment of resources and goodwill by the federal government to address the issues.

4. Identify and support programs to narrow skills and education gaps between men and women.

To narrow the gaps between men and women, and boys and girls, in skills acquisition and PSE attainment, governments, institutions, and other stakeholders should identify and support specific programs that aim to address the causes of differing performance.

As the gaps between men and women differ depending on what metric one is examining, programs to address gaps between men and women will be many and varied. For example, programs to address boys' reading deficits will be different than those which address women's low participation in certain STEM disciplines. The federal government—perhaps through a newly created CCSHE—should develop an inventory of programs with demonstrated success in addressing the causes of specific gender gaps in skills and education performance. Provincial governments and institutions should provide additional support to expand those programs that demonstrate success.

5. Improve credential recognition and skills training for immigrants.

To improve the labour market participation and outcomes of immigrants, governments, institutions, and industry associations should work to improve credential recognition practices, and federal and provincial governments should invest more in skills development for recent immigrants.

Immigrants to Canada tend to be highly educated, but have weaker literacy and communication skills and often find that their educational and occupational credentials are not recognized by Canadian institutions and employers. If Canada is going to rely on highly educated immigrants to meet skills and occupational needs, then federal and provincial governments, educational institutions, and industry will need to build on and extend current efforts to achieve a better system of credential recognition. Additionally, given the integration challenges many immigrants face, additional essential and other skills training should be provided to ensure that they are able to use their full range of skills to contribute to Canada's economy and society, as well as their own well-being.

6. Increase employer investments in skills training.

To complement the skills development that occurs in higher education, and to ensure that they have the highly trained people they need, employers should increase investments in skills training.

Employers' weak investment in skills training is exacerbating skills pressures and preventing businesses and individuals from becoming more competitive. Even as many employers raise concerns about skills shortages, not enough are taking steps to address the challenge. They need to take more responsibility for the training that, ultimately, produces great benefits for them.[92] Existing and emerging provincial and federal initiatives, such as the Canada Job Grant, provide a wide range of incentives and support for employers. The governments that provide such incentives and support should assess how well those incentives actually generate new training and contribute to skills development and shift resources from poor-performing to strong-performing programs.

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[92] Canadian Council on Learning, *Securing Prosperity Through Canada's Human Infrastructure*, 27.

Canada 2020

Excellence and Equity in Skills and Higher Education

Canada's performance in higher education and skills development has been fairly strong for many years. We lead the world in producing higher education graduates, the skills they acquire place Canada near the top of international rankings, and our highly skilled people contribute to economic prosperity, and social, political and individual well-being. But there are signs that Canada's skills and higher education performance is deteriorating, that not enough is being done to address a range of economic and social problems, and that opportunities and benefits have to be on an excellence and equity agenda for skills and higher education. We do well, but we can do much better.

About the Author

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Crisis & Opportunity

John Brodhead
Executive Director, Evergreen CityWorks

Jesse Darling
Urban Project Designer, Evergreen CityWorks

Sean Mullin
Executive Director, Brookfield Institute for Innovation and Entrepreneurship

Time for
a National
Infrastructure
Plan for Canada

Foreword

Improved infrastructure is essential to raising future incomes of Canadians. Greater investment in public infrastructure is needed over the next decade to complement private investment in plant and equipment in order to maximize the productivity of Canada's shrinking labour force to population ratio in the years ahead. And it is a good time to start now making this investment. Financing costs are at historic lows and there is enough slack in labour markets across the country that such investment will not strain capacity and push up costs. This paper documents that rationale well.

What is novel about this paper is that it sets out a framework for a "National Infrastructure Plan" for Canada. A key element of this plan is that the federal (and provincial) governments decouple infrastructure investment decisions from annual operating budgets. Operational budgets need to be balanced,

but borrowing to finance infrastructure investment is absolutely appropriate – especially at today's low rates – when the expected future benefits are so large. A second key element is that public accounting rules and budget planning for infrastructure should reflect the capital nature of infrastructure expenditure just as private sector accounting rules and corporate planning procedures reflect the capital nature of expenditure on plant and equipment. Finally, a third element of the plan would very importantly provide tools for municipalities and other special public sector investment vehicles to efficiently access capital markets. These and other elements of a "National Plan" would facilitate financing of investment in public infrastructure today and over the next few decades – investment that will raise national productivity and the incomes of the current and future generations of Canadians.

by David A. Dodge, O.C.
Senior Advisor, Bennett Jones Former Governor of the Bank of Canada

Introduction

Infrastructure is central to every aspect of life in Canada. As a key driver of productivity and growth in a modern economy, as a contributor to the health and well-being of Canadian citizens, as a critical component of transporting goods and services across the country. It is a method for enabling communication and sharing of information between citizens, a means for providing core services such as water, electricity and energy and is a shaper of how our communities grow and contribute to our collective social fabric.

Increasing Focus on Infrastructure:

In recent years, an increasing number of papers have been issued drawing attention to Canada's infrastructure needs.
A select few include:

- *Rebuilding Canada: A New Framework for Renewing Canada's Infrastructure,* Mowat Centre, 2014
- *The Foundations of a Competitive Canada: The Need for Strategic Infrastructure Investment,* Canadian Chamber of Commerce, 2013
- *Canada's Infrastructure Gap: Where It Came From and Why It Will Cost So Much To Close,* Canadian Centre for Policy Alternatives, 2013
- *At The Intersection: The Case for Sustained and Strategic Public Infrastructure Investment,* Canada West Foundation, 2013
- *Canadian Infrastructure Report Card,* Federation of Canadian Municipalities, 2012

And, yet, across the country, Canadians are impacted by infrastructure that has failed to be maintained or that remains to be built. This is apparent in the deterioration of our roads and highways, the over-capacity of our public transit systems, underinvestment in affordable housing and social infrastructure, and the increased prevalence of environmental incidents, such as flooding in our urban areas. Canada's infrastructure, along with the institutional frameworks that fund and finance these assets, are in need of repair.

This paper attempts to set out the need for urgent federal attention to this issue. It will discuss some tools and levers the federal government has at its disposal to engage in what is a national issue, including proposing the creation of a national infrastructure strategy for the country.

This paper will start by reviewing the economic benefits of public infrastructure and highlight how current market conditions create a historic opportunity for increasing infrastructure investment. It will then review current estimates of the size of Canada's infrastructure deficit, followed by an examination of how the federal government's role in financing infrastructure has changed over the last 50 years. Finally, it will end by proposing an increased federal role in infrastructure planning and postulate what could be included in a National Infrastructure Plan.

As many have commented before this paper, it should no longer be a question of if we need to devote more resources to public infrastructure or if the federal government should be involved. The question for the Canada at this moment is how the federal government should engage and in what form and capacity.

Economic Benefits of Public Infrastructure

The economic case for investing in infrastructure has never been stronger. In recent years – and particularly in the aftermath of the financial crisis – a consensus regarding the positive economic benefits of stronger infrastructure spending has emerged among economists and policymakers. In addition to the non-economic benefits of infrastructure, a dollar of infrastructure spending has a positive effect on economic conditions in two ways: in the short-term, by supporting jobs and businesses, leading to lower levels of unemployment and higher levels of economic growth; and, in the long-term, by boosting the competitiveness of private businesses, thereby leading to greater wealth creation and higher living standards.

Within Canada, a recent Conference Board of Canada report undertook a detailed examination of the impacts of infrastructure spending on job creation and found that for every $1.0 billion in infrastructure spending, 16,700 jobs were supported for one year.[1] Moreover, these jobs are not just concentrated in the construction sector, as manufacturing industries, business services, transportation and financial sector employment also benefit from the spillover effect of infrastructure spending.

Increased investment in infrastructure will not only have direct impacts on the economy but will also spread through the economic through a series of multiplier effects.[2]

Examining the impact of infrastructure spending on GDP growth has found similar results. The same Conference Board report estimated that for every $1.0 billion in spending, GDP would be boosted by $1.14 billion, resulting in a multiplier effect of 1.14.[3] Other studies have shown similar effects, with estimated multipliers ranging from 1.14 to a high of 1.78, including Finance Canada's "Seventh Report to Canadians" estimating a multiplier of 1.6.[4]

Critical to this analysis is that virtually all recent estimates estimate the multiplier to be greater than 1.0, implying that every dollar of spending on public infrastructure boosts GDP by more than one dollar. Thus, infrastructure spending generates a positive economic return before projects are even completed, as the construction stage alone generates enough economic activity to justify the expense.

[1, 2, 3] Conference Board (2013)

[4] CCPA (2009), Finance Canada (2011)

However, the most important economic benefit of public infrastructure is the long-term effect it has on productivity and business competitiveness, which are critical components of a modern, growing economy.

In this case, investments in public infrastructure, such as roads and transportation systems, communication infrastructure, utilities, water and wastewater systems, and health and social infrastructure, result in lowered business costs and increased labour productivity.

Lower business costs result in increased private sector returns, allowing for higher rates of private investment and ensuring Canadian companies can remain competitive and grow on a global stage. Similarly, increased labour productivity results in higher wages and greater wealth creation for Canadian citizens.
(See *Cost of Inadequate Public Infrastructure* for a discussion of the impacts of failing to properly invest in public infrastructure.)

Cost of Inadequate Public Infrastructure: "The literature shows that inadequate public infrastructure is a threat to long-term economic growth. Inadequate public infrastructure lowers economic potential in a direct and obvious way according to this simple progression:

- Inadequate infrastructure results in increased costs for business.
- Increased costs result in lower return on private investment.
- Lower returns—profits—mean less money for business to re-invest in new plants, machinery and technology.
- Less investment means fewer jobs and less productive labour.
- Lower productivity means less economic output and lower personal incomes.

The end result is a loss of competitiveness and lower rates of economic growth."

At The Intersection:
The Case for Sustained and Strategic Public Infrastructure Investment,
Canada West Foundation (2013)

The Conference Board has estimated that roughly a quarter of all productivity growth in recent years is a result of public infrastructure investment.[5] Similarly, looking over a longer period of time, Statistics Canada estimated that up to half of all productivity growth between 1962 and 2006 can be attributed to investment in public infrastructure.[6]

Finally, increased economic activity and higher productivity rates allow the government to recoup a portion of its initial investment through higher tax revenues. Although estimates vary, the Conference Board study estimated that governments recover between 30% - 35% of every dollar spent on public infrastructure through higher personal, corporate and indirect taxes.[7]

Investment in public infrastructure has an immediate, short-term benefit to the economy, while also ensuring that businesses remain competitive in the long run. The alternative is to postpone investment, allowing existing infrastructure to decay and demand for new infrastructure to accumulate, ultimately restricting Canada's potential for future economic growth.

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[5] Conference Board (2013)

[6] Statistics Canada (2009)

[7] Conference Board (2013). Note that this actually underestimates the impact on tax revenues, as it only measures the benefits from the construction stage of investment and not the long-term benefits from higher productivity rates and increased profits and incomes.

A Window of Opportunity: The Time to Invest is Now

While the general case for investing in public infrastructure is clear, current economic conditions create an even more compelling rationale for investing in infrastructure – right now. Canada is at a unique moment in time where the need for a stimulative macroeconomic policy, historically low long-term interest rates and a large infrastructure deficit, together, combine to dictate the need to accelerate the rate of investment in public infrastructure.

While Canada has fared relatively well compared to its peers, economic recovery from the recent global financial crisis has nonetheless been slow, with employment and GDP growth rates lagging pre-recession levels.[8] Within this context, an increased focus on reducing fiscal deficits has resulted in a slowing of public spending just when economic conditions could most benefit from increased investment and infrastructure spending.

In a recent paper, David Dodge, former Governor of the Bank of Canada, called on governments to shift emphasis away from short-term deficit reduction to instead "expand their investment in infrastructure while restraining growth in their operating expenditures so as to gradually reduce their public debt-to-GDP ratio."[9] Dodge cites Canada's lagging productivity growth as a justification for additional infrastructure spending, as increased investment would "enhance multifactor productivity growth and cost competitiveness in the business sector and open up new markets for Canadian exports."[10]

In addition, faced with sluggish employment and weak economic growth, and with further monetary stimulus limited by near-zero interest rates[11], economists are returning to the idea that targeted fiscal stimulus should be a component of government economic policy.

As former United States Treasury Secretary Larry Summers writes:

> *In an economy with a depressed labor market and monetary policy constrained by the zero bound, there is strong case for a fiscal expansion to boost aggregate demand. The benefits from such a policy greatly exceed traditional estimates of fiscal multipliers, both because increases in demand raise expected inflation, which reduces real interest rates, and because pushing the economy toward full employment will have positive effects on the labor force and productivity that last for a long time.[12]*

According to this recent line of research, traditional benefits of public infrastructure investment are even greater during periods of economic slowdown, as more traditional means of spurring the economy are much less effective. A 2010 paper by Berkeley economists Alan Auerbach and Yuriy Gorodnichenko estimated that the multiplier on government investment is significantly higher (as much as 3.42) in times of recession.[13] This finding was further supported by a 2012 paper by two economists from the Federal Reserve Bank of San Francisco, Sylvain Leduc and Daniel Wilson, which focused specifically on public infrastructure spending and found that the multiplier on public infrastructure investment had a lower bound of 3.0.[14]

Finally, historically low long-term interest rates have created market conditions that are ideal for increased infrastructure spending. As can be seen in the above chart, long-term interest rates (that is, government bonds with terms greater than 10 years) have been hovering at levels lower than any point over the past 40 years.

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[8] See Wilkins (2014) or Globe and Mail (2014) for representative discussions examples of Canada's lagging recovery from the global recession.

[9] Dodge, Dion and Weekes (2014)

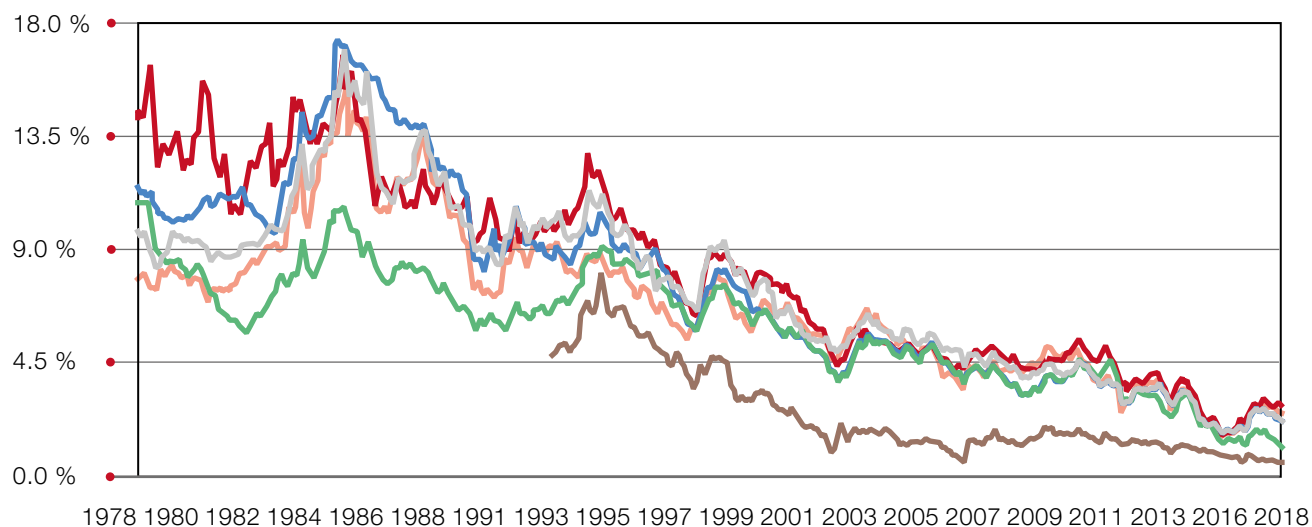[10] Dodge, Dion and Weekes (2014)

[11] In a near-zero interest rate environment, further monetary stimulus is restricted by the fact that interest rates cannot be cut below 0%.

[12] Ball, DeLong, and Summers (2012)

[13] Auerbach and Gorodnichenko (2010)

[14] Leduc and Wilson (2012)

Long-Term Interest Rates: 1974 to 2014

(Source: OECD)

Legend:
- Canada
- Germany
- United Kingdom
- France
- Japan
- United States

Given the long horizon associated with infrastructure assets, long-term, fixed-rate debt financing is an ideal instrument for providing the necessary capital required to increase investment levels. Lower debt-servicing costs effectively reduce the cost of infrastructure investments, while fixed-rate financing insulates projects (and governments) from future increases in interest rates. These macroeconomic conditions – low interest rates, a sluggish economy, and a looming infrastructure deficit – create a unique window of opportunity for the federal government. Focusing on public infrastructure investment can be a key tool for enhancing economic growth, resulting in increased productivity and employment, and improving the quality of life for Canadians.

Canada's Infrastructure Deficit

Many recent studies have attempted to quantify the current size of Canada's infrastructure needs. Determining a single number can be problematic, as various studies have focused on specific sectoral needs and have approached the challenge using different methodologies, sometimes resulting in overlap. Thus, instead of trying to determine one figure that represents the size of Canada's infrastructure deficit, we will briefly review a number of areas that require urgent attention from Canada's policymakers.

Urban and Municipal Infrastructure

Since the turn of the century there has been growing interest in urban issues and the role that cities play in securing Canada's economic competitiveness and high quality of life. Today, municipal infrastructure in Canada has reached a breaking point.

The majority of municipal investment was made when there was little understanding of the role that infrastructure plays in maintaining and strengthening social bonds, public health and the integrity of our natural environment. In many cases, these decisions have locked residents and

communities into ways of life that are now perceived as unsustainable. This challenge is magnified by the fiscal gap and lack of fiscal levers confronting Canadian municipalities as they plan for the future.

Faced with the dual problems of declining investment and aging infrastructure, the Federation of Canadian Municipalities has estimated that Canada's municipal infrastructure deficit is $123 billion and growing by $2 billion annually.[15] This estimate is comprised of four categories, including:

- Water and Wastewater Systems ($31 billion);
- Transportation ($21.7 billion) and Transit ($22.8 billion);
- Waste management ($7.7 billion); and
- Community, Cultural and Social Infrastructure ($40.2 billion).

Road Networks, Transportation and Electricity Infrastructure

Efficient road networks and transportation systems are critical for the functioning of a modern economy. Reducing gridlock ensures that goods can be easily transported across the country, reducing business costs and enhancing trade. Effective public transit and uncongested road networks allow for faster commute times, reducing worker stress and increasing labour productivity.

Within this context, the need for investment has been highlighted by a number of studies:

The McKinsey Global Institute has estimated that Canada must invest $66 billion into maintaining and repairing urban roads and bridges between 2013 and 2023.[16]

- Transit systems across the country require $4.2 billion annually for repair and replacement of existing assets. This estimate excludes meeting unmet or future demand.[17]

- The Canadian Chamber of Commerce has estimated that congestion is costing the country, as a whole, $15 billion per year, which is equivalent to almost one percent of Canada's GDP.[18]

- It is estimated that upgrading Canada's electricity infrastructure between 2010 and 2030 will cost over $300 billion, requiring an annual investment higher than any level of investment in any previous decade.[19]

[15] Mirza (2007)

Extreme Weather: Too Costly to Ignore

Extreme weather is becoming increasingly more prevalent throughout Canada. The recent spike in natural disasters has resulted in unprecedented social and economic consequences for residents, businesses and governments across Canada. Prior to 1996, only three natural disasters exceeded $500 million in damages (adjusted to 2010 dollars). However, beginning in 1996, Canada has averaged one $500 million or larger, disaster almost every single year. And, according to the Insurance Bureau of Canada, for the first time water damage passed fire damage in terms of the amount of insurance claims across the country last year.

Property damage created by small weather events has also become more frequent. Canada's sewage systems are often incapable of handling larger volumes of precipitation. This is particularly a problem for older cities in central and eastern Canada where there is great need to rehabilitate water and sewage systems to mitigate the chance of flooding.

By 2020, it is estimated that almost 60 percent of Montreal's water distribution pipes will have reached the end of their service life. This is particularly concerning given that the International Panel on Climate Change determines that extreme weather, such as heavy precipitation, will become more frequent over the next 50 years.

The need to prepare for the new reality of extreme weather and climate change becomes clear when the economic consequences are exposed. The average economic cost of a natural disaster is $130 billion and lowers GDP by approximately 2 percent. This is attributable to the rising occurrence of severe weather affecting urban areas that have high-density populations and high-value assets. In the aftermath of a disaster, lost tax revenue and demands for relief and reconstruction place enormous fiscal strain on governments. On average, it is estimated that natural disasters increase public budget deficits by 25 percent.

[16] McKinsey Global Institute (2013)

[17] Mirza (2007)

[18] Canadian Chamber of Commerce (2013)

[19] Canadian Chamber of Commerce (2013)

Global Estimates

Finally, a number of global estimates of Canada's infrastructure deficit – across all sectors and sub-national jurisdictions – do exist. A 2013 study by the Canadian Chamber of Commerce estimated that the breadth of investment needed to address Canada's infrastructure deficit could be as high as $570 billion.[20]

Additionally, a recent study by the Canada West Foundation estimated the accumulated infrastructure debt at $123 billion for existing infrastructure, with an additional $110 billion required for new infrastructure.[21] Finally, in a sobering report, the Association of Consulting Engineers of Canada estimates that 50 percent of public infrastructure will reach the end of its service life by 2027.[22]

Moreover, estimates of the effect of chronic underinvestment in infrastructure have shown that the infrastructure deficit is hindering our national competitiveness. Between the mid-1990s and 2006, infrastructure investment within Canada declined, while the United States increased spending by 24 percent. During the same period, Canada went from near parity with the productivity of the United States to 20 percent lower.[23]

It is clear that, regardless of the exact size of Canada's infrastructure needs, the various estimates agree that the problem is significant in scale and that drastically increased levels of public investment are warranted.

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[20] Canadian Chamber of Commerce (2013)

[21] Canada West Foundation (2013)

[22] Association of Consulting Engineers of Canada (2004)

[23] Canadian Chamber of Commerce (2013)

Declining Role of Federal Involvement in Infrastructure

Over the past 50 years, there has been a significant shift in the ownership and funding of public infrastructure between the three levels of government.[24] In 1955, the federal government owned 44 percent of public infrastructure, the provinces owned 34 percent and local governments owned 22 percent. Today, provincial, territorial and municipal governments own and maintain roughly 95 percent of Canada's public infrastructure.[25]

Chart 1 / Asset Shares by Order of Government

(Canadian Centre for Policy Alternatives, 2013)
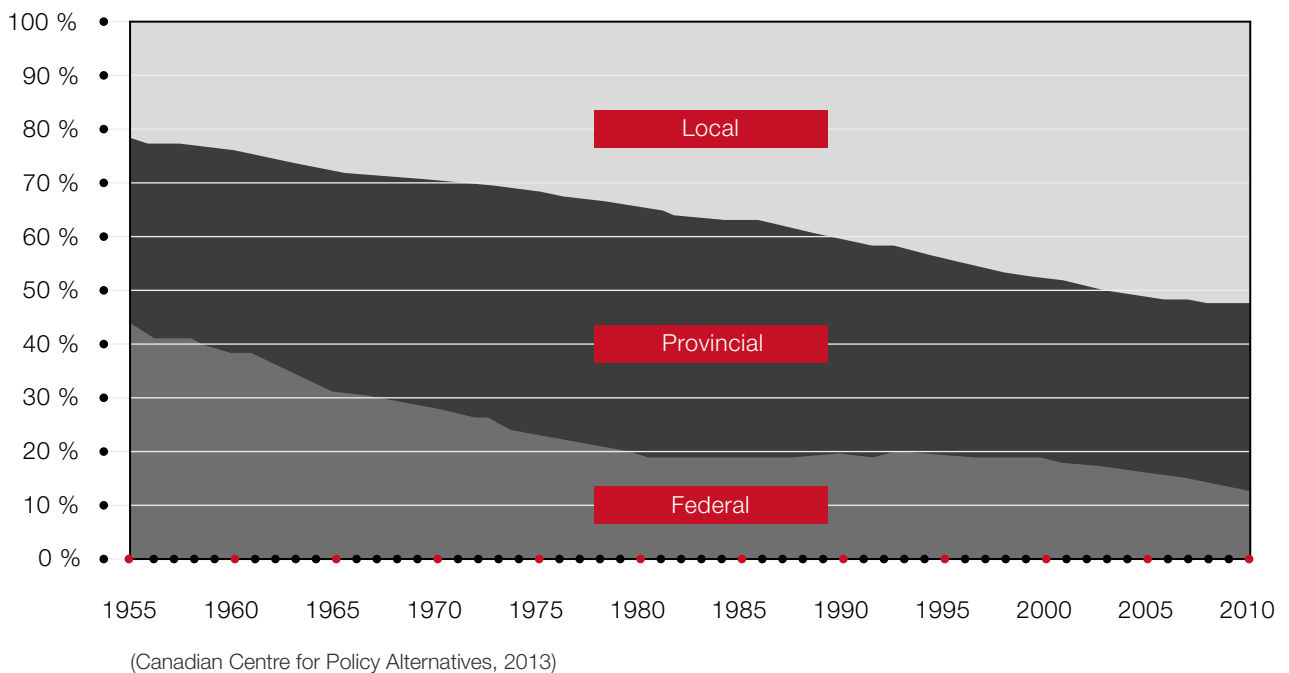
Municipalities own 52 percent of public infrastructure, but collect just eight cents of every tax dollar.[26] In our existing taxation structure, the federal and provincial government collect more than 90 percent of all taxes paid by Canadians.[27] Senior levels of governments benefit from sales, income and corporate taxes, which are responsive to economic growth.

Local governments are increasingly dependent on property taxes, a regressive funding tool that is the least responsive to growth and impacts middle-and-low-income people the hardest.[28]

[24] Canadian Centre for Policy Alternatives (2013)

[25] Government of Canada (2013)

[26] Federation of Canadian Municipalities (2006)

[27] Federation of Canadian Municipalities (2012)

[28] Federation of Canadian Municipalities (2012)

While transfer payments from the federal government to the provincial government increased throughout the 2000s, a corresponding increase in transfer payments from the provincial government to local governments has failed to materialize.[29] The shift in responsibilities without corresponding capacity to respond has created a structural imbalance between local authorities and federal and provincial governments.

Chart 2 / Intergovernmental Transfer Payments, % of GDP, 1961- 2011

Net Transfers Federal to Provincial

Net Transfers Provincial to Local

Net Transfers Federal to Local
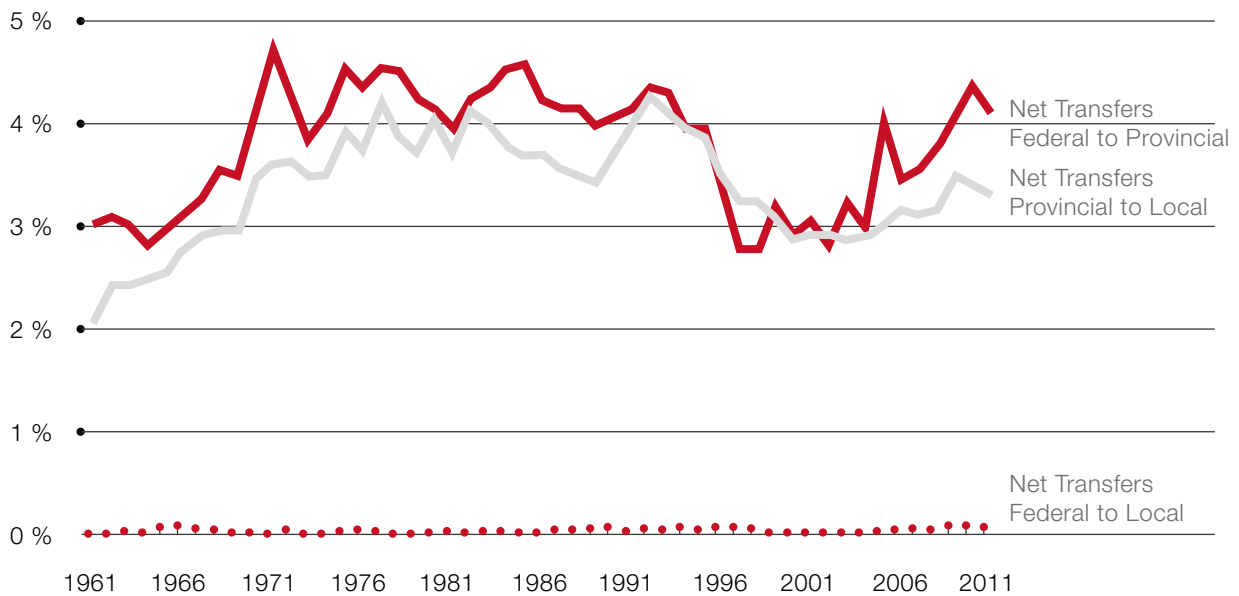
(Centre for Policy Alternatives, 2013)

Recognizing that a new approach to federal funding for provincial, territorial and municipal infrastructure was needed, the Government of Canada began to re-enter the municipal infrastructure conversation in the early 2000's. This renewed interest led to the creation of the Department of Infrastructure and a series of shared-cost infrastructure programs.

And governments of all political stripes have recognized the importance of infrastructure and have continued to invest. The 2007 Building Canada Plan for example, divided funding between transfer payments and projects that were deemed of national significance. Municipalities would receive $17.6 billion in predictable revenue over the course of seven years derived from the federal gas tax and GST rebate.

At the same time, the federal government would invest $13.2 billion in national priority projects. While we should be encouraged by the interest the past few federal governments have taken in financing infrastructure across the country, according to the OECD our federal government continues to play a relatively small role in funding infrastructure.[30] The provincial, territorial and local governments in Canada play a larger role relative to the federal government in public infrastructure funding than is the case in comparative countries like Germany, Australia, the United States and other similar OECD countries.[31]

[29] Centre for Policy Alternatives (2013)

[30] OECD (2014)

[31] OECD (2010)

The renewed interest in the role and importance of infrastructure saw public investment in Canadian infrastructure reach just over 3 percent of GDP in 2008.[32] This investment barely surpasses the annual investment of 2.9 percent of national GDP that is required just to maintain the current infrastructure stock.[33] By way of comparison, the world average expenditure on public infrastructure is 3.8 of GDP per year.[34] To promote prosperity and improved productivity throughout Canada, experts have postulated that a total annual investment of 5.1 percent of GDP is required.[35]

While our federal government has shown great progress over the past number of years re-engaging in the infrastructure challenge, clearly there is more work to be done. The next section lays out the case for a National Infrastructure Plan and its potential components.

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[32] Federation of Canadian Municipalities (2012)

[33] Residential and Civil Construction Alliance of Ontario (2014)

[34] Economist Magazine (28 September, 2013)

[35] Residential and Civil Construction Alliance of Ontario (2014)

A National Infrastructure Plan for Canada

It is evident that one piece that is missing from the federal landscape is a comprehensive National Infrastructure Plan that could coordinate Canada's planning and investment decisions with respect to public infrastructure. While a complete, comprehensive plan is beyond the scope of this paper, it is nonetheless instructive to review possible components of what could be included in a National Infrastructure Plan for Canada.

What Could a National Infrastructure Plan Look Like?

The need for a National Infrastructure Plan is clear. Countries that exhibit best practices for infrastructure investment have decision-making frameworks driven by a strong central government committed to innovation and economic development. Within these frameworks, projects move forward based on 50 to 100 year forecasting and planning, establishing a platform for innovation, resiliency and prosperity.[37]

UK's National Infrastructure Plan
In 2010, the UK government introduced its first National Infrastructure Plan.

"…the Government is setting out, for the first time, a broad vision of the infrastructure investment required to underpin the UK's growth."

" The role of the Government in this work is clear. It is to specify what infrastructure we need, identify the key barriers to achieving investment and mobilise the resources, both public and private, to make it happen."
By 2013, the UK's NIP, updated annually, included a pipeline of projects valued over £375 billion, status reports on projects valued over £50 million, detailed funding tools and mechanisms, and a comprehensive framework for evaluating and prioritizing infrastructure investment across the country.

For example, in the Netherlands, the Dutch government has been actively involved in setting strategic infrastructure plans since the 1960s, particularly with respect to projects of national interest. A recent World Economic Forum report on global competitiveness ranked the Netherlands 1st for quality of port infrastructure and electricity supply and ranks Netherlands 5th overall out of 144 countries in global competitiveness.[38]

Moreover, national governments are helping cities execute visionary plans that are embedded in infrastructure as a means to enhance global competitiveness. These countries recognize that providing integrated, efficient infrastructure is essential to offering a high quality of life and business environment that prospective investors and residents find attractive and find the means to finance it.[39]

To help shape this concept, the authors propose that a National Infrastructure Plan could, at minimum, include the following components:

A comprehensive, multi-year plan that would prioritize infrastructure projects across a number of areas of national significance. This plan would include a pipeline of projects, prioritized by status such as completed, under construction, funded and awaiting approval. Under this structure, the plan would be updated at least once a year to reflect movement in the project pipeline and changes in strategy or emphasis.

Transparent disclosure of infrastructure planning and project prioritization. Building on the last point, any infrastructure plan would need to transparently describe the infrastructure planning and prioritization process, including publishing decision-making criteria and detailing the status of projects under consideration for funding.

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[37] KPMG (2012)

[38] Cor (2013), World Economic Forum (2013)

[39] PWC (2014)

- **Dedicated annual targets for infrastructure investment.**
  For example, targeting a certain percentage of GDP each year would ensure that the infrastructure deficit is slowly reduced, while demands for new infrastructure are met. The plan could include flexibility to accelerate planned infrastructure investment in times of economic slowdown or recession.

- **A decoupling of infrastructure investment decisions from annual operating budgets.**
  The long-term benefits of public infrastructure investment require a decoupling from the short-term incentives associated with deficit reduction. Although infrastructure spending obviously cannot be undertaken in complete isolation of the government's fiscal situation and would need to be publicly reported in a transparent manner, it should nonetheless be somewhat insulated from the volatility of annual fiscal budgeting.

- **A detailed inventory of infrastructure needs, including maintenance and new build requirements.**
  The federal government should play a coordinating role in collecting and assessing infrastructure needs across Canada. This inventory should then be used by policymakers to prioritize future infrastructure funding levels and project investment decisions.

- **Clear, transparent rules for infrastructure funding programs.**
  For programs that involve partnering with provinces or municipalities, application rules should be transparent and predictable. Program funding levels should not be capped, but rather provided with annual allocations, thus ensuring that projects that are unsuccessful in one year can be prioritized in a following year.

- **Accounting and budgeting provisions that recognize the multi-year nature of infrastructure investment, including a separate Capital Budget.**
Again, as infrastructure planning operates on time horizons well beyond annual budgeting cycles, accounting rules and budget planning for infrastructure should be updated to reflect this reality. This should include separately accounting for capital spending within the government's fiscal budgeting process and ensuring that all infrastructure investments, including projects that are partnerships with provinces or municipalities, are appropriately capitalized over the life of the asset.

- **Financial tools for municipalities and public sector entities who cannot efficiently access capital markets.**
Building on the success of P3 Canada, the federal government should create centres of excellence in financing, access to capital, project planning and infrastructure budgeting that smaller public sector entities can utilize. This centralization of expertise will result in the promotion of best practices across Canada and allow for smaller players to benefit from the economies of scale associated with a pan-Canadian infrastructure plan.

- **Dedicated funding mechanisms to address the misalignment of infrastructure responsibilities with fiscal capacity.**
This could include, among other mechanisms, transferring fiscal capacity from the federal government to municipalities, as the greatest imbalance exists between these two levels of government.

Finally, this list is not an attempt to comprehensively describe what may be included in a National Infrastructure Plan, but rather an attempt to start a dialogue on the subject. The authors invite policymakers and thought leaders to build upon this outline to develop a comprehensive vision for what should be included in a National Infrastructure Plan for Canada.

Conclusion

Modern public infrastructure is a crucial component of national prosperity and high living standards. But decades of neglect and underinvestment have left Canada on the precipice of a national crisis in terms of our collective infrastructure needs.

Numerous studies and analyses have shown that Canada faces a substantial infrastructure deficit, both in terms of maintaining our existing assets, as well as servicing unmet demand for new infrastructure. This deficit extends across almost all areas of public infrastructure, including transportation and transit, water and wastewater, social and cultural institutions, affordable housing, electricity transmission, environmental and climate change adaptation and many more. The long decline of federal involvement in infrastructure spending has exacerbated the problem, as the vast majority of infrastructure inventory is in the hands of Canada's municipalities and provinces, creating a misalignment between funding responsibility and fiscal capacity within the country.

This challenge, while dire, also represents a key opportunity for Canada's federal government. The economic benefits of investing in public infrastructure are numerous and substantial, with additional investment providing badly-needed stimulative effects in the short-term and contributing to higher productivity and a more competitive economy in the long run. Moreover, current market conditions, including historically low long-term interest rates, create a window of opportunity for decisive action by an active and committed federal government.

It is time for the federal government to play a more active role in the planning and funding of public infrastructure within Canada. A critical starting point would be the creation of a National Infrastructure Plan, following the example of other countries such as the U.K.

A national strategy, while respecting provincial and municipal jurisdiction, would coordinate infrastructure efforts across Canada, take advantage of the federal government's greater fiscal capacity, create clear, transparent rules for infrastructure programs, enhance transparency of infrastructure planning and prioritization and share best practices across Canada. Only the federal government has the ability, authority and fiscal capacity to play this role within Canada.

The state of Canada's infrastructure represents both crisis and opportunity for our country. Only by taking decisive action now, can the federal government ensure we collectively seize the latter and avoid the former.

Sources

Canadian Chamber of Commerce (2014): http://www.chamber.ca/advocacy/top-10-barriers-to-competitiveness/Booklet_Top_10_Barriers_2014.pdf

Centre for Policy Alternatives (2013): http://www.policyalternatives.ca/sites/default/files/uploads/publications/National%20Office/2013/01/Canada's%20Infrastructure%20Gap_0.pdf

"Bennett Jones Spring 2014 Economic Outlook", David A. Dodge, Richard Dion and John M. Weekes (2014): http://www.bennettjones.com/Publications/Updates/Bennett_Jones_Spring_2014_Economic_Outlook/

David Dodge (2014): http://www.cbc.ca/news/business/david-dodge-says-low-rates-should-encourage-infrastructure-spending-1.2673828

Dupuis and Ruffilli (2011): http://www.parl.gc.ca/content/lop/researchpublications/cei-24-e.htm?Param=ce4

Economist Magazine, 28 September, 2013

Environment Canada (2013): http://ec.gc.ca/meteo-weather/default.asp?lang=En&n=3318B51C-1

Federation of Canadian Municipalities (2006): http://www.fcm.ca/Documents/reports/Building_Prosperity_from_the_Ground_Up_Restoring_Muncipal_Fiscal_Balance_EN.pdf

Federation of Canadian Municipalities (2008): http://www.fcm.ca/Documents/reports/Infrastructure_as_Economic_Stimulus_EN.pdf

Federation of Canadian Municipalities (2009): http://www.fcm.ca/Documents/reports/Municipal_Infrastructure_Projects_Key_to_Putting_Canadians_to_Work_EN.pdf

Federation of Canadian Municipalities (2012), State of Canada's Cities and Communities http://www.fcm.ca/Documents/reports/The_State_of_Canadas_Cities_and_Communities_2012_EN.pdf

Government of Canada (2013): http://www.budget.gc.ca/2013/doc/plan/budget2013-eng.pdf

Infrastructure Canada (2013): http://www.civicinfo.bc.ca/Library/Asset_Management/Presentations/Workshop_on_Asset_Management_October_2013/Federal_Infrastructure_and_Asset_Management--Infrastructure_Canada--October_10_2013.pdf

Insurance Bureau of Canada (2012): http://www.ibc.ca/en/natural_disasters/documents/mcbean_report.pdf

Insurance Bureau of Canada (2014): http://www.ibc.ca/en/natural_disasters/documents/economic_impact_disasters.pdf

KPMG (2012): http://www.kpmg.com/Africa/en/Documents/Infrastructure-100-world-cities-2012.pdf

McKinsey Global Institute (2013): http://www.mckinsey.com/insights/engineering_construction/infrastructure_productivity

Mirza (2007): https://www.fcm.ca/Documents/reports/Danger_Ahead_The_coming_collapse_of_Canadas_municipal_infrastructure_EN.pdf

OECD (2010): http://www.oecd.org/governance/regional-policy/48724540.pdf

OECD (2014): http://www.keepeek.com/Digital-Asset-Management/oecd/economics/economic-policy-reforms-2014_growth-2014-en#page1

PWC (2014): http://www.pwc.com/en_GX/gx/psrc/publications/assets/pwc-investor-ready-cities-v1.pdf

Residential and Civil Construction Alliance of Ontario (2014): http://www.rccao.com/news/files/RCCAO_Ontario-Infrastructure-Investment_July2014-WEB.pdf

"UK National Infrastructure Plan 2010", *HM Treasury*, United Kingdom (2010): https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/188329/nip_2010.pdf

"UK National Infrastructure Plan 2013", *HM Treasury*, United Kingdom (2013): https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/263159/national_infrastructure_plan_2013.pdf

"Leadership for Tough Times: Alternative Federal Budget Fiscal Stimulus Plan", *Canadian Centre for Policy Alternatives* (2009): http://www.policyalternatives.ca/sites/default/files/uploads/publications/National_Office_Pubs/2009/Leadership_For_Tough_Times_AFB_Fiscal_Stimulus_Plan.pdf

"Canada's Economic Action Plan: A Seventh Report to Canadians", *Finance Canada* (2011): http://www.fin.gc.ca/pub/report-rapport/2011-7/pdf/ceap-paec-eng.pdf

"Monetary Policy and the Underwhelming Recovery", Remarks by Carolyn Wilkins, Senior Deputy Governor of the Bank of Canada, September 22, 2014: http://www.bankofcanada.ca/wp-content/uploads/2014/09/remarks-220914.pdf

"The growth puzzle: Why Canada's economy is lagging the U.S.", Globe and Mail, March 5, 2014: http://www.theglobeandmail.com/report-on-business/economy/economy-lab/the-growth-puzzle-why-canadas-economy-is-lagging-the-us/article17299527/

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Once More into the Breach

Wesley Wark
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Strengthening Canadian Intelligence and Security Accountability

Foreword

It is accepted wisdom that the world changed on 9/11. Perhaps, it is only now, though, with the tabling of new anti-terrorism legislation, Bill C-51, that Canadians are beginning to understand how much change has taken place here at home as we attempt to ensure our country's national security while protecting our individual civil liberties.

As the Minister of Justice on 9/11 and the first Minister of Public Security and Emergency Preparedness, I learned, firsthand, how important it is to achieve balance between these two imperatives – keeping Canadians safe from threats to our national security while, at the same time, ensuring the minimum intrusion possible upon their civil liberties.

Wesley Wark, a leading Canadian expert on national security issues, has written a timely paper, making the case that our mechanisms of accountability have not kept pace with the expansion of powers granted to our intelligence and law enforcement agencies.

Professor Wark puts to oneside the often distracting discussion around the distinctions (although they are important) between "review" and "oversight" and focuses on the broad concept of "accountability". He defines "accountability" as "the big picture objective of a system operating at numerous points of contact with, and scrutiny of, security and intelligence agencies".

Wark discusses who benefits from a robust regime of accountability; what is wrong with our current system and what needs to be done to create a strengthened system of accountability.

From my perspective, as a former Minister responsible for most of the agencies discussed by Professor Wark, I find little with which to disagree. It is hard for even the most diligent of Ministers to push back on agencies who argue for more powers and more resources "to keep Canadians safe". And our existing Parliamentary committees have little chance of acquiring the level of expertise required to hold both the Minister, and the agencies for which she is responsible, to account.

Wark makes the point that the agencies, themselves, will not agree willingly to enhanced transparency and accountability. Experience tells me that they will argue actively against it (and often for reasons that are difficult for the Minister or her staff to assess independently).

Parliamentary oversight, of the kind our partners in the "Five Eyes" have implemented, is supported by Professor Wark, as it is by me. The Government, of which I was a part, did introduce legislation in November 2005, creating a new, all-party, Parliamentary committee with special powers of review. An election intervened and the government of Prime Minister Harper has chosen not to take up such legislation over the past, almost ten years.

Professor Wark, being a realist, acknowledges the political stalemate in which we find ourselves at the moment, as it relates to new accountability mechanisms. In response, he offers up something he calls "purposeful study". I cannot deny being disappointed in this, his main recommendation – it seems so modest. However, I do acknowledge that much has happened over the years since 9/11, both here and elsewhere as it relates to effective and transparent accountability mechanisms. Therefore, perhaps, for now the best we can offer Canadians is "purposeful study".

Professor Wark's analysis and recommendations are based on an intimate knowledge of our national security apparatus and are well worth taking the time to consider.

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Introduction

The tabling of new, omnibus anti-terrorism legislation, Bill C-51, in the Canadian Parliament in January 2015, has re-energized calls for greater "oversight" of Canadian intelligence and security practices. Many voices have weighed in, from former Canadian Prime Ministers, to the NSA whistleblower, Edward Snowden, who called out Canada for having one of the "weakest oversight" frameworks for intelligence gathering in the Western world.[1] The concern is understandable. Not only are there significant legacy problems with our existing system of accountability, but the various new powers proposed in Bill C-51 are bound to impact greatly on security and intelligence practices. If the Bill is passed in its present form, a new information sharing regime within the Canadian government will be established; Canada's 'no fly' list will be re-tooled; the Canadian Security and Intelligence Service [CSIS] will acquire a new "disruption" mandate; criminal offenses for the advocacy and promotion of terrorism will be added to the Criminal Code, expanding the national security law enforcement mandate of the Royal Canadian Mounted Police.

Additional provisions for dismantling web sites deemed to support terrorism "propaganda" will inevitably involve the Communications Security Establishment, Canada's signals intelligence and cyber security agency. Higher secrecy walls will be built around the use of security certificates under the Immigration and Refugee Protection Act. How all these measures will impact exactly is hard to determine without experience, but it is precisely in this unknown space, moving forward, that strong accountability needs to operate.

These new legislative powers, for which the Government aims to acquire Parliamentary approval before the summer recess, build on more than a decade of significant increases in the power, resources and capabilities of Canadian intelligence and security agencies. Major changes, post 9/11, to the agencies and departments that comprise the Canadian security and intelligence community have not been matched, to date, by any increased ability to scrutinize their activities. Indeed there has been some rollback, notably in the decision of the Harper government to abolish the function of the Inspector General of CSIS in 2012.

Now we are into a further expansion of powers, with a growing demand that a concomitant increase in accountability finally be afforded. Unusually, this demand has not been fueled by scandal, as has been the case in the past. Scandal was the root cause of the creation of Canada's two principal review bodies, the Security Intelligence Review Committee (SIRC), twinned at birth with CSIS in 1984, and the Commissioner for the Communications Security Establishment, created in 1996, and charged with a watchdog function over Canada's electronic spy agency. It was the scandal of the Maher Arar affair that led to recommendations for reform of Canada's accountability system in 2006 (recommendations which were not acted on).[2] The current demand for greater accountability stems instead from legitimate concerns that Canada has reached a point of imbalance between measures to protect our security and measures to protect our basic rights. Because finding the right balance is so difficult in a world of changing threats and increased security powers conducted in an environment of secrecy, we look to systems of accountability as a check on abuses, as a restorative mechanism, and as a vital form of public reassurance.

Finally, and importantly, the public and political environment has changed. Canadians have experienced more than a decade of persistent terrorism-related security threats, culminating in two unfortunately successful, if small scale, terrorist attacks in October 2014. Current concerns about terrorism threats may now be at their highest level since the 9/11 attacks, stoked by a succession of terrorist attacks around the world, by concerns that Canada may truly be a target, as the Islamic State group has publicly proclaimed, and by the heated political debate around new anti-terrorism legislation. In the period since 9/11, Canadians have learned more about Canadian security and intelligence practices than has ever been the case in any previous era of Canadian history. Attention is being paid, including in unprecedented ways by both the traditional and new media, and with that attention has come an appetite for more—more knowledge, more information from government, more explanation, more transparency. The secret world now confronts a public demand for more openness, and into that breach stronger accountability must rush. There is no more ominous recipe for failure, both for operational performance and the maintenance of civil liberties, than if security and intelligence institutions lose public trust and legitimacy.

For all of these reasons: concerns about the potential loss of our ability to balance security needs and rights protections, fears of new powers and their unknowable usage, a fast changing security environment, heightened public awareness, and new demands for knowledge of state practices, we face an unusual moment of a crisis of confidence in the existing mechanisms of security and intelligence accountability. The crisis might pass, but the opportunity to fix an antiquated and wholly inadequate system of accountability should not be allowed to slip by.

The Canadian accountability system for intelligence and security was once widely touted as pioneering and impressive—once being in the 1980s and early 1990s. We even engaged in some quiet, behind-the-scenes, efforts to export our model of accountability to newly emerging democracies in places like Eastern Europe after the fall of the Soviet Union. It is not far-fetched to imagine that we could return Canada to being a world leader among democracies when it comes to holding a burgeoning spy and security system to proper account, while letting them get on with doing their needful, lawful work to protect national security and contribute to international security.

To push in this hopeful direction, three things need to be established:

1. What purpose does accountability serve (or who benefits)?
2. What is wrong with the current system of accountability?
3. What changes are needed?

But first, a word about words. As many other commentators have noted (and political points have even been scored on this front), there is a great confusion around the terms used in this debate. "Oversight," "review," "accountability" are the major phrases of the art, sometimes used interchangeably in ways that are bound to create confusion. The most over-arching concept, and to my mind the preferable one, is "accountability."

Striving for accountability best represents what Canadians need from a system that scrutinizes the activities of our security and intelligence agencies from multiple perspectives and vantage points. Accountability contains elements of both oversight and review, an idea embraced by Justice O'Connor in his study of a new mechanism for scrutiny of the RCMP's national security activities (Arar Inquiry, Part 2). Oversight in the professional lexicon means engagement with current and ongoing intelligence and security activities. This professional definition (which captures how the intelligence committees of the US House and Senate operate) is at odds with a common sense one that takes oversight to mean a capacity to scrutinize a security and intelligence system as a whole, from a strategic perspective. We can avoid this confusion by agreeing to talk about accountability instead. Accountability incorporates elements of "oversight" conducted in the Canadian, Westminster system by the executive branch, and of retrospective "review" conducted by external, independent agencies. It embraces internal measures within agencies, and external judicial controls. There is a place for an important role by Parliament in a system of accountability. Accountability represents the big picture objective of a system operating at numerous points of contact with, and scrutiny of, security and intelligence agencies.

Accountability for security and intelligence: Who Benefits?

In their public letter arguing for strengthening the accountability regime for Canada's security and intelligence agencies, four former Canadian Prime Ministers offered this succinct statement of purpose:

> "A strong and robust accountability regime mitigates the risk of abuse, stops abuse when it is detected and provides a mechanism for remedying abuses that have taken place."[3]

While this statement accords with Canadian practice and reflects the scandal-driven context in which we have created elements of our accountability system in the past, I would argue that it is too narrowly constructed. The focus on abuses is an important part of the role of any democratic accountability system, and must remain a perennial feature. But to erect an elaborate system of accountability solely to catch abuses, while it might mirror public concerns, is insufficient. Accountability plays other, important roles both within the secret space of security and intelligence agencies, and in the public domain. Accountability systems are meant to provide support to internal cultures of lawfulness generated by leadership directives and training

programs. It is in this internal cultural space that any abuses of law or government direction are best nipped in the bud. Accountability is also meant to assist in improved operational performance, in a wide variety of ways, including learning lessons from past operational or policy errors.

Accountability systems have to be acknowledged as a burden to security and intelligence agencies: they take time, attention, personnel resources away from purely operational matters. But they must not be seen as an unnecessary, unproductive burden. Too singular attention to abuses magnifies this problem. An understanding of the role of accountability in internal cultural and policy support and in performance improvements is vital. Most security and intelligence agencies know this, however reluctantly; but the public needs to know it as well.

The other important function of accountability operates in the public, political space. Here, accountability offers more than a check on abuses. It also has the power to provide for public reassurance and public education.

In an age when the public is rightly concerned both about threats to national security and about the enlarged, intrusive powers of security and intelligence agencies, accountability can offer an authoritative, independent source of information about the nature of threats, the nature of responses undertaken by security and intelligence agencies, about lawfulness issues and, on occasion, about the ultimate question of how well (or badly) our security and intelligence agencies are doing to provide for public security—what is sometimes referred to as the efficacy question. It can be a major contributor to sustaining public legitimacy around secret intelligence and security functions.

Accountability thus has multiple purposes and multiple audiences. It is meant to sustain lawfulness and contribute to successful performance. It is meant to speak in secret internally and to speak loudly in public. It has to manage these multiple audiences, and to find the right balance between internally directed messaging and messaging for public consumption.

Who benefits? In theory, everyone. Intelligence and security agencies benefit; government benefits; the public benefits. In practice, a major impediment to strengthening Canadian accountability is precisely the absence of recognition that everyone benefits. The root causes of this are a reluctance on the part of security and intelligence agencies to openly embrace accountability; a reluctance on the part of Government to see the benefits in contrast to seeing the costs of exposure and loss of informational control; an inability on the part of the public to truly grasp the value of accountability, largely because national security accountability mechanisms in Canada, particularly our existing review agencies, SIRC and the CSE Commissioner, have been so bad at addressing the public audience.

What is Wrong with the Current (Canadian) system of accountability?

The current Canadian system of accountability can be measured against many variables, but two in particular are on offer in the joint letter from our former Prime Ministers: robustness and integration. As their letter states:

"We all also share the view that the lack of a robust and integrated accountability regime for Canada's national security agencies makes it difficult to meaningfully assess the efficacy and legality of Canada's national security activities."[4]

Robustness refers to the general capacity of the accountability system to see into those dark spaces of security and intelligence where it needs to peer (access) and to report appropriately. Integration refers to the ability of the different moving parts of an accountability system to work together - to be, in fact, a system. It has another meaning that looks outward to the scanning capacity of accountability.

To explore these problems further, it is helpful to distinguish between internal mechanisms for oversight, generally in the hands of agency heads, deputy ministers and Ministers, and external review mechanisms.

It is, admittedly, extremely difficult to pronounce on the adequacy of internal oversight in the Canadian system, as this is conducted largely out of sight. It would appear to be the case that internal cultures of lawfulness within security and intelligence agencies are currently sound and that agency leadership is strong. Deputy Ministers have a clear mandate to ensure lawfulness and efficacy of their portfolio agencies and "serve at pleasure." Greater problems may exist at the Ministerial level, the pinnacle of internal oversight, in terms of the capacity of Ministers to perform their accountability function. This requires knowledge, engagement and clear direction and can sit uncomfortably with notions of the complexity and secrecy of national security operations, their necessary degrees of independence, the desire to avoid overt politicization and even the desire to have some degree of plausible deniability. Ministers engage too closely with national security agencies at their peril; they remain too distant and removed from national security agencies also at their peril. It's a fine balancing act that needs constant adjustment and cannot stand alone.

There are documented hints that not all is well, including a recent 2013 study commissioned by the Department of National Defence on the review of Defence Intelligence activities, that argued:

> "While the Minister of National Defence provides Ministerial direction to DND/CAF on the Government's intelligence priorities each year, strategic direction for DI [Defence Intelligence] activities is otherwise weak, outdated or ad hoc."[5]

Included in the Defence intelligence portfolio are the Communications Security Establishment and the Chief of Defence Intelligence, whose remit includes elements of counter-intelligence, security, threat assessment and overseas operational support.

Controversial Ministerial directives, from the Minister of Public Safety to CSIS, the RCMP and CBSA, on the handling of information and intelligence possibly derived from torture suggest that the Minister of Public Safety has been content to push decision-making authority on such matters down to the level of agency heads, or even managers within agencies.[6]

The most recent annual report (2013-14) from the Security and Intelligence Review Committee (SIRC) argued that with respect to one (unnamed) CSIS "sensitive" activity that "The Minister of Public Safety is not always systematically advised of such activities, nor is he informed of them in a consistent manner."[7]

These are worrying straws in the wind that suggest that Ministerial accountability may not be as robust as desired. This problem is compounded by the fact that Ministers do not have to account for national security activities to any dedicated, security-cleared Parliamentary body and that substantial public Ministerial statements on national security matters are rare.

Ministerial accountability in the Canadian system also goes unexercised in the sense that Ministers do not currently have a Cabinet level forum for discussions on national security; a brief experiment in creating a Cabinet committee on National Security chaired by the Prime Minister was abandoned. Canada also lacks any mechanism for bringing key portfolio Ministers together with Deputies and agency heads to deal with national security emergencies or major policy discussions—a role played, for example, by the COBRA committee in the UK system.

Internal oversight in the Canadian system thus appears dependent on bureaucratic leadership and internal cultures, which can always be subject to change. Top-level oversight, conducted by Ministers, may be the weakest link.

The robustness of external review is another matter. The key external review bodies are the Security Intelligence Review Committee, with a mandate to scrutinize the activities of CSIS; and the CSE Commissioner, with a similar mandate to scrutinize the lawfulness of the Communications Security Establishment. SIRC was established in 1984 in the CSIS Act; the CSE Commissioner's Office was first created by Order in Council in 1996. There are important differences in their construction, and some similarities. SIRC consists of a steering committee of part-time Privy Councillors (up to 5) appointed by the Prime Minister after consultation (which may be limited) with the Opposition parties. SIRC is supported by a small, full-time staff. The CSE Commissioner is a part-time retired judge, also supported by a small, full-time staff. There are currently no mandated requirements for knowledge of national security issues as a qualification for being a member of SIRC or being appointed as CSE Commissioner. Staff appointments to both bodies are non-transparent as are any appointments of persons on contract.

Access (to classified documents and officials) on the part of the review agencies is, in theory, guaranteed, short only of access to Cabinet confidences. In practice, access depends on a good working relationship between the review agency and the service being scrutinized. It depends on the expertise and persistence of the review body staff.[8] Struggles over access compound resource scarcities on the part of review bodies, leading to delays in reporting.

In any case, the existing review bodies are only capable of doing partial audits of national security activities on the basis of pre-approved review plans that are multi-year in nature and can sometimes fail to catch breaking issues or developing trends. Review agencies, it has to be accepted, will always be restricted to a partial audit function; the questions become how partial and how timely. Stickiness in relations between review agencies and their subjects, alongside significant resource constraints and possible expertise deficiencies, can tip partial audit away from its intended goal of producing meaningful national security scans, to mere unfinished 'pointillism'—imagine canvases of scattered painted dots and brush strokes where no meaningful image ever coalesces.

The robustness of external review bodies is also affected by the fact that they are torn between two desired audiences for their reporting. One audience is the agency being scrutinized. Review agencies want their reports to be treated with respect, their recommendations (and they can only make recommendations), listened to and followed so as to improve lawfulness and even raise efficiency. This requires a close working relationship—a kind of closed loop of reporting, protected and shrouded by official secrecy. Such desired closeness can distort the critical faculties and independence of a review body. It can also lead to an over-valuing of the relationship between reviewer and reviewed at the expense of the review body's public function.

The second audience for an external review agency is Parliament and the Canadian public. But in order to serve that audience, the review body has to step outside the ring of secrets, learn how to report declassified findings, and learn how to contribute to a public debate. This is more challenging than it might seem, and both of our external review agencies, SIRC and the CSE Commissioner, have struggled mightily over the years with public reporting, an especial problem for the CSE Commissioner. This on-going struggle to find ways to tell important national security stories in public without the deadweight of euphemistic language, the screen of obscurity, the excessive obeisance to official secrecy, has lowered the public legitimacy of these bodies to a dangerous extent.

In sum, the robustness of internal oversight may be compromised by weak Ministerial accountability and is subject to the vagaries of bureaucratic leadership and agency cultures. The robustness of external review is compromised by lack of resources and expertise, conflicts between reviewer and reviewed, by tensions pulling review bodies in different directions as they try to address different audiences for their reporting, and ultimately by lack of public standing.

If the current Canadian system clearly lacks robustness, as I have defined it; there is little to save it in terms of its integration. The meaning of integration cuts in two directions. One refers to the ability of elements of the accountability system to work together. Internal oversight is department and agency specific, with little overall coordination, especially in the absence of a Cabinet level standing committee or emergency body. The National Security Adviser can play a limited oversight role over the Canadian security and intelligence community as a whole but has to avoid delving into the details of individual agency and departmental issues. Justice Major's Air India Inquiry report called for the strengthening

of the powers of the National Security Adviser, but these recommendations were not accepted and would have required a significant re-engineering of the Canadian system with unclear payoffs.

The existing external review bodies, SIRC and the CSE Commissioner, represent siloed entities, with little capacity to coordinate their work, even in the face of increasingly integrated operations by national security agencies themselves. Their mandates limit them to the study of CSIS and CSE respectively, and nothing further. Beyond informal and limited exchanges between their professional staffs they cannot conduct joint inquiries. Justice O'Connor proposed in his Part 2 Arar Inquiry Study of national security review that statutory gateways should be constructed to allow for such coordination and joint inquiries, but the Government chose not to act on this recommendation.

Other external review agencies operate on the periphery of national security review, with only an occasional or tenuous foothold, owing to specialized mandates and sometimes lack of expertise and sufficient security-cleared staff. This is the case for the federal Privacy Commissioner, the Auditor General, and even the re-named Civilian Review and Complaints Commission for the RCMP.

Even more striking than the lack of integration between existing external review bodies, is the fact that they are wholly inadequate to confront the reality of integrated and multi-faceted national security operations conducted by a wide range of agencies, many of which are not subject to any form of external review. The basic explanation for this is historical. The external review system was first created to deal with the then limited number of intelligence agencies with an operational capacity that included intrusive surveillance powers, and hence where abuse and scandal might lie—CSIS and CSE being the prime candidates. But the review system has not kept pace with the expansion of intelligence and security activities conducted by a wider range of agencies, some with intrusive operational mandates and powers.

One illustration of the gap between reviewed and non-reviewed government bodies can be found in the listing of entities to be included in the proposed national security information-sharing regime under Bill C-51. The list includes 17 entities, of which only 3 (CSIS, CSE, and the RCMP) are subject to some form of independent, external review. The list of non-reviewed entities includes the Canada Border Services Agency, the Department of National Defence/Canadian Armed Forces, the Department of Foreign Affairs,

Trade and Development, the Department of Public Safety, and the Financial Transactions and Reports Analysis Centre of Canada (FINTRAC). All have important intelligence and national security mandates and functions.

External review, to be effective, has to have the capacity to scrutinise the operations of the Canadian security and intelligence community as a whole, or if that is too ambitious, at least its key components. Our external review system is founded on an antiquated idea of what 'key components' means, and has been completely outstripped by the pace of change in the Canadian security and intelligence system since the 9/11 attacks and the many organisational changes that have followed in the Canadian governmental context. Since the 9/11 attacks we have seen the creation of the Department of Public Safety, the establishment of CBSA and FINTRAC, the growth of defence intelligence within DND/CAF, and the establishment of new security and information gathering functions, including the Global Security Reporting Program (GSRP), by the Department of Foreign Affairs, Trade and Development. Too much of the Canadian security and intelligence system goes un-reviewed and this undermines confidence in the review of those few government agencies currently watched by external agencies. The review system is Swiss-cheese in nature.

Arguably the greatest gap in the Canadian system of accountability, when it comes to the ability to scrutinise the Canadian security and intelligence system as a whole, concerns Parliament. The size of this gap is far greater than many Canadians understand. There are currently standing committees of both the House of Commons (the Standing Committee of Public Safety and National Defence) and the Senate (Senate Standing Committee on National Security and Defence) whose mandates include issues of security and intelligence. But several things are worthy of note about the current committee system. One is that the mandates of both existing committees are very broad (including Defence) and not just focused on intelligence and security matters. The second is that the membership of these committees is chosen in the usual and obscure manner of jockeying among the parties and does not involve considerations of expertise on the part of MPs and Senators, which may help explain their frequent descent into partisanship. The third is that these committees have only minimal research expertise at hand, relying on assistance from the staff of the Library of Parliament. Their budgets are constrained. And if this list was not long enough, the biggest problem they face is that the MPs and Senators who sit on these committees are not security cleared, so they have no access to classified briefings and

classified documents. These are committees seeking to understand the secret world without having access to the secret world.

As has often been pointed out, Canada stands apart from the practice of many of our close allies and partners, especially in the Five Eyes intelligence community, by not having any dedicated, security cleared Parliamentary body to engage in review of security and intelligence community. Among Westminster style legislative bodies, The United Kingdom has its Intelligence and Security Committee, with a recently expanded mandate; Australia has its Joint Committee on Intelligence and Security; and tiny New Zealand punches above its weight with a Parliamentary Intelligence and Security Committee. The United States has the mother of all legislative branch review systems, dating back to the 1970s, with separate committees of the House and Senate devoted exclusively to intelligence issues. There are many models out there to choose from and best practices to adapt to Canadian needs, but we have done none of this, despite sincere attempts including proposed Government legislation in the dying days of the Martin Liberals, which had all-party support, and despite subsequent private members bills and Senate motions to create such a body. The most recent effort, voted down at second reading by a Government majority in the House

of Commons in September 2014 and not sent for Committee study, was the private member's bill, C-622, by Joyce Murray, the Liberal defence critic. The Murray bill, which was two-part in nature, aimed at improving the accountability and transparency of CSE, as well as creating a committee of Parliament to scrutinise intelligence and security matters more broadly.

In Ms. Murray's private members bill, the mandate of a proposed committee of Parliamentarians was described as three-fold:

1. review the legislative, regulatory, policy and administrative framework for intelligence and national security in Canada
2. review the activities of federal departments and agencies in relation to intelligence and national security; and
3. report publicly on its activities, findings and recommendations

This mandate would have provided for what Craig Forcese and Kent Roach aptly describe as "pinnacle" review, of the sort missing not just in Parliament, but in all the external review mechanisms of the current accountability system.[9]

To the extent that the value of Parliamentary review has not completely penetrated the Canadian Parliament, it is illustrative to turn to Australian commentary. Perhaps the most succinct argument for true Parliamentary accountability was provided recently by Australian Senator John Faulkner, a former Cabinet Minister who serves on the Australian Parliamentary Joint Committee on Intelligence and Security. Like Canada, Australia is trying to come to grips with new national security threats from terrorism and other sources and is expanding the legal powers of its security and intelligence agencies. Faulkner stated:

> "The Australian Parliament's responsibility is clear. It must ensure our intelligence and security agencies have the necessary powers and resources to protect Australian citizens and Australian interests. But these powers can impinge on the values and freedoms on which our democracy is founded—qualities which Australian citizens rightly expect Parliament to protect. So Parliament must strike a balance between our security imperatives and our liberties and freedoms. Key to achieving this balance is strong and effective accountability."[10]

Would a new Parliamentary capacity be a magic solution to Canadian accountability gaps? The reasonable answer would have to be no. It would be part, an important part, of a broad based system of internal oversight and external review. But it could command the strategic heights. It would take time for the Committee to mature and gain the trust of both the security and intelligence community and the Canadian public. Qualifications for membership on the committee would have to be carefully considered. It would be a challenge for Parliament to set aside partisanship, as any such committee must.

Its reporting would inevitably be hampered by official secrecy constraints. But should we worry that such a committee would simply disappear down the rabbit hole of secrecy, leading as Philippe Lagasse opined, simply to " a select group of parliamentarians knowing more about national security affairs, but the public knowing, and perhaps caring, less"?[11] The answer is no—based on both the experience of other established Parliamentary or legislative bodies among our close allies, and on the self-interest of Parliamentarians, and Parliament, itself.

The best that can be said, and it is something, is that accountability exists in the Canadian system. But it is wholly inadequate to the task of watching over a greatly enlarged sphere of security and intelligence operations conducted by a wider range of Canadian federal agencies, and fails to meet enhanced public fears around national security and expectations of transparency and debate and the guarding of public interest about such important issues.

What Needs to be Done?

The argument of this paper is that if we have a clear understanding of the purpose of accountability, a grasp of the current context of accountability in Canada, and of its historical roots, and a clear appreciation of the current and sizeable gaps in the system, then we have a roadmap for change. The new Rome of strengthened accountability won't be built in a day, but we need to make a start. In fact, a start has been made in terms of the heightened public and political debate around these issues.

The roadmap suggests that we need to focus our attention on four areas of change:

1. improved Ministerial accountability (internal oversight)
2. strengthened and broadened external review so as to capture under its watchful lens the full range of intelligence and security operations that are now being conducted by the Canadian government
3. the creation of a true Parliamentary capacity to review intelligence and security matters
4. Better public reporting by all components of the internal oversight and external review system

There are some solutions at hand to satisfy many of these requirements for change. The argument can be made that we just need the political will and sense of urgency to implement them, starting with a more strategically focused and more wide-ranging expert external review body, often referred to as the "super SIRC" model, and with the establishment of a Parliamentary review capacity.

But we have to accept that the current Government believes that existing accountability mechanisms are adequate and has rejected arguments for change. In the context of the debate around C-51 the Government has, in particular, expressed a reliance on the Security and Intelligence Review Committee to police new CSIS powers, and on judicial "oversight" to ensure that Canadians' rights are protected and the balance between security and rights is ensured. Judicial oversight exercised, for example, through scrutiny of warrant applications, the conditions imposed on peace bonds, controls on the use of preventative detention measures, and through the trial process (or judicial proceedings in the case of security certificates), is clearly very important to a system of accountability. But I would also, without going into the details here, second the concerns of legal experts such as Craig Forcese and Kent Roach that judicial oversight can never be complete, obviously does not reach the exercise of intelligence and law enforcement powers that fall beneath thresholds for judicial engagement, and contains no built-in requirements for on-going monitoring (or feedback loops).[12] Judicial oversight, like SIRC review, is part of a system; if the overall system of accountability is weak, it cannot be saved by exaggerated reliance on individual components.

But if we are faced by political stalemate at the moment, as we appear to be, the question of what can be done slips ahead of what needs to be done. What can be done might take the form of minor and unsatisfactory changes, such as statutory gateways and more resources for existing external review bodies, to the overall accountability system. In that way what can be done might fool us into thinking we have solved the problem, or solved enough of it to allow it to be safely punted into the future.

My own preference would be to substitute further (purposeful) study for inaction or incomplete action, so as not to let slip the opportunities that currently exist to make headway on a problem that has (unusually) seized the political agenda and public imagination. I would argue for further, purposeful study, on two grounds. One would be that there exist a multiplicity of possible solutions to Canada's accountability problems that warrant careful examination. There are best practices abroad that need careful scrutiny; there is a Canadian context and history that similarly needs careful attention. The other ground for further study is to avoid missing some important additions to accountability while in hot pursuit of the obvious changes (in which basket I would put a super SIRC and a Parliamentary capacity). As we consider changes to our accountability system, maybe with the idea of returning us to a leadership role among democracies, we need to consider such things as changes to the machinery of government for dealing with security and intelligence, greater application of outside expert knowledge on complex security threats and responses, (possibly though the re-constitution of the Prime Minister's Advisory Council on National Security). We need to consider the requirement for greater transparency, without which accountability is hobbled. One measure would be a return to the practice of issuing a National Security Strategy on a regular basis. We need to consider adopting the practice of some of our close partners in terms of establishing an independent senior judicial authority to scrutinise the ever more complex and layered nature of national security legislation.

What would constitute purposeful study? Here are two suggestions. One would be a dedicated Parliamentary review of the matter, conducted by one or both of the House and Senate. The other would be the creation of an independent external body of experts to study the accountability waterfront. Both endeavours would have as their purpose the collection and analysis of evidence about accountability gaps and the practices of our close partners; both would reflect on public requirements for accountability; both would be charged with offering, within a reasonable time frame, concrete recommendations for change, to be presented as public reports to the Prime Minister and Parliament.

Further study is needed, further study would be beneficial, further study would capitalize on the opportunity of public attention. Further study can bridge, hopefully, the gap between the necessity for change and the current political stalemate.

Even if our political system chose to consider further study as a form of punting a problem over the horizon, that, too, would be OK. The issues aren't going away. And an election is coming up, and, no doubt, another one after that.

[1] "A Close Eye on Security Makes Canadians Safer," Jean Chretien, Joe Clark, Paul Martin, John Turner, published in the Globe and Mail, February 19, 2015. Online at www.tgam.ca/globe-debate; "Edward Snowden says Canadian Spying has weakest oversight in Western World," CBC News, March 4, 2015

[2] "A New Review Mechanism for the RCMP's National Security Activities, Part 2 report of the Commission of Inquiry into the Actions of Canadian Officials in Relation to Maher Arar [Arar Inquiry], December 2006

[3] "A Close Eye on Security Makes Canadians Safer"

[4] ibid.

[5] "Independent Review of Defence Intelligence Activities," November 29, 2013, declassified ATIP record, ATIP file A2014-00133-0001. Kindly provided to me by Murray Brewster, Canadian Press.

[6] Minister of Public Safety [identical] directives to CSIS, RCMP and CBSA; Minister of Public Safety Directive to CSIS, dated December 7, 2010, declassified ATIP file A-2011-00249/TH; kindly provided to me by Jim Bronskill, Canadian Press; updated Ministerial Directive to CSIS, "Information Sharing with Foreign Entities," July 28, 2011, available at: http://cips.uottawa.ca/wp-content/uploads/2012/04/PS-ATIP-A-2011-00297-March-2012-InformationSharing.pdf

[7] Security Intelligence Review Committee, Annual Report 2013-2014, "Lifting the Shroud of Secrecy," summarising SIRC classified Study, "A Sensitive CSIS Activity," at p. 19-20

[8] See the comments of the SIRC Executive Director, Michael Doucet, in the most recent SIRC annual review (2013-2014): "In some instances, I had to personally intervene to ensure that staff received complete information."

[9] Craig Forcese and Kent Roach, with Leah Sheriff, Bill C51 Backgrounder #5: "Oversight and Review: Turning Accountability Gaps into Canyons," Executive Summary, p. 3

[10] John Faulkner, "Surveillance, Intelligence and Accountability: an Australian story," The Australian Financial Review, October 24, 2014. See also Senator Faulkner's longer report, of the same title.

[11] Philippe Lagasse, "Should Parliament 'Oversee' National Security Affairs," Institute for Research on Public Policy (IRPP), Policy Options, Blog post, February 25, 2015 Online at http://policyoptions.irpp.org/2015/02/25/should-parliament-oversee-national-security-affairs/

[12] Craig Forcese and Kent Roach, with Leah Sheriff, Bill C-51 Backgrounder #5, "Oversight and Review: Turning Accountability Gaps into Canyons"

About the Author

Professor Wesley Wark is one of Canada's leading experts on national security, intelligence and terrorism. He is a frequent contributor to the Canadian and international media and is currently working on two books dealing with the history and current practises of Canadian national security.

Privacy Protection in the Federal Public Service

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Unresolved Issues of the Digital Era

Foreword

Edward Snowden burst into the public consciousness in June 2013 with a series of astonishing revelations about U.S. surveillance activities. The Snowden leaks, which have continued for nearly two years, have confirmed that fears of all-encompassing network surveillance and data capture that were envisioned as worst-case scenarios more than a decade ago have become reality.

Yet despite increased public and media attention, the Snowden leaks have thus far failed to generate sustained political debate in Canada. Privacy issues, particularly lawful access and warrantless disclosure of Internet and telecom subscriber information, emerged as important issues in 2014 with the government forced to respond to mounting concerns over the privacy protections afforded to Canadians' personal information. Moreover, the Supreme Court of Canada issued the landmark Spencer decision in June 2014 that removed any lingering doubt that Canadians have a reasonable expectation of privacy in telecom and Internet subscriber information.

Chantal Bernier, the former Acting Privacy Commissioner of Canada, offers an insightful and important perspective on some of the most challenging modern privacy issues in this timely contribution. From cloud computing services to

social media, she identifies the competing values that often lie at the heart of beneficial new technologies. Governments are understandably anxious to take advantage of the new efficiencies promised by cloud-based services or to interact with citizens in a more dynamic, effective manner through social media. While few would argue against the use of new technologies to improve government services, Bernier succeeds in pointing to the privacy risks associated with these technologies and identifies some of the potential policy measures that would better safeguard user privacy.

While new technologies appear on the public's radar screen seemingly on a daily basis, Bernier rightly grounds the debate in fundamental, international principles. Her conclusion notes that "privacy protection challenges to Internet surveillance are at the heart of the relationship between the citizens and the state. Section 12 of the Universal Declaration of Human Rights illustrates eloquently this essential character of the right to privacy." Those words come toward the end of this important work, but belong as the very first consideration when the government confronts the difficult policy challenges posed by digital privacy.

by Michael Geist
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In one single day, the 23rd of March 2015, the privacy protection issue in the Federal Public Service was under the spotlight, for two reasons: the Ottawa Citizen headlined that complaints relating to the weakness of the security measures protecting personal information in the Federal Government had reached a never-before-seen record, and the CBC as well as Radio-Canada disclosed new Edward Snowden revelations questioning the legality of gathering personal information by the Communications Security Establishment Canada (CSEC).

As is the case for all other institutions, privacy protection in the Federal Public Service in the digital age has become an unprecedented challenge, in its importance as well as in its nature. Even experienced managers find themselves unequipped to deal with the convergence of two towering phenomena: an information technology that is wreaking havoc with all traditional patterns of data protection, and a public security environment that calls for the collection and analysis of personal information at an unprecedented rate. The coupling of totally new data collection capacity with a new interest for it, forces a questioning of the acquired schemes of protection, and development of new measures in this area.

Beyond the technical measures required by these new information technologies, the Federal Public Service must update its policies relating to privacy protection so they reflect the unique challenges of these technologies. If no corrective legislative measures are taken-there is no real appetite-the Treasury Board Secretariat (TBS) becomes the main source of standards for privacy protection in a digital environment. I propose five main steps, which result from observations I made during the time I managed the Office of the Privacy Commissioner of Canada (OPC) over almost six years. I start with the main challenges found by OPC studies within the Federal Public Service and that resulted from the arrival of digital technologies:

1. Management of new technologies' vulnerabilities;
2. Definition of personal information in the digital environment;
3. Debate on the storage of personal information in the cloud;
4. Differential repercussions of the Internet on the need for public transparency and privacy requirements; and,
5. Emerging challenges.

I will treat them separately in order to define the issues, and propose policy directions for the protection of personal information.

Management of New Information Technologies Vulnerabilities

One can summarize the risks affecting personal information protection brought on by the arrival of new information technologies in the Federal Public Service, as is happening everywhere else, as follows: i) their complexity is such that it overwhelms the common abilities of employees and senior staff, ii) these technologies collect data on such small devices that the best controls can miss them, and on such powerful devices that if the data is lost, the private life of thousands of individuals can be compromised in one fell swoop, iii) the virtual mode of access of these technologies complicates the control over this access, and iv) permanent files created, correctly or erroneously, have massive dissemination possibilities, appropriate or not.

Through all these violations to privacy protection, especially in relation to the digital environment, I saw these risks materialize around four constants: i) the small size and the enormous complexity of the devices became increasingly challenging because of insufficient employee digital training; ii) governance structure is incomplete relative to the realities of the risks; iii) protection from indiscretion is lacking, and iv) new technologies are adopted without proper assessment of the risks involved.

To illustrate the lack of digital literacy, an employee left a USB key uncoded on the desk of a colleague, without any physical protection, thinking that a USB key was more secure than an e-mail. To this day, the USB key is missing. It contained medical information concerning approximately 6,000 individuals. In another case, a lack of digital literacy caused an employee to record on his electronic organizer the reason for a meeting with another employee (for disciplinary action), unaware that the content of his organizer could be read by 17 people who, by the way, knew the employee.

This lack of literacy is due to governance weakness, which does not ensure proper training of employees before letting them use information technology devices.

These incomplete structures of governance have been found in studies by the OPC, even in the case where departments run excellent personal data protection policies. Simply put, these policies were not accompanied by an efficient implementation mechanism. For example, movable devices were not identified, or registered or entrusted to anyone. With no one responsible,

protection of the devices was totally lacking. The devices that contained personal data were lost and never found because there was no mechanism to protect them, hence to find them, or at least to permit tracing of persons responsible for the protection of these devices.

This lack of protection from indiscretion is also quite frequent: the studies of the OPC, from 2008 to 2014, have uncovered the severity of the problem within the public service as well as in the private sector. In the Federal Public Service, we witnessed employees searching in the medical records of a former lover, employees distributing tax returns of celebrities, or accessing tax returns of new lovers and their family. Even if these indiscretions are quite rare, they reveal the systemic weaknesses that make them possible: access authorizations are too wide, controls such as journaling and reviewing are insufficient.

We already know that the main differential repercussion of the digital environment is the following: the smallest mistake can cause enormous damage. For example, a file that really got my attention made me write in 2012 "Ten

Things HR Professionals Need to Know" . It was a case whereby a Director General had her abilities assessment mistakenly sent to 321 colleagues. The mistake being: someone has hurriedly pressed on the button without even being aware of the consequences of the act, furthermore, the department had not restricted the distribution through e-mail of human resources information. The result was: the humiliation of the person and the damage to her reputation. It also triggered an inquiry by the OPC. I would venture to add, along with the damages to the person: the loss of employee confidence in the management of personal information in the department.

How can these blunders be avoided? My recommendations are in "Ten Tips" regarding the digital environment:

- Avoid sharing sensitive information electronically, even though it is the current method of communication for all other types of communications;

- Continuously ensure that the technology is mastered by the employee before handing it to him as a working tool, and test the capabilities of the person using it; and,

- Develop a regime of access authorizations, as restrictive as possible while preserving the functionality of the organization, and support this regime by establishing a journaling process, and regularly review the access data it contains.

However, the complexity of information technologies does not affect employees exclusively. Higher level management in the public service, economy and political science experts, do not necessarily have the reflex of owning, as they should, the issue of their privacy protection on new technologies devices. This is what the 2010 audit of the OPC concluded on the use of wireless technologies within five Federal entities. Those entities had all adopted those technologies and none had implemented an adequate risk assessment. The expected

consequences occurred: the employees did not protect their devices through a solid password, the devices were not kept in a safe place, and the adequate protection policies had not been established because the risk had not been determined. I believe, however, that this complacency has now been replaced with greater acknowledgment of the risk, especially since the loss of a hard drive at Employment and Social Development Canada containing the financial data of some 600,000 individuals.

My recommendations in this regard were part of the Special Report of Inquiry relating to this incident and submitted to Parliament on March 25, 2014. Briefly, they were:

- Protection of personal data in the digital environment should be addressed as an ecosystem of interacting components, i.e., physical, technological, administrative and employee security checks, including the digital literacy needed to handle those work tools.

- Protection of personal data must be considered as being an institutional issue and not as a distinct and separate issue, that is, of the exclusive domain of the administrators of information technologies or of the office of access to information and privacy. Its implementation must be accompanied by a governance structure that:

  - Reflects the accountability regime established by the Privacy Act, which defines the attribution of this responsibility to the very senior public servants within an organization; and
  - Insures that the necessary supervision imposed by the Act is present at all levels in order to abide by this regime of personal information protection.

Definition of Digital Personal Information

Internet has challenged the established definitions of both the "personal information" and the private sphere. Two notions that have been challenged in the last while within the Federal Public Service: the privacy aspect, or not, of the Internet subscriber's data and the IP address, as well as free or protected access to personal accounts on the social networks.

Personal Data on the Internet

The question as to whether proprietorship of IP (Internet Protocol) addresses (name, address and other identifiers of the subscriber) or personal data, do or do not constitute personal data, was pressing in the last few years in regards to the many successive bills that would have allowed access to these data by the executive and security authorities without court approval. Much of the argument touched on two different contradictory understandings: one concluded that the IP address and personal data, and the relevant personal data of a subscriber, do not carry more value than a phonebook, and that the absence of such a phonebook for Internet cannot determine the judicial statute of the data. The other, of which

I approve, said that the subscriber's data contained in the IP address of the subscriber constitutes a key to the subscriber's interiority by giving access to his Internet searches – i.e., his areas of interest, his worries or his allegiances – and, consequently, should be considered a static and limited data of a physical address and a phone number.

In June 2014, in its decision re. R. v. Spencer, the Supreme Court ended the debate: it declared that the subscriber's data in the IP address, allowing access to the Internet searches, is so revealing as to constitute protected personal data, to which the controlling forces can only have access after court authorization.

The consequences for the Federal Public Service are mostly felt within the RCMP and CSIS, but they also have a wider reach: the Privacy Act has just been modified to include, within the interpretation of personal information, the name to which the IP belongs.

Consequently, the federal institutions have to abide by the following constraints:

- The subscriber's data in the IP address, or the IP address that can lead to the identification of the subscriber, can only be collected if there is a direct link with the programs or activities of the institution; and,
- These data must be obtained through their owner, unless that constrains the use for which these data are intended (for example, a police inquiry).

The analytical framework described in the Office of the Privacy Commissioner's 2010 report *A Matter of Trust: Integrating Privacy and Public Safety in the 21st Century* gives the four steps of applicable considerations for integration within the measures of public security and the relative obligations towards privacy protection. They also apply to a regime of access to personal data on the Internet.

- Establishing the legitimacy of the measure on the base of empirical data, which proves its necessity, its proportionality and its efficiency compared to the need and absence of less intrusive alternatives;

- Implementation of security measures in order to protect data gathered and used legitimately;
- Development of an internal governance framework that ensures conformity with these security measures; and,
- Development of an external and internal supervision framework that ensures the accountability of the organization in regard to its duties regarding privacy protection.

Therefore, privacy protection is not a hindrance to the carrying out of the main duty of Canada's government, i.e., to protect the security of its population. It rather provides an implementation framework that protects fundamental freedoms as well as personal security.

Access to Personal Accounts on Social Networks

The right of access, or not, of federal institutions to the personal accounts of individuals has been contested in at least two major cases of the OPC: a Privacy Impact Assessment (PIA) of the factors involved in the private life of a program that would have allowed the surveillance of accounts on public servants' social networks in order to control their political activities, and a study on the surveillance by two departments of the Facebook account of an activist.

In the PIA's case, OPC's reaction had a sobering effect on the project: it violates Section 4 of the Privacy Act, as there is no direct link between the project and the activities or programs of the institution. Even if public servants are mandated, in different capacities, to stay away from political demonstrations and the public service is entitled to ensure that this rule is obeyed, the wide gathering of data inherent to the surveillance of the accounts on social networks would have widely exceeded what was deemed necessary in order to ensure that these restrictions to partisan activities are respected.

The project has been vehemently criticized by the upper echelons of the public service following the comments of the OPC. Nevertheless, it constitutes an illustration of the consequences such straying can have on the digital surveillance ability without a framework.

One other illustration of this phenomenon was noted in a study by the OPC in 2013. An activist alleged that two departments had gathered her personal information from her Facebook account. None of the departments denied it. However, both said that they had not broken the Privacy Act, as Facebook accounts are in the public domain, hence, the information appearing there is also public and not protected by the Act.

The OPC rejected this argument: the information available does not lose its personal confidentiality just because it is available on the Internet. The information still belongs to an identifiable person and is destined to select people, not the government. And if there is no direct link with the department's program or activities, it remains out of bounds for the department in question.

- Regulating access to sources of open personal information sources accessible to the public; and,
- Developing outlines defining specifically the gathering, use and dissemination of personal information online and on social media sites.

This recommendation remains valid…And awaits implementation.

Hosting of Personal Information in the Cloud

The commitment of governments towards protection of data on the Internet has caused some to ask for the government to have its data hosted on its territory. In practice, this excludes government institutions from financial and functional benefits of the cloud because suppliers of cloud computing are mostly Americans. Edward Snowden revelations in June 2013 have increased mistrust to the point where governments that had planned a loosening of these rules had to backtrack.

The Government of Canada has, wisely, not imposed hosting of electronic data in Canada. However, the Canada Revenue Agency reserves the right to allow, or not to allow, the storing of accounting and financial information outside of Canada. The increasing use of cloud computing casts a doubt on the pertinence of this rule, which has, at least, to be explained within the cloud computing environment.

British Columbia and Nova Scotia governments require their institutions to store their data within Canada, except for a few conditions, excluding

or complicating the use of cloud computing. I think that the residency requirement of the electronic data in Canada, with all its good intentions, weakens the security of personal data because it eliminates a particularly secure platform for hosting data: the dependable supplier of cloud computing.

I will now move to the strategic factors that should guide Federal institutions for converting to cloud computing.

Benefits and Risks of Cloud Computing

A policy paper published jointly by the OPC, the Office of the Information and Privacy Commissioner of Alberta and the Office of the Information and Privacy Commissioner of British Columbia, and a Fact Sheet authored by the OPC, describe the benefits and risks of data stored by cloud computing hosts: in its favour, cloud computing is an on-demand Internet service that does not require the user to have his own technological infrastructure, allowing for "on-demand self-service, broad network access, resource pooling, rapid elasticity and measured service". As a result, the user saves money, benefits from a lighter management load, improved efficiency, and the supplier being dependable, enjoys greater security of the data because it is handled by professionals. In this regard, OPC clarifies: "For businesses that are considering using a cloud service, cloud computing could offer better protection of personal information compared with current security and privacy practices. Through economies of scale, large cloud providers may be able to use better security technologies than individuals or small companies can, and have better backup and disaster-recovery capabilities. Cloud providers may also be motivated to build privacy protections into new technology, and to support better audit trails."

In stating the potential risks of cloud computing, the OPC refers to physical distance of the data hosting locales, the multiplicity of clients of the supplier, the possible misuse of the data, i.e., using them for other ends than what they were gathered for, and, because of the low cost of storage, the keeping of excessive amounts of data.

The OPC concludes that, in regard to the implementation of cloud computing, "Privacy is not a barrier, but it has to be taken into consideration."

One can summarize as follows the relevant factors the Federal Government should consider when implementing cloud computing:

- How is the existing infrastructure improved if cloud computing is adopted?
- Which data can be stored in the cloud, and according to what criteria?
- How would users of government services know that the data is in the cloud?
- Is the cloud supplier dependable, certified ISO/IEC 27018 in privacy protection in cloud computing?

This brings me to the perfect combination: one where technological security of cloud computing by renowned suppliers pairs with a contractual mechanism that ensures conformity with certified ISO/IEC/ 27018 cloud computing security.

The ISO/IEC 27018 Standard for Privacy Protection in Cloud Computing

The OPC acted upon its beliefs concerning cloud computing: for a long while, the Office provided its expert advice for the development of standard ISO/IEC 27018 information technology — Security techniques — Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors, adopted on April 25th, 2014.

This standard increases dramatically the security of personal information in the cloud by creating a security certification base that combines the supplier's technological strength with a framework that ensures that the conformity is really solid: by contract, the observance of which is checked through audits, the client organization using cloud computing keeps its control over the data and the supplier cannot use it for any other purpose than that defined by the client. Moreover, the supplier must support the client in respecting his own legal obligations. Finally, the obligations of the cloud computing supplier are subject to audit by the client as well as by the certifying organization, to ensure the level of

adequacy. To be certified, the supplier must implement all the security measures required by Standard ISO/IEC 27018. Not only does a supplier that does not respect the standard lose his clientele, he also loses his certification.

How is this normative development relevant to the Canadian Public Service? It allows, at lower cost, a maximal protection of personal data by storing it in the most sophisticated technological infrastructures, as per the most efficient and demanding governance model. Standard government institutions are being asked more frequently to share their data beyond Canada's borders and to hire suppliers that would enhance the efficiency of their services, when they do not possess the required resources to be able to render these services. The ISO/IEC 27018 Standard is universal and is accepted by the various players in the transborder flow of data.

Following the recommendations of the OPC, the Treasury Board Secretariat (TBS) has published, in the framework of its policies of information management, the document *Privacy Matters: The Federal Strategy to Address Concerns About the USA Patriot Act and Transborder Data Flows*, as well as the *Guidance Document: Taking Privacy into Account Before Making Contracting Decisions*. These documents should now be supplemented by the ISO/IEC 27018

Standard. But first, let's have a look at the ISO Standards.

ISO, International Standardization Organization, and IEC, International Electrotechnical Commission, constitute the specialized system of international standardization. Both have members, states, institutions and experts. They are at the heart of the certification of compliance to some ISO Standards by an accredited organization to do so. Certification is maintained, or revoked, following regular audits.

TBS already uses the universal standards, the ISO Standards. For example, the TBS Standards for the geospatial standard is based on the implementation of ISO Standards 19115 and 19128. The ISO/IEC 27018 Standard would be the perfect and most comprehensive contractual model in order to implement the conversion of federal institutions to certified cloud computing, thus achieving economies of scale and greater data security.

Avoiding cloud computing is obsolete; adopting it without guidance would be irresponsible. The adoption of the ISO/IEC 27018 Standard by TBS would show other federal institutions the way towards secure cloud computing for personal data according to universally recognized settings.

Balance Between Public Transparency and Privacy

The legislative framework defining the balance between transparency and privacy is based on the complementarity of the Privacy Act (PA) and the Access to Information Act (AIA). Section 19 of the AIA bridges the gap between transparency and privacy. It forbids a public servant in charge of a Federal institution from communicating documents that would contain personal information as defined by the Privacy Act, i.e., information relating to an identifiable person. Three exceptions: the identifiable person agrees to this communication; the public already has access to the information; or, the AIA allows for a special case communication.

The weakness here stems from the fact that the disclosure imperatives emanate from principles that rival in strength the fundamental right to privacy in relation to administrative tribunals since the Internet became public. In reality, I am of the opinion that transparency of judicial tribunals must be reviewed within the framework of the differential consequences of the Internet. But judicial tribunals are not part of the Federal Public Service. Administrative tribunals are, and are therefore subject to the Privacy Act.

The Federal Public Service has eleven administrative tribunals, of which four work regularly on personal data issues: Canada Agricultural Review Commission; Public Service Labour Relations Board; Human Rights Tribunal; and, Social Security Tribunal. The Public Servants Disclosure Protection Tribunal also publishes decisions that contain personal and even very sensitive information, but they are subject to such disclosure restrictions that the tension between transparency and privacy is resolved within the legislative framework applicable to the tribunal. Furthermore, the other tribunals are proceeding quite cautiously towards a resolution of the natural tension between transparency and privacy.

In 2009, the OPC published, jointly with its provincial and territorial counterparts, a *Guidance Document: Electronic Disclosure of Personal Information in the Decisions of Administrative Tribunals*. The incentive to act came from an observation of real cases of differential consequences of the Internet on the materialization of the transparency principle.

It is worth noting that, in the Internet environment, the transparency principle does not give prominence to the tribunal, although it is subject to the principle that ensures its impartiality; it gives it to the parties whose identity is of no public interest. The massive and permanent distribution of this information can unjustly damage the parties' reputation and would cause them to lose all hope of finding work due to such an insignificant cause. And this hinders the access to justice, due to the fact that complainants decide not to exercise their rights, fearing loss of reputation due to the Internet posting of their cause.

The *Guidance Document of the Canadian Commissioners of Privacy* is based on Section 8 of the Privacy Act, which restricts the communication of personal information without the consent of the concerned individual, except in very rare exceptions that seldom apply to the decisions of administrative tribunals. In summary, here are the proposed parameters, subject of course to the specific rules applicable to each tribunal:

- Employees of the tribunal should inform the parties, as soon as a recourse has been filed, of the risks relating to privacy and what the safeguard measures are, and encourage the parties not to disclose more personal information than what is strictly needed;
- The decisions should not divulge any identifier, directly or indirectly. Transparency applies to the reasoning of the tribunal and not to the parties. For example, names should be replaced with initials and addresses deleted or generalized. ISO/ IEC 27018 becomes crucially important in the transborder flow of data and the outsourcing services;
- The decision might contain an identifier when, in accordance with Section 8 (2) m) of the Privacy Act, it is in the public interest to publish the parties' identities (for example, in criminal or fraud cases);
- The tribunal would develop criteria to exercise its discretion in the application of the public interest concept.

This discretion is an absolute necessity for personal security reasons (a plaintiff contesting her disability pension was threatened by thugs who, having seen the tribunal decision on the Internet, knew her address, the amount and payment date of her pension), but also for reasons relating to reputation and financial integrity (two complainants couldn't find employment for ten years because any Internet search concerning them revealed their grievance).

The TBS must pick up after the OPC and issue policies aimed at re-establishing a fair relation between public transparency and privacy for administrative tribunals in the digital era.

Conclusion: Emerging Challenges

I summarized, from the start, the actual and important challenges that face the Federal Public Service in relation to privacy protection, and the double effect of two fundamental transformations in our means of communication: the arrival of new, complex, powerful and vulnerable information technologies, as well as the increase in cyber-surveillance capacity in a public security environment largely dependent on personal information.

The growing number of new security technologies is clearly moving ahead, mainly in one direction: risk assessment is being refined and multiple technological restrictions are being used following the risk analysis. New applications, like information hubs, where information management is centralized but respects the separation of the different databases, abide by the Act in this regard.

However, the limits of Internet surveillance in a free and democratic society have yet to be defined in view of its progress as well as the evolution of risks concerning physical security.

Privacy protection challenges to Internet surveillance are at the heart of the relationship between the citizens and the state. Section 12 of the *Universal Declaration of Human Rights* illustrates eloquently this essential character of the right to privacy by declaring:

"Section 12. No one shall be subjected to arbitrary interference with his privacy, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks."

Brought ahead in the debate on Bill C-13, the current Protecting Canadians from Online Crime Act, the issue of the legitimacy of Internet surveillance reappears in Bill C-51, whose short title is the Anti-terrorism Act, 2015. While the Bill traces the legislative process, it also highlights the manner in which the Internet surveillance capabilities force an upgrade of public service obligations towards privacy, i.e.:

- Section 8 of the Canadian Charter of Rights and Freedoms protects against unreasonable surveillance, which under the Privacy Act includes all gathering of data that have no relation to government programs or activities, which in turn includes the legitimate purposes of inquiry based on a reasonable suspicion, and individualized;

- Restrictions that regulate the sharing of personal data between government agencies in order to avoid citizen profiling that produces new information beyond what has already been collected from the individual himself, and over and above the reason for which the data was gathered;

- Natural justice principles of impartiality and accountability, specifically within Internet surveillance, which is meant to be secret and, thus, has to define its own form of accountability to the citizen.

The other double-edged sword of technological evolution resides in the analysis capabilities of data, leading to possible data mining.

As, on a smaller scale, the Census data supported, even anonymously, the government's decisions at all levels, as well as the business decisions, according to demographic, social or economic movements, we therefore will have to develop an ethical framework for the analysis of Big Data that we store to draw conclusions for the greater good of the citizen. These data can improve the government's services, refine decisions and adequately adapt the programs. Solutions seem to favour a governance framework based on anonymity, necessity and consent, i.e.:

- When the public service develops efficient policies and programs and needs unidentified demographic data for census purposes, the Privacy Act does not forbid it, on the condition that an efficient anonymization process be applied. This would include the separation of data between demographic and nominative data that are pertinent in such a way that the demographic data does not relate to an identifiable person, because the re-identification would be so difficult that it would become improbable.

- For all nominative data needed by the operations of a public institution, Section 4 of the Privacy Act allows their gathering, and Section 7 allows for their compatible use.

- If the Public Service needs to use personal data for other purposes than the ones that justified its gathering, even if it is in the public interest, it has to request and obtain the consent of the person concerned. For example, if a department wished to contact people for medical research purposes, it would have to explain the purpose of the research, how the personal data would be used, and ask if, in the interest of science, they would consent to this new use of their personal data.

These basic parameters show a general trend, insufficient, though, to settle the ethical challenge between reconciling privacy and public interest within the analysis of Big Data. This subject of conversation, like the one relating to Internet surveillance, must be raised more frequently, in order to ensure privacy protection within a new technological frame.

At this point, the priority of the public service should be to develop a normative framework that reflects what Canada considers to be legitimate in relation to the gathering and use of data in the digital age. In a certain way, Bill C-51 has provoked this debate, concerning both Internet surveillance and the analysis of personal data. But this debate isn't what it should be: the die is cast, and the discussion is framed in a limited and political debate instead of within a social blueprint taking into account the real challenges, in a thoughtful and empirical manner.

That's the next step we need to take in order to preserve privacy in the digital age, and it has become urgent.

About the Author

Chantal Bernier joined the Privacy and Security practice of Dentons Canada LLP on October 6, 2014. Prior to this role, Ms. Bernier served as Interim Privacy Commissioner and as Assistant Commissioner for six years in the Office of the Privacy Commissioner of Canada (OPC). She oversaw the operations of the OPC, including national and international privacy investigations in the public and private sectors, privacy audits, privacy impact assessment reviews as well as technological analysis, privacy policy development and research.

A Canadian Foreign Policy for the Future

This article originally appeared in the March 2015 issue of the Literary Review of Canada.

Roland Paris
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An open letter to the winner of Canada's 2015 federal election

Foreword

Roland Paris is especially well placed to provide comprehensive advice to the next Prime Minister: he has been a practitioner of foreign policy in the Privy Council Office and Foreign Affairs where we worked together. As a leading academic, he has undertaken extensive research into conflict management. I find his letter to the post-election incumbent at 24 Sussex, at once disturbing and, at the same time, gratifyingly encouraging. It is an important document.

Since the turn of the century, there has been an unprecedented compression of the pace and nature of global transformation. While economic opportunities have lifted millions out of dire poverty, authoritarian regimes have given way to borderless conflicts forcing the mass migration of innocents. Yes, the digital revolution has disseminated vital knowledge instantaneously, but it also spawns hate and prejudice. Asia is rising, providing remarkable business opportunities, but China is aggressively extending its territorial reach. Global warming has replaced nuclear winter as humankind's existential threat.

Paris claims correctly that Canada risks sleepwalking through this global minefield. It is not that Canadians are unaware of these developments. But Mr. Paris worries that this government risks leaving Canadians unprepared for

the frightening immediacy and consequences of this upheaval. No government should fail to engage Canadians in a conversation (a necessary prelude to establishing a coherent strategy); nor should it absent itself from those councils and partnerships where these issues are confronted. The extension of niche politics to the international arena is no substitute for a foreign policy based on broad Canadian values.

And it is on the question of principle that I find Mr. Paris' advice reassuring. He points out that Canada was at the top of its game when it pursued a non partisan foreign policy designed to work constructively with others. Because Canada itself was built by community effort, collaborative internationalism is a true extension of a basic Canadian value.

He is also practical. In calling for real, not rhetorical investment in diplomatic and military resources, Mr. Paris understands a truism in foreign policy: if you don't pay, you don't play.

Canadians would be well served if the next Prime Minister heeds Mr. Paris' sage advice.

by Michael Kergin
Senior Advisor, Bennett Jones
Former Canadian Ambassador to the United States and Cuba

Dear Prime Minister,

Congratulations on your election (or re-election). You deserve a rest, but regrettably you will not get one, because now you must govern. During the campaign, your attention was focused on the daily battle for votes, but now the future stretches before you. Your most important task—like that of all your predecessors—is to create the conditions in which Canadians and Canada can thrive, now and in the years to come.

Doing so, however, requires a measure of foresight. Wayne Gretzky's hockey adage—that you need to skate to where the puck is going to be, not where it has been—has become something of a cliché, but it is an apt description of the policy challenge you face.

Today, this challenge is particularly important, and difficult, in relation to foreign policy, because the world is changing so quickly. New powers are rising. Competition for markets, energy and resources is intensifying. Digital technologies are revolutionizing how we work, communicate and collaborate, but also raising new concerns about intrusive surveillance, cyber-attacks and violent radicalization across borders. Millions of people around the world are entering the global middle class for the first time, but other societies remain mired in cycles of poverty, poor governance and conflict. Meanwhile, evidence of climate change and its damaging effects continues to mount. Confronted with these and other challenges, the system of global institutions and rules is under growing strain.

These changes matter for Canada and for our future. They matter, in part, because Canadians have long believed that their country should play a constructive role in addressing global problems; we are not isolationists. They also matter because these changes have potentially serious implications for the prosperity, security and well-being of Canadians. If you, Prime Minister, fail

to maintain Canada's competitiveness, or to address transnational threats to our security, or to deal with pressing environmental problems, we will all end up worse off.

For Canada to succeed—not in the world we have known, but in the world that is emerging—you will need to pursue a forward-looking foreign policy. The starting point for such a policy is a simple, but powerful, principle: that Canada's interests are served by working constructively with others. This principle was at the core of Canada's largely non-partisan foreign policy for the better part of six decades following World War Two. Its most successful practitioner in recent decades was a (Progressive) Conservative prime minister, Brian Mulroney, who invested in diplomacy and the military while championing Canada's role in the United Nations, among other things.

This emphasis on constructive diplomacy never prevented Ottawa from taking strong stands on important issues, from nuclear arms control to South African apartheid. Nor did it preclude participation in close military alliances, including the North Atlantic Treaty Organization.

Effective multilateralism strengthened Canada's relationship with its most important partner, the United States—a relationship that Ottawa, completing the circle, parlayed into influence with other countries and multilateral institutions.

In recent years, however, our relations have weakened. Tactless attempts to pressure the White House into approving the Keystone XL pipeline, for example, have placed new strains on the Canada-U.S. relationship. Without high-level political support from Barack Obama's administration, progress on reducing impediments to the flow of people and goods across the Canada-U.S. border—a vital Canadian interest—has flagged.

Canada's standing in many multilateral bodies, including the United Nations, has also diminished. We became the only country in the world to withdraw from the United Nations Convention to Combat Desertification, undoubtedly irritating Berlin on the eve of Germany's hosting a major meeting on the issue. Ottawa also cut off funding to the Commonwealth Secretariat and boycotted its last meeting in protest against the host, Sri Lanka, even though other countries, such as Britain, were equally critical of Sri Lanka, but decided to attend. While we used to be a leader in multilateral arms control, now we are laggards—the only member of the North Atlantic Treaty Organization that still has not signed the Arms Trade Treaty on conventional weapons.

Rather than maintaining the virtuous circle of effective bilateral and multilateral diplomacy, Canada has been marginalizing itself. It is one thing to excoriate our adversaries, as we have recently taken to doing, but carelessly alienating our friends and disconnecting ourselves from international discussions is simply self-defeating. Canada is not powerful enough to dictate to others, even if we wished to do so. We have succeeded in international affairs by building bridges, not burning them.

This point seems to be lost on some foreign policy commentators, including Derek Burney and Fen Hampson, who disparage this approach as "Canada's Boy Scout vocation," or a kind of woolly-minded idealism. Their scorn is misplaced. Building international partnerships, including through energetic and constructive multilateral diplomacy, is a necessary condition for advancing Canada's interests. Nothing could be more hard-headed.

Your challenge, Prime Minister, is to devise a foreign policy that reaffirms this approach while responding to the sweeping changes taking place in the world: a foreign policy for the future. Allow me to offer the following suggestions—on our relations with Asia and the United States, our policy on energy and the environment, and our approach to fragile states.

A forward-looking policy would, first, recognize that the centre of economic power in the world is shifting with unprecedented speed away from the advanced industrialized countries and toward emerging markets, particularly in the Asia-Pacific region. In 1980, for example, Chinese economic output was just a tenth of the U.S. figure, but by 2020 it is expected to be 20 percent larger than that of the United States. Despite a recent slowdown, growth rates in emerging economies are expected to continue outperforming those of the advanced economies by a wide margin.

Deepening Canada's economic links with these emerging powerhouses would allow us to benefit more from their elevated rates of economic growth, but we have been very slow to do so. Fully 85 percent of our exports still go to slow-growth advanced countries, according to figures cited by the Bank of Canada. The recently finalized trade deal with Korea was a step in the right direction, but we still lag far behind our competitors (see figure). Canada's market share of China's imports, for instance, did not increase between 2004 and 2013, and our share of India's imports actually fell during this period.

Exports to Emerging-Market Economies as a Share of Total Exports
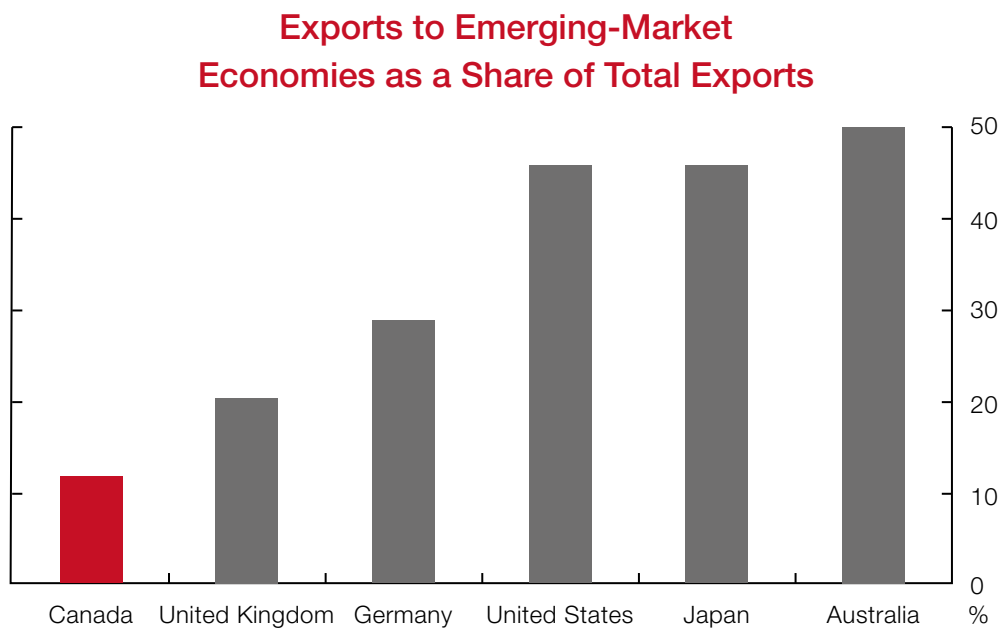
Source: Bank of Canada, citing International Monetary Fund figures for 2012.

This is not only bad for Canada's long-term growth prospects; it also imposes costs today. A small but telling example: Australia's recently concluded free trade agreement with China eliminated tariffs on Australian barley imports into China, among other things. Selling food to the Middle Kingdom is big business—and an enormous opportunity for Canadian exporters. Now, however, Australian barley exports to China will enjoy a $10 per tonne advantage over Canadian barley. We lose.

The good news is that Canada is participating in negotiations for a Trans-Pacific Partnership, an economic cooperation zone that will, if completed, encompass twelve countries including Canada. In addition to pressing for a successful conclusion of these negotiations, you should initiate free trade negotiations with China, which is not part of the TPP, and with the Association of Southeast Asian Nations, while expeditiously concluding Canada's ongoing bilateral negotiations with India and Japan.

Even these steps are only a beginning. Trade deals can secure market access, but business relationships in Asia are often founded on personal contacts and familiarity. Canada still has a lot of work to do on this front, too. Other western countries recognized Asia's potential years ago and launched concerted strategies to strengthen their professional, cultural and educational links with the region. In 2009, for instance, President Barack Obama announced that the U.S. would send 100,000 American students to study in China by the end of 2014. (The target was met and surpassed last year.) Australia's New Colombo Plan, funded to the tune of $100 million over five years, also aims to increase Australian knowledge of and connections to Asia through study, work and internship programs.

Diplomacy is also critical; our partnerships in the region must be about more than commerce. Relationships need to be cultivated steadily and assiduously,

including with those countries in Asia, and elsewhere, which are playing or are likely to play pivotal roles in regional and global politics. The recent push to increase Canada's diplomatic presence in Asia, which had waned under both Liberal and Conservative governments, is welcome but does not go far enough. We have a lot of ground to catch up. As Singapore's senior statesman, Kishore Mahubani, who was once a foreign student at Dalhousie University in Halifax and is now dean of the Lee Kuan Yew School of Public Policy in Singapore, noted in 2012: "Canada has neglected Asia. Canada has paid very little attention."

Reversing this state of affairs will require a concerted and sustained effort. You will need to develop a comprehensive Asia-Pacific strategy to expand Canada's market access and significantly increase our business, diplomatic and people-to-people contacts with the region. This should be a national campaign involving the provinces, major cities, exporting sectors, educational institutions, tourism and export development agencies, and other stakeholders—and it should be led by you, Prime Minister.

In developing this strategy, pay special attention to international education—Canadian students going abroad and international students coming to Canada—which builds long-term links between societies, expands the pool of Canadians who are prepared to operate in international environments and attracts talented young people to Canada. Governor-General David Johnston, who knows something about higher education from his years as a university leader, calls this the "diplomacy of knowledge." His recent speeches on the subject are worth reading. They make a strong case for dramatically increasing the flow of exchange of students between Canada and other countries.

Canada's current international education strategy, issued in 2014, sensibly aims to double the number of foreign students in Canada over the next decade. Beyond larger numbers, however, we should seek to attract the best and brightest to Canada by creating a major new international scholarship program that targets key countries, including in Asia. In its 2012 report, the federally appointed advisory panel on international education recommended that Ottawa fund 8,000 foreign-student scholarships over ten years. You should follow this advice. Among other things, it would be an investment in building Canada's brand as a prime destination for international students.

The other side of this equation—sending Canadian students abroad—also deserves your attention. Only 3 percent of Canadian students participate in educational programs in other countries, a "miniscule" proportion, according to the Canadian Bureau for International Education, which also notes that more than 30 percent of German students go abroad. Among the Canadian students who participate in international programs, moreover, most go to the United States, Britain, Australia or France, and study in their first language. We are not preparing the next generation of Canadians to navigate a more complex world in which economic and political power is diffusing. The fact that only about 3,000 Canadian students were studying in China in 2012, for instance, ought to be a source of concern. Create a new scholarship program that will send 100,000 Canadian students on international learning experiences over the next ten years, including to the emerging countries of Asia.

Education, however, is just one element of an Asia-Pacific strategy. Business development is key. Take groups of young Canadian entrepreneurs on trade missions to China and to other emerging economies, and negotiate visa regimes to enable young international workers to be mobile and gain international experience over a two-year period. Sponsor "reverse trade missions" by inviting representatives from key emerging-country sectors to Canada, where they could attend trade fairs with Canadian businesses, as the

Ontario Jobs and Prosperity Council recently suggested. Promote Canada as a hub for Asian multinational enterprises in the Americas. And establish an advisory council of eminent Asian political and business leaders to meet annually with you and senior government officials.

While the Asia-Pacific strategy is important, so is restoring positive and constructive relations with the United States, which will remain our principal economic partner for the foreseeable future. In 2013, more than 75 percent of Canada's total merchandise exports went to the United States. Of these, more than half crossed the border by road or rail. Even in a digital age, therefore, ensuring that these land crossings remain open and efficient for travellers and goods remains a vital Canadian interest. But progress on improving the efficiency of the border has slowed. We need an engaged partner in the White House to drive this agenda forward and to overcome the entropy of the U.S. political system. However, convincing the American president to embrace this role will require—once again—skillful diplomacy.

Your first priority should be to improve the tenor of bilateral relations, but you also need to begin planning for the inauguration of a new president in January 2017—by developing a proposal for renewed continental cooperation. Here, too, there are many options to consider: Propose a new mobility agreement allowing more Canadians and Americans to work temporarily in the other country. Seek a Canadian exemption from U.S. "Buy America" laws and protectionist country-of-origin labelling requirements. Create a genuinely integrated cargo inspection system, so that goods entering Canada, the U.S. or Mexico need to be inspected only once, not every time they cross our shared borders. You could even explore options for eliminating differences in the tariffs that the U.S. and Canada charge on imports from third countries—also known as a customs union. As University of Ottawa economist Patrick Georges has shown, this would generate significant economic benefits for Canada.

Energy and the environment loom large in our bilateral relations, especially given Canada's long-unanswered request for U.S. approval of the Keystone XL pipeline. Being an international laggard on climate change—arguably the biggest problem facing the world—has not helped our case. Canada's environmental irresponsibility must end. Your foreign policy should include meaningful reductions in Canada's carbon emissions and a more constructive approach to global negotiations of a post-Kyoto arrangement on climate change. To the greatest extent possible, you should do this in conjunction with the U.S., in order to avoid placing Canadian companies at a competitive disadvantage. Our two countries should resolve to make North America the most responsible producer of natural resources in the world. A continental cap-and-trade system, or coordinated carbon taxes, could be part of this arrangement.

Beyond climate change, you should revitalize Canada's multilateral diplomacy on a range of global issues, including at the United Nations. We have all but abandoned our involvement in UN peace operations—even though the number of troops deployed in these missions is at an all-time high. These "next generation" missions tend to be more dangerous and complex than the traditional peacekeeping of the Cold War era, yet in many cases they are containing violence or helping to prevent renewed fighting after ceasefires have been struck. You should offer to provide the UN with the specialized capabilities—such as engineering companies, mobile medical facilities, in-theatre airlift, surveillance and reconnaissance capabilities, and civilian experts—which many of these missions need.

Some might see a return to UN peace operations as retrograde, but they would be wrong. Stabilizing fragile and conflict-affected states is an international security and development challenge of the first order. Most of the world's refugee and humanitarian emergencies occur in fragile states. These countries are also home to half of all people who live below the $1.25-a-day poverty line.

Moreover, chronic unrest and weak governance can create opportunities for transnational militants to establish a presence, to destabilize neighbouring states and to recruit internationally.

Canada should be at the forefront of a comprehensive international response to this problem. In some cases, this will involve assisting local and regional forces who are fighting groups that threaten civilian populations and international security, such as Islamic State. There is an important distinction, however, between helping these forces secure their own country and doing the ground fighting for them. In Iraq and Syria, the U.S.-led coalition has, to date, performed mainly a supporting role—training anti-Islamic State forces and conducting air strikes against Islamic State targets—but there will likely be growing pressure on Western governments to move their ground troops into front-line combat roles in the coming months and years. Beware mission creep. "Limited" military operations have an inborn propensity to become decidedly less limited over time.

Military action alone, however, is unlikely to create the conditions for stability in most fragile states. It deals only with the symptoms of instability, not its causes. NATO's supreme commander, U.S. Air Force General Philip Breedlove, made this point last December in relation to Iraq and Syria. Long-term stabilization and de-radicalization strategies, he said, must focus on bringing jobs, education, health and safety to vulnerable people, as well as figuring out how to make governments responsive to their people. He is right. You should call for a more comprehensive international response to fragile states, one that addresses the causes of instability and radicalization, including poor governance and lack of economic opportunity, ideally before they threaten international security. Today, most fragile states are still far less violent than Syria and Iraq, but if we ignore them, or if we respond only to the symptoms of their unrest, all bets are off.

These proposals—on relations with Asia and the U.S., energy and the environment, and fragile states—are by no means an exhaustive list. As you choose your priorities, however, bear in mind that Canada needs to maintain a "full-spectrum" foreign policy that is global in scope. We are a G7 country and should behave like one. This also means investing in the instruments of our international policy: a superb diplomatic service, an effective and well-equipped military, and a robust development program.

In some areas of policy, it is our methods, rather than our goals, that require adjustment. Canada should, for example, continue to stand strongly with our allies against Russia's aggressive behaviour in Eastern Europe, but we should maintain open channels of communication with Moscow, including on Arctic issues. We should uphold Israel's right to exist and its security, but without diminishing the rights of Palestinians. We should continue Canada's international campaign for maternal, newborn and child health, but without excluding reproductive rights, which are vital to women's health. The World Health Organization estimates that unsafe abortions cause about 8 percent of maternal deaths globally, but Canada has nevertheless refused to fund safe abortions abroad.

The maternal and child health campaign is noteworthy for another reason: it underscores the importance of constructive diplomacy. Apart from the controversy over Canada's position on reproductive rights, the overall campaign has "helped to significantly reduce maternal deaths" since it was launched in 2010, according to Maureen McTeer, a noted feminist and the Canadian representative of the international White Ribbon Alliance for Safe Motherhood. It has worked, in part, because Canada joined forces with a broad array of partners—like-minded countries, philanthropic foundations, civil society organizations and global institutions—in pursuit of a common set of goals.

This is a promising model, particularly given the changes now taking place in world affairs. The diffusion of power to rising states and non-state actors is making collective action even more difficult to achieve, as we see in the periodic paralysis of major multilateral organizations, from the World Trade Organization to the UN. Getting things done in a more crowded world—and finding solutions to complex international problems—will increasingly require mobilizing issue-specific "action coalitions" of state and non-state actors.

As it happens, Canada is well positioned to perform this role. We have done so in the past, assembling coalitions in the 1990s that produced a ban on anti-personnel landmines and established the International Criminal Court. In fact, Canada's tradition of diplomatic entrepreneurialism dates back much further—and for good reason: working constructively with a broad range of partners to tackle international problems has often served both our interests and our values. When Canadian diplomats contributed to the construction of the post–World War Two international order, they did so not only to foster international peace, although this was certainly one of their goals. They also saw an opportunity to increase Canada's influence—by making Canada a respected and valued partner. As Prime Minister Louis St. Laurent once said, we could be "useful to ourselves through being useful to others."

When St. Laurent spoke those words in 1947, he was setting forth a Canadian foreign policy strategy for a then-new post-war world. Today, we are living through yet another period of global transformation. Your challenge, Prime Minister, is to chart a new course for Canada—one that will safeguard and enhance our prosperity, security and well-being for the years to come.

Some things, however, do not change. Whatever objectives you may set forth, St. Laurent's maxim will remain true: In international affairs, Canada's strength comes not from telling others what to do, but from working with others toward shared goals.

About the Author

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