

Fraser Forum

A Fraser Institute review of public policy in Canada

May/June 2011

\$3.95

Measuring Congressional views of CANADA



ALSO IN THIS ISSUE:

Public sector wages

Canada's *Nuclear Liability Act*

BC and Ontario budgets



FRASER
INSTITUTE

Publisher Fraser Institute
Chief Editor Brett J. Skinner
Managing Editor Cari A. Ferguson
Editorial Advisor Kristin McCahon
Contributing Editors Amela Karabegović
 Fred McMahon
 Mark Rovere
 Bill C. Ray
Art Direction and Cover Design Bigstock
Cover Photos Cari A. Ferguson
Production and Layout Dean Pelkey
Media Relations Advertising In Print
Advertising Sales Tel: (604) 681-1811
 E-mail: info@advertising
 inprint.com

The Fraser Institute's vision is a free and prosperous world where individuals benefit from greater choice, competitive markets, and personal responsibility. Our mission is to measure, study, and communicate the impact of competitive markets and government interventions on the welfare of individuals. Founded in 1974, we are an independent Canadian research and educational organization. Our work is financed by tax-deductible contributions from thousands of individuals, organizations, and foundations. In order to protect its independence, the Institute does not accept grants from government or contracts for research.

For additional copies, or to become a supporter and receive *Fraser Forum*, write or call the Fraser Institute, 4th Floor, 1770 Burrard Street, Vancouver, BC V6J 3G7
 Telephone: (604) 688-0221; Fax: (604) 688-8539; Toll-free: 1-800-665-3558 (ext. 580—book orders; ext. 586—development)

Copyright © 2011 Fraser Institute
 ISSN 0827-7893 (print version)
 ISSN 1480-3690 (online version)
 Printed and bound in Canada.

Return undeliverable Canadian addresses to:
 Fraser Institute, 4th Floor, 1770 Burrard Street
 Vancouver, BC V6J 3G7

The contributors to this publication have worked independently and opinions expressed by them are, therefore, their own and do not necessarily reflect the opinions of the supporters, trustees, or other staff of the Fraser Institute. This publication in no way implies that the Fraser Institute, its trustees, or staff are in favour of, or oppose the passage of, any bill; or that they support or oppose any particular political party or candidate.

Fraser Institute Board of Trustees Peter Brown (Chairman), Edward Belzberg (Vice Chairman), Mark W. Mitchell (Vice Chairman), Salem Ben Nasser Al Ismaili, Louis-Philippe Amiot, Gordon Arnell, Charles Barlow, Jr., Ryan Beedie, Brad Bennett, Everett Berg, T. Patrick Boyle, Joseph Canavan, Alex Chafuen, Derwood Chase, Jr., James Davidson, John Dielwart, Stuart Elman, Greg Fleck, Paul Fletcher, Shaun Francis, Ned Goodman, John Hagg, Paul Hill, Stephen Hynes, C. Ken Jespersen, Andrew Judson, Robert Lee, Brandt Louie, Lukas Lundin, David MacKenzie, Hubert Marleau, James McGovern, George Melville, Gwyn Morgan, Eleanor Nicholls, Roger Phillips, Herb Pinder, R. Jack Pirie, Conrad Riley, Gavin Semple, Rod Senft, Anthony Sessions, Christopher Shackleton, Bill Siebens, Anna Stylianides, Arni Thorsteinson, Michael Walker, Jonathan Wener, Catherine Windels, Brett J. Skinner (President), Peter Cowley (Senior Vice President, Operations), Niels Veldhuise (Vice President, Research), Fred McMahon (Vice President, Research), Michael Perri (Secretary-Treasurer)

With the recent Canadian election just behind us, it is relevant that a theme in this issue of *Fraser Forum* concerns Canadian politics. More specifically, it focuses on Canada's relationship with the United States, and the perceptions that American politicians hold of Canada.

In 2009, Alexander Moens and Nachum Gabler identified that "there are few objectively measured indicators that disclose how each [country's governing] body views the relationship between our two countries" (pg.13). In an attempt to provide concrete data to confirm or contradict beliefs about the Canadian-American political relationship, the pair undertook a project examining how Canadian parliamentarians viewed cooperation with the United States.

In 2011, they began a similar project examining the American Congress in an attempt to determine what US senators and congressmen have to say about Canada. They examined five areas in particular—trade, health care, energy and the environment, the border, and finally, defence and foreign affairs—to determine on which issues American policy makers hold favourable or unfavourable views towards Canadian public policy decisions. Their study, *What Congress Thinks of Canada*, was released at the beginning of this month, and the cover story in this issue of *Forum*, "Measuring Congressional Views of Canada," summarizes the findings of that study.

This month's *Fraser Forum* also includes an article addressing America's reliance on Canadian oil (pg. 4), the need to eliminate public sector wage premiums (pg. 4), and a discussion of both the Ontario and British Columbia provincial budgets (pg. 22–26). Finally, our two recurring features are also included in this issue of *Forum*. In the "Quarterly Research Alert," our researchers summarize important studies on topics such as government performance, taxation, and labour markets. In our newest section on regulations, our energy expert Joel Wood has written an article about Canada's *Nuclear Liability Act* (pg. 35). I hope you enjoy this second appearance of this new section.

CARI A. FERGUSON (fraserforum@fraserinstitute.org)



What Congress really thinks of Canada

Contents

9



Merit pay for teachers

23



Quarterly research alert

30



Outdated medical equipment

1

From the editor

4

Forum authors

5

Canada should follow Wisconsin's lead and roll back the public sector wage premium

Niels Veldhuis and Milagros Palacios

To overcome fiscal challenges, Canadian politicians should follow the lead of the Wisconsin governor and eliminate public sector wage premiums.

6

Memo to the United States: Canada is your best energy friend

Mark Milke

Anti-Canadian oil advocates try to persuade the American public and policy makers that the United States can do without Canadian oil, but the truth is that Canadian oil is in the US national interest.

10

Properly designed, merit pay for teachers will pay off for students

Peter Cowley and Niels Veldhuis

Merit pay systems deserve careful consideration as one way to increase learning in classrooms.

Feature Story

Congress on Canada—page 12

12 **Measuring congressional views of Canada**

Alexander Moens and Nachum Gabler

Read the favourable and/or unfavourable views that US senators and congressmen have about Canada.

16 **Quarterly research alert**

Our researchers summarize the findings of recent studies on important topics including taxation, government performance, and poverty.

20 **Minimum wages don't help the poor**

Niels Veldhuis and Amela Karabegović

Higher minimum wages decrease employment opportunities, benefits, and on-the-job training, which actually increases poverty.

22 **Ontario's budget lacks a credible plan**

Niels Veldhuis, Charles Lamnam and Milagros Palacios

Ontario's budget failed to provide what Ontarians really needed: a new fiscal direction.

25 **Spending challenges leave BC's new premier with less budget flexibility than promised**

Niels Veldhuis, Charles Lamnam and Milagros Palacios

The \$2.55 billion in "flexibility" funding included in BC's 2011 budget should not be used for new spending.

27 **Canada's health spending crisis**

Mark Rovere

Provincial health expenditures are growing at unsustainable rates.

31 **Old and outdated medical equipment**

Nadeem Esmail

The quality of Canada's medical technology often fails to meet prescribed standards and the health care system should be doing much more to replace old and outdated medical equipment.

35 **Canada's nuclear liability**

Joel Wood

The liability cap outlined in Canada's *Nuclear Liability Act* should be replaced with unlimited liability.



Forum *Authors*



PETER COWLEY (peter.cowley@fraserinstitute.org) is the director of School Performance Studies at the Fraser Institute. He has a B.A. in commerce and is co-author of the Institute's report cards on schools in British Columbia, Alberta, Ontario, Quebec, and Washington state.



NADEEM ESMAIL is a senior fellow and a former director of Health System Performance Studies at the Fraser Institute. He holds an M.A. in economics from the University of British Columbia.



AMELA KARABEGOVIĆ (amela.karabegovic@fraserinstitute.org) is a senior economist in the fiscal studies department at the Fraser Institute. She has an M.A. in economics from Simon Fraser University.



NACHUM GABLER (nachum.gabler@fraserinstitute.org) is a research assistant in the Centre for Canadian-American Relations at the Fraser Institute. He has an M.A. in economics from Boston University.



CHARLES LAMMAM (charles.lammam@fraserinstitute.org) is a senior policy analyst in the fiscal studies department at the Fraser Institute. He holds an M.A. in public policy from Simon Fraser University.



MARK MILKE (mark.milke@fraserinstitute.org) is director of the Fraser Institute's Alberta office and of the Alberta Prosperity Project, www.fraserinstitute.org. He has a Ph.D. in International Relations and Political Philosophy from the University of Calgary.



ALEXANDER MOENS (alex.moens@fraserinstitute.org) is a professor of political science at Simon Fraser University in Vancouver and a senior fellow in American Policy at the Fraser Institute.



MILAGROS PALACIOS (milagros.palacios@fraserinstitute.org) is a senior economist with the Fraser Institute's fiscal studies department. She holds an M.Sc. in economics from the University of Concepcion in Chile.



MARK ROVERE (mark.rovere@fraserinstitute.org) is the associate director of the Health Policy Research Centre at the Fraser Institute. He holds an M.A. in political science from the University of Windsor.

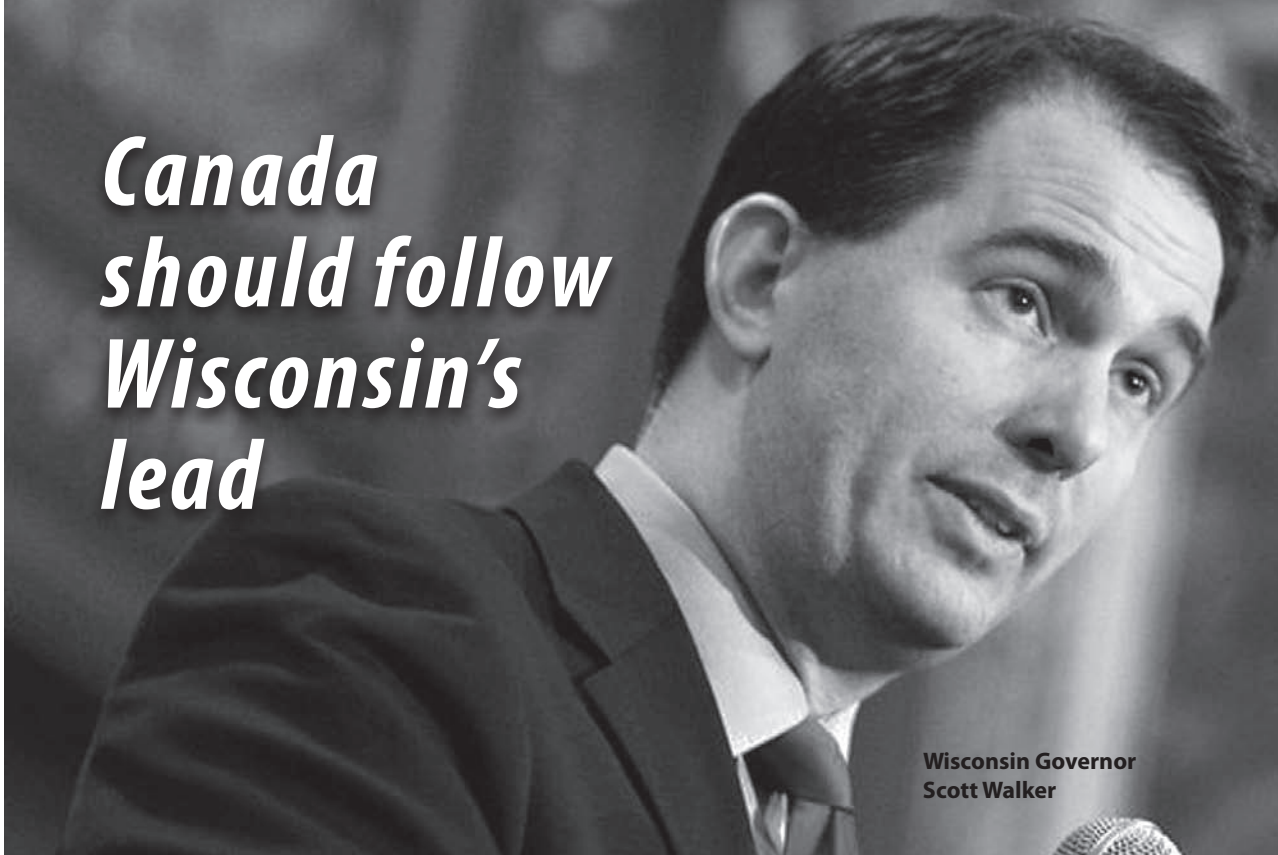


NIELS VELDHIJS (niels.veldhuis@fraserinstitute.org) is the director of fiscal studies and vice-president, Canadian policy research, at the Fraser Institute. He has an M.A. in economics from Simon Fraser University.



JOEL WOOD (joel.wood@fraserinstitute.org) is the Institute's senior research economist in the Centre for Environmental Studies and Centre for Risk and Regulation. He holds an M.A. in economics and has completed all the requirements for a Ph.D. in economics from the University of Guelph.

Canada should follow Wisconsin's lead



Wisconsin Governor
Scott Walker

Truthsort

...and roll back the public sector wage premium

NIELS VELDHUIS AND MILAGROS PALACIOS

Facing a \$3.6 billion deficit, Wisconsin Governor Scott Walker recently declared his state “broke” (Walker, 2011). To overcome this fiscal challenge, Governor Walker proposed cutting generous public sector pension and health care benefits and threatened immediate layoffs if concessions were not made. He also introduced legislation to restrict collective bargaining in the public sector and limit future wage increases to the rate of inflation.

Governor Walker has clearly tapped into the growing backlash from ordinary working taxpayers against the generous compensation of the public sector. His willingness to tackle Wisconsin’s fiscal situation head-on is a welcome breath of fresh air. While Canadian politicians should be following Governor Walker’s lead, most are simply deferring fiscal problems into the future, unwilling to make the tough choices today.

For instance, Ontario Premier Dalton McGuinty’s government plans to run a \$16.7 billion deficit (2.7% of GDP) this year and another \$67.6 billion over the next six years (Ontario, Ministry of Finance, 2011). Jean Charest’s government in Quebec plans to finish the year with a \$3.5 billion deficit (1.1% of GDP) and another \$3.3 billion over the next two years (Quebec, Ministry of Finance, 2011).


For Premier Ed Stelmach in Alberta, no tough choices are being made there either. His government plans to run a deficit of \$4.8 billion (1.8% of GDP) this year and another \$4.1 billion over the next two years (Alberta, Ministry of Finance, 2011). Even Stephen Harper’s Conservative government expects a \$40.5 billion deficit this year (2.5 % of GDP), and plans to return the budget to balance in five years by limiting spending growth (something they have not done to date) and hoping that revenues will

grow at 5.6% a year (Canada, Department of Finance, 2011).

If our politicians here in Canada admitted to the seriousness of the current fiscal situation—as Governor Walker has done in Wisconsin—and were bold enough to deal with the problem aggressively, they would start cutting in the same place: with overly generous public sector wages and benefits. Like Wisconsin, Canada’s public sector enjoys a significant wage premium. That is, workers in the public sector are paid significantly more than comparable private sector workers. Specifically, after accounting for differences in education and skills (and other factors that influence wages) public sector workers enjoy a wage premium of up to 38%.

The premium varies depending on occupation and industry. Those in retail (sales clerks, cashiers, supervisors) enjoy a 26% premium in the

continued on page 24



Memo to the United States:

Canada is your best energy friend

Courtesy Suncor

MARK MILKE

Over the last several years, Canada's oil exports have been assailed by those who would like to convince American consumers and policy makers that they must choose between perfection and Canadian oil imports—which, as with any processed product, carries some environmental costs. The perfectionist-end choice assumes that a cessation of imported oil from Canada (or at least oil from this country's oil sands) would not have negative consequences. Except that one such consequence would be the then-created need to import more from potentially unstable countries where security of supply might be interrupted by revolutions or newly unfriendly regimes. Recent events in Libya, while a minor supplier of oil imports to the United States, are a reminder that it does indeed matter from which countries the US imports its oil.

On an example of perfectionism, in 2010, city councilors in Bellingham, Washington voted 7–0 to “promote energy alternatives to fossil fuels, and in particular, Canadian tar sands sources, and encouraging the use of alternative transportation techniques” (Audette, 2010: A4). Similarly, in 2010, a San Francisco-based environmental lobby group, Corporate Ethics International, sponsored billboards in the United States and United Kingdom to urge potential tourists to Alberta to “rethink” their travel plans. The group's boycott was based upon their opposition to the oil sands (Gerein, 2011: A6).

The desire to improve is a human characteristic, but long-lasting positive reforms must necessarily be based on how men and women actually live, behave, and work; such reforms must also occur within the physical limitations they themselves face. To ignore real-world restrictions in pursuit of an imagined ideal is not to improve the world, but to ignore it, and to disregard the realistic choices available.

Available choices on energy at present: A 10-point, factual check-in

Insofar as anti-Canadian oil advocates try to persuade the American public and policy makers that the United States can do without Canadian oil in whole or in part, a factual “check-in” is thus required.

Fact #1: The United States now imports 5.4 million more barrels of oil per day than it did in 1973

The United States imported 5.4 million more barrels of oil per day in 2009 (the last year for which statistics are available) than it did in 1973, an increase of 87%. With rare exceptions, US oil imports have increased since the 1970s, pausing and declining only in recessions (US Energy Information Administration, 2011). Thus, the

question is not whether or not the US will import oil, but *which country* will supply that oil to American consumers, businesses, and government.

Fact #2: Oil will remain the dominant fuel through to 2035, at least

In its recent forecast to 2035, the International Energy Agency (IEA) notes that “oil remains the dominant fuel in the primary energy mix to 2035.” The IEA forecasts global demand for crude oil to reach 99 million barrels per day by 2035; that is up from 63.1 million barrels in 1980 (IEA, 2010a: 1–2).

Fact #3: Unconventional oil will increase in importance through to 2035

The IEA also notes that unconventional oil (of which Canada’s oil sands are an example) will play “an increasingly important role in world oil supply through to 2035, *regardless of what governments do to curb demand*” (emphasis added) (IEA, 2010b: 147–161).

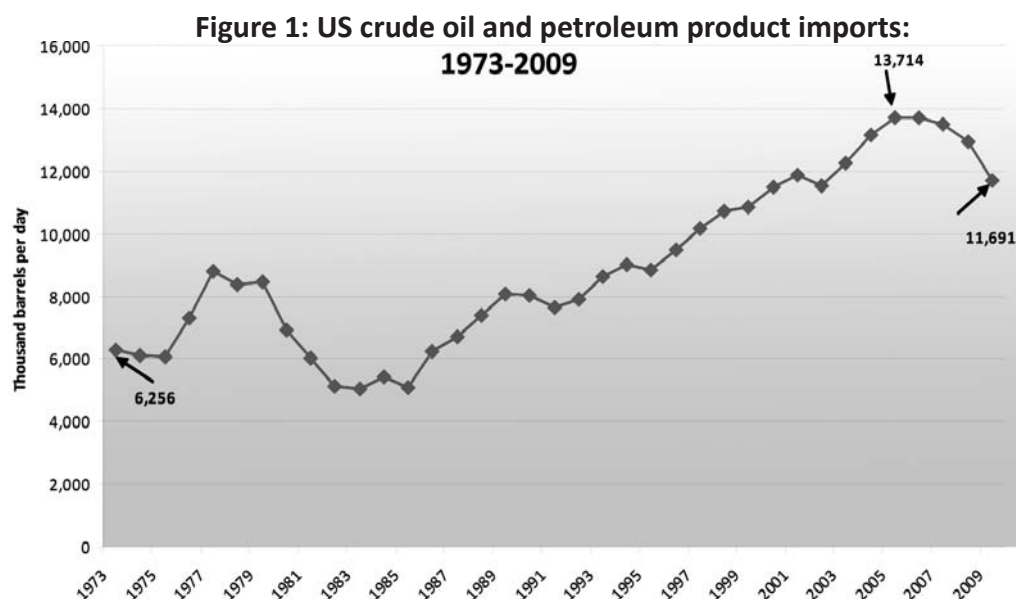
Fact #4: Geo-political events can affect the flow of crude oil imports from the Persian Gulf region suddenly and dramatically—witness Iran in 1979 and Iraq in 1991

While activists such as Steve Kozel claim that the “energy security benefits of tar sands oil have been exaggerated,”

(Kozel et al., 2010), the historical record demonstrates otherwise. In 1978, Iran’s share of the US oil import market was 555,000 barrels per day (6.1%). In 1979, the year of the Iranian Revolution, that share dropped to 304,000 barrels (3.6%) and ceased altogether in 1980.

In Iraq, a similar dramatic decline occurred due to the first Gulf War. By 1990, Iraq’s supply of oil to the United States reached 518,000 barrels per day (6.5% of all US imports). After the invasion of Kuwait in August 1990 and the subsequent Gulf War in early 1991, imports from Iraq ceased entirely.

In the case of Iran and Iraq, a replacement of their relatively minor oil flows was possible. However, in 1991, the year of the first Gulf War, Saudi Arabia provided the United States with an average of 1.8 million barrels of oil per day, or 23.6% of all American imports (all references above from US Energy Information Administration, 2010a). If some unforeseen event had negatively affected Saudi oil flows in 1991, it would have been much more difficult to replace almost a quarter of America’s oil imports, especially as interruptions in delivery also increase prices on the rest of the world’s oil. In the event of such a supply disruption, while an over-night switch to more Canadian imports could not occur, a long-term view should compare the security of Canadian imports versus those of other countries. Put bluntly, Canada’s flow of oil is unlikely to ever be imperiled by revolution or an unfriendly arbitrary autocrat. Both realities have occurred in the Middle East in the last 40 years. Recent events also serve as reminder of such possibilities.



Source: US Energy Information Administration. (2011). International energy statistics.
<http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MTTIMUS2&f=A>, as of January 12, 2011.

Fact #5: Growing world-wide demand for oil means little room for disruptions in supply

Over the past three decades, oil consumption grew dramatically in some developing countries. For example, in 1980, the Asia and Oceania region consumed just 10.7 million barrels a day, or 17% of total world consumption that year (63.1 million barrels per day). Almost three decades later by 2009, total world consumption rose to 84.4 million barrels per day and Asia and Oceania's demand, in particular, rose to 25.6 million barrels per day, or 30.4% of oil consumption that year (US Energy Information Administration, 2010b). Clearly, a secure supply of oil from a stable country does indeed matter (or should) to policy makers.

Fact #6: Canada now provides more of America's oil and petroleum imports than all Persian Gulf countries combined

In 1979, Persian Gulf countries accounted for just over 2 million barrels per day (24.5% of all US oil imports) with little more than half-a-million barrels per day coming from Canada (6.4% of all US imports). By 2009, the Persian Gulf share declined to just under 1.7 million barrels of oil per day (14.4% of all US oil imports) and Canada's share amounted to almost 2.5 million barrels per day (21.2% of all US imports). Canada is now the largest supplier of crude oil to the United States (US Energy Information Administration, 2010a).



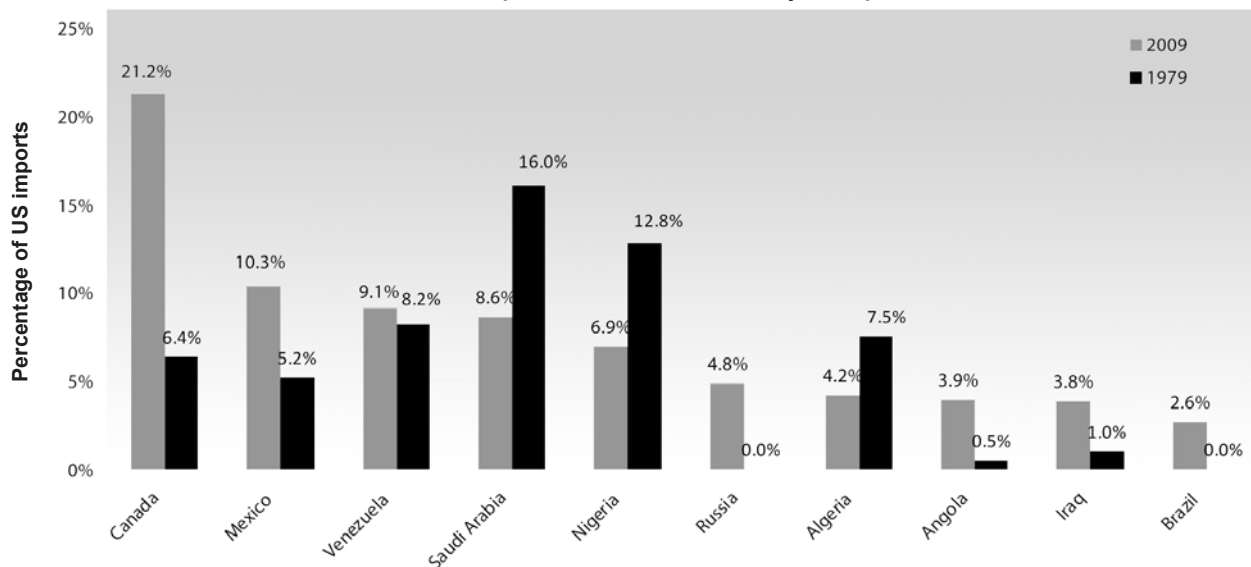
Fact #7: Oil exports from America's two NAFTA partners, Canada and Mexico, are closing in on OPEC's share

In 1979, The Organization of the Petroleum Exporting Countries (OPEC) accounted for over 5.6 million barrels per day (66.7% of all US oil imports). By 2009, that total declined to under 4.8 million barrels per day (40.9% of all US oil imports). Together, oil imports from America's two NAFTA partners grew from just under 1 million barrels per day in 1979 to almost 3.7 million barrels per day in 2009—or from 11.6% in 1979 to 31.5% in 2009 (US Energy Information Administration, 2010a).

Fact #8: Less Canadian oil would necessitate more oil imports from non-North American sources

A recent paper prepared for the US Department of Energy on the proposed Keystone pipeline (that would extend from Alberta south to Texas) found that any decrease in imports from Western Canada “would be filled by offsetting increases in crude oil imports from other

Figure 2: Top 10 import sources of US oil and petroleum products in 2009 (with 1979 levels compared)



Source: US Energy Information Administration. (2010b). US Imports by Country of Origin.
<http://www.eia.gov/dnav/pet/pet_move_impqus_a2_nus_ep00_im0_mbbldpd_a.htm> as of November 8, 2010.



Extractions from the Alberta oil sands comprise a large portion of Canadian petroleum exports to the US.

Courtesy Suncor

foreign sources, especially the Middle East (as the primary balancing supplier)” (Ensys Energy, 2010: 6). Given real security concerns—again, made obvious by recent events in North Africa and the Middle East—security of oil import supply should be noted by American policy makers and/or those who would see to restrict oil imports from a more friendly and secure supply source such as Canada.

Fact #9: Canada’s oil production capability matters to the question of price

On price, the claim that oil sands crude “does not lower prices” because non-conventional oil is more expensive to produce than conventional oil (Kozel et al., 2010) is a mistaken assertion. True, oil from non-conventional sources *is* more expensive to extract (IEA, 2010a: 139). However, the final price of oil is determined not only by the initial cost of production, but also by demand. Less supply on the international market from any source tightens supply and pushes prices up; in reverse, more oil on the market *from any source* acts to keep prices lower. This is straightforward supply and demand. Oil is an internationally traded commodity, the price of which is set by that same international market.

Fact #10: Canada acts as a counterbalance to the potential for disrupted supply

Arguments that Canada’s oil exports from the oil sands make little difference to supply are erroneous. An extra supply of oil from a non-OPEC source *by virtue of its existence* acts as a counterweight to OPEC and provides possible spare capacity. Obviously, if oil is removed from the international market due to a domestic crisis in some oil-exporting country, a terrorist attack, declining reserves, or any other reason, the supply of oil to customers will be affected. Canada’s existence as a major oil exporter has an obvious potential to act as a counterbalance to such tightened supply.

A summary portrait

Canada has the potential to greatly lessen American dependence on non-North American sources of oil, and

thus avoid any economic and policy shocks that would result from an over-reliance on countries with unpredictable and, in some cases undesirable, regimes. Simply put, Canadian oil is in the US national interest.

References

- Audette, Trish (2010, June 10). American City Rejects Alberta-Produced Fuel; Province Not Overly Concerned About Decision. *Edmonton Journal*. A4.
- Ensys Energy (2010). *Keystone XL Assessment—Final Report*. Prepared for the US Department of Energy. <<http://www.keystonepipeline-xl.state.gov/clientsite/keystonexl.nsf/Assmt-DrftAcpt.pdf?OpenFileResource>>, as of February 3, 2011.
- Gerein, Keith (2011, January 12). “Rethink Alberta” Failed To Slow Tourism. *Calgary Herald*: A6.
- International Energy Agency (IEA) (2010a). *World Energy Outlook 2010 Factsheet*. <<http://weofiles.iea.org/Factsheets/factsheets.pdf>> as of November 17, 2010.
- International Energy Agency (IEA) (2010b). *World Energy Outlook 2010 Factsheet*. <http://www.iea.org/Textbase/nppdf/stud/10/weo2010_part1.pdf> as of November 18, 2010.
- Kozel Sr., Steve, et al. (2010, September 8). *Open letter to Honorable Nancy Pelosi and Honorable Edward Markey*. <<http://www.dirtyoilsands.org/files/PelosiMarkeyLetter-FINAL.pdf>> as of October 18, 2010.
- US Energy Information Administration (2010a). *US Imports by Country of Origin*. <http://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_ep00_im0_mbbldpd_a.htm> as of November 8, 2010.
- US Energy Information Administration (2010b). *International Energy Statistics*. <<http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=54&aid=4>> as of November 8, 2010.
- US Energy Information Administration (2011). *International Energy Statistics. Annual US Imports Of Crude Oil And Petroleum Products*. <<http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MTTIMUS2&f=A>> as of January 12, 2011. ■

Properly designed,
MERIT PAY
for teachers will pay off for students



Bigstock

PETER COWLEY AND NIELS VELDHIJS

It is safe to assume that all British Columbians want children to acquire the skills and knowledge needed to build a happy and productive life. In order to ensure this opportunity for all, our public schools should seriously consider any innovation that promises improved education for our children.

When it comes to teacher pay, one might expect that a compensation package that pays a premium for

effective teaching—and encourages less successful teachers to improve their skills—would be one tool in the improvement toolbox. Unfortunately, that is not currently the case in British Columbia's public schools. Here, teacher compensation is governed by a collective agreement with teacher unions, which does not recognize effectiveness in its pay schedule.

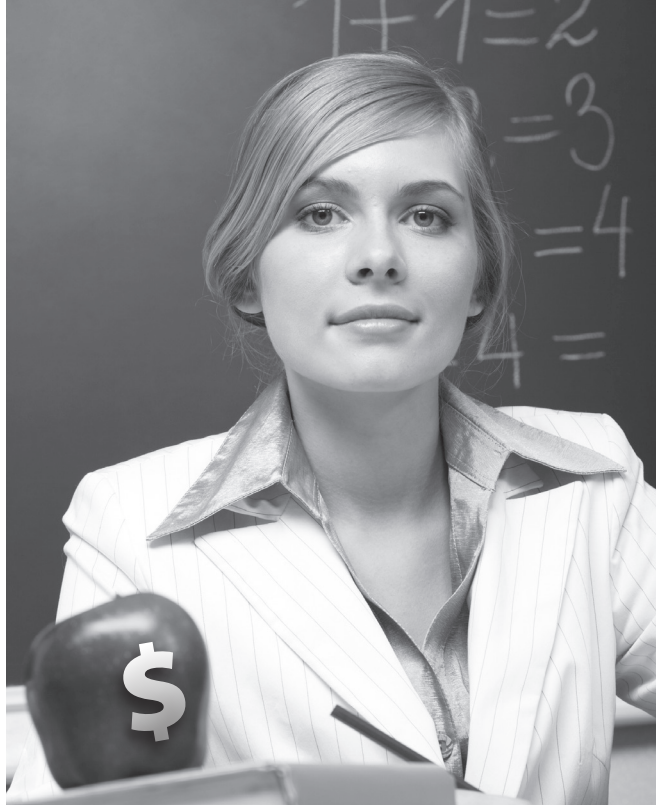
Generally, British Columbia's teachers can earn a pay increase

in only two ways: experience and additional education credentials. All teachers get an annual increase upon completing each of their first ten years of service. The only other way to get a boost is to get a post-graduate degree.¹ Add to this the fact that, under the same collective agreements, it is nearly impossible to penalize a failing teacher,² and you have a compensation system that contributes little to the improvement

of our children's futures. As such, some system of merit pay is certainly worth considering. Broadly speaking, the concept of merit pay includes any compensation system that rewards an employee for achieving specific results. Such systems are common in both the public and the private sectors. Sales commissions, bonuses for established levels of superior performance, piece work, team incentives, and pay raises based on past success are all common systems of merit pay.

The question is, do merit pay systems actually work in education? Fortunately, there is solid evidence that properly designed merit pay systems can have positive affects. One recent study by University of Chicago economics professor Derek Neal, entitled *The Design of Performance Pay in Education* reviews the scholarly literature on performance pay systems and their effects; he finds "strong suggestive evidence that total teacher effort [rises] following the introduction of performance [ie. merit] pay" (Neal, 2011: 44). There are, of course, exceptions, most notably bonus systems in England and Portugal that "relied on subjective assessments made by either education officials or peer teachers" (Neal, 2011: 44).

Another recent study by Economics Professor Victor Lavy published in the prestigious *American Economic Review* presents evidence on the effect of monetary incentives for English and math teachers in Israel. Professor Lavy found that "the incentives led to significant improvements in test taking rates, conditional pass rates, and mean test scores. Improvements were mediated through changes in teaching methods, enhanced after-school teaching, and increased responsiveness to students' needs" (Lavy, 2009: 1979).



Bigstock

Of course, not all merit pay systems are designed equal. In an earlier study, Professor Lavy offers guidelines for designing effective merit pay systems. He highlights, among many other criteria, that the system must align performance with outcomes and must be monitored closely to discourage manipulation by teachers. Professor Lavy concludes that "many of the practical challenges faced by performance-related pay can be addressed through careful design of the system" (Lavy, 2007: 87).

BC union leader Jim Sinclair will almost certainly trot out predictable objections to any merit pay proposals. But identifying possible objections to merit pay is helpful: it informs better design, implementation, and operation of a merit pay system. It certainly doesn't mean that a potentially valuable innovation should be shelved out of hand.

Indeed, we owe it to our kids to ensure that every aspect of our education system is aligned with the over-riding goal of increased learning. Since current compensation does not contribute to achieving of this goal, we ought to look for ways to fix it. Merit pay deserves a long, hard look.

Notes

1 See the Teacher Qualification Service (TQS) category requirements at www.tqs.bc.ca/requirements.html and Local Collective Agreements 2006-2011 at <http://bctf.ca/BargainingAndContracts.aspx?id=20788&libID=20778>.

2 See Local Collective Agreements, 2006-2011 <http://bctf.ca/BargainingAndContracts.aspx?id=20788&libID=20778>s of February 21, 2011.

References

Lavy, Victor (2009). Performance Pay and Teachers' Effort, Productivity, and Grading Ethics. *American Economic Review* 995: 1979-2011.

Lavy, Victor (2007). Using Performance-Based Pay to Improve the Quality of Teachers. *The Future of Children* 17, 1: 87-109.

Neal, Derek (2011). *The Design of Performance Pay in Education*. National Bureau of Economic Research. <<http://www.nber.org/papers/w16710>>, as of February 21, 2011. ■



Bigstock

Measuring congressional views of Canada



ALEXANDER MOENS AND NACHUM GABLER

Although both Canada's Parliament and the US Congress have the principal say in policy making in their respective countries, there are few objectively measured indicators that disclose how each body views the relationship between our two countries. To fill this void, in 2009, we wrote a study examining how Canadian parliamentarians perceive cooperation with the United States (Moens and Gabler, 2009). In our most recent study, *What Congress Thinks of Canada*, we focus on the American national legislative body—known as the Congress¹—in an attempt to determine the extent to which US senators and congressmen hold favourable or unfavourable views towards Canadian public policy.² American legislators commonly discuss Canada and its public policy positions and generally indicate their approval or disapproval of such policies. This article does not explain why American politicians hold the perceptions of Canadian public policy that they do, rather it seeks merely to summarize and state these positions as expressed during congressional debates. For a fuller analysis and more detailed findings of the larger congressional study, please read Moens and Gabler

(2011). Our findings show five important trends in Congress's perception of Canada.

Trade

Both Democrats (61%) and Republicans (65%)¹ in the House of Representatives express positive views on trade and commercial relations with Canada. The Senate's numbers on trade are positive as well, albeit somewhat lower: Democrats 54%, and Republicans 55%. However, these results are heavily influenced by law makers who want their American constituents to have easier access to the lower-priced brand prescription drugs that they believe to be available in Canada. According to US politicians, these drugs are lower-priced primarily because Canada imposes price controls while the United States does not.²

When scoring all other trade issues such as softwood lumber, BSE, the Canadian Wheat Board, diluted sugar molasses, etc., we find that the perceptions and attitudes of the law makers were generally negative. Notably, Democrats were more negative about trade issues with Canada than were Republicans, particularly during discussions of NAFTA. We

found that about two thirds (67%) of Democrats, both in the House and Senate, were negative, while House Republicans scored 35% negative and Senate Republicans who scored 40% negative.

Our data thus reveal a significant difference in perception between the two political parties towards trade with Canada. When NAFTA is under discussion, Republicans have a more tempered view of Canada than their Democratic counterparts. For Republicans, advocacy for free trade seems to supersede any trade disputes with Canada. Conversely, Democrats are more concerned with ballooning trade imbalances within NAFTA.

Health care

During the recent debates over health care reform in the US (Obama Care), Republicans overall tend to be very critical of Canadian-style, single-payer, universal-coverage health care. While Democrats overall do not speak out against Canadian health care directly, they avoided strongly upholding it as a model for Americans.

Republicans certainly view Canada's health care system as an

example to avoid (80% negative in the House and 95% in the Senate). The Democrats are almost polar opposites in their perception of Canadian health care provision (83% positive in the House and 77% in the Senate), but it must be noted that this praise is confined to Canada's system of pharmaceutical price controls only, rather than its single-payer health system.

Energy and the environment

During discussions on energy, both Democrats and Republicans are consistently positive in their perceptions of Canadian policy. They express strong support and goodwill on most matters related to energy and the environment, including further development of Alberta's oil sands. The exceptions are usually related to non-energy issues like the maritime seal hunt. This strong foundation bodes well for continued cooperation between the two governments and industry on energy exploration and trade.

The House Republican view on energy is overwhelmingly positive (89%). The fact that even the House Democrats have a positive score (49%) should be even more reassuring for the Canadian energy industry. Our data suggest that the House has a solid understanding of the importance of bilateral energy trade between Canada and the US, and may well be able to withstand environmentalist attempts to pursue restrictive policies on crude oil imports.

The border

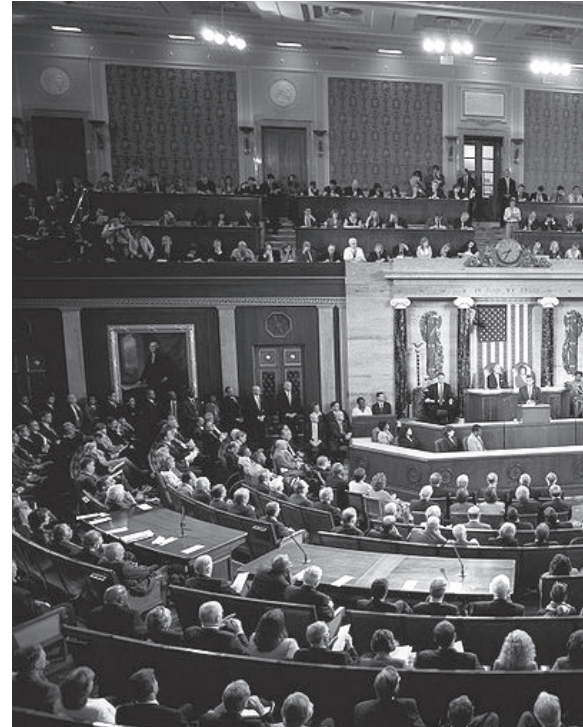
Our data confirm what most Canadians have surmised for some time: both Republicans and Democrats in

the House of Representatives view Canada negatively when it comes to our shared border and the handling of border security issues. House Republicans are substantially more negative than the Democrats regarding whether or not Canada poses a security risk to the United States, and also about the lack of progress regarding new security measures at the border (Republican negative 59% versus Democrat negative 38%). The Republican Senate numbers are somewhat better than the House (Republican negative 22% versus Democrat negative 40%). Our data suggest that Canada remains highly vulnerable to a congressional push for more border security and a thicker border with Canada.

Defence and foreign affairs

The study's data demonstrate that both the House Republicans (82%) and House Democrats (100%) continue to view Canada as a loyal, foreign ally and a reliable defence partner. However, the overall number of observations concerning defence and foreign affairs was fairly small, with just 30 observations mentioned in this category between the 107th and 111th Congress. Even during the years marked by disagreement between Ottawa and Washington over Canada's lack of involvement in the 2003 Iraq War, only negligible negative views were expressed about Canada.

Like the House, Senate Democrats (90%) and Republicans (86%) were strongly and consistently positive about the defence and foreign policy rapport with Canada. Similar to the House of Representatives, we found that the actual number of observations pertaining to defence and foreign affairs matters in the Senate was quite small, with just 17 observations

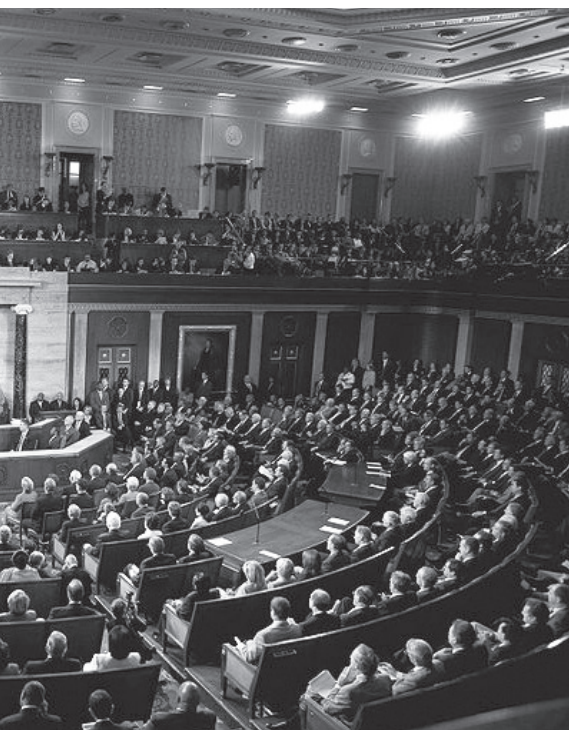


recorded for this category during the span between the 107th and 111th congressional sessions.

Our finding on defence policy is quite novel considering that many politicians and pundits in Canada feared that Canada's choice to opt out of the Iraq War and missile defence would lead to lasting "damage" to the political relationship (Barry, 2005). However, whatever discord there was between the two administrations in Ottawa and Washington appears not to have been fuelled by sentiment in Congress.

Conclusion

The US Congress frequently takes a position on Canadian policy and Canadian-American relations. The overall sentiment on trade with Canada—outside the prescription drug category—is skeptical at best and often critical. Republicans are only slightly more receptive to free trade with Canada than Democrats. The



Wikimedia Commons

overall negative sentiment on trade poses a formidable challenge in negotiating future trade deals between the two countries. Just as troublesome is the fact that American legislators are suspicious of the shared border with Canada and tend to favour stronger enforcement and more security which translates to a slower border for trade. Given this sentiment, the current Canada-US negotiations on perimeter security are likely to be challenged in Congress.

The good news from a Canadian perspective is in our data on energy, defence, and foreign policy. Both parties tend to see Canada as a partner in continental energy security. The so-called “dirty fuel” debate has not changed Congress’ views that the Canadian oil sands form an important source of US energy supply. Despite widely publicized squabbles between the executive branches in Ottawa and Washington on missile defence and the 2003 Iraq War, our data shows that both

the Republicans and Democrats continue to view Canada as a loyal ally and a reliable defence partner. The traditional benevolent view of Canada remains intact and Canada’s efforts in Afghanistan are recognized and appreciated by American politicians. It is encouraging to know that Canadian policy makers continue to maintain this source of political goodwill within the American legislature.

Given the strong electoral mandate the Canadian government received on May 2nd, 2011, it would do well to press for immediate progress on perimeter security and border thinning and to maintain the positive political capital generated from close cooperation on defence policy and foreign affairs.

Notes

1 The US Congress is composed of two chambers: the House of Representatives and the Senate. Senators represent their entire state (two per state), whereas House members represent a defined number of people distributed over 435 districts nationwide. The views of both chambers are discussed in this article.

2 To this effect, we designed a study that would quantify and contextualize these views, using the analytical tools of content analysis. We collected 1830 substantial comments from the House of Representatives and the Senate that refer to Canada over a ten-year period (2001–2011), and we noted Congress’ observations on various aspects of Canadian public policy as positive, neutral, or negative. The comments made by US law makers are stored in the Thomas Archives of the United States Library of Congress which can be accessed via the following website. United States Library of Congress (2010). Thomas Archives. <<http://thomas.loc.gov/>>.

3 All percentages provided in this article are from Moens and Gabler, 2011.

4 Although the facts may be disputable (for instance, there are several reasons brand prescription drugs may be cheaper in Canada beyond just price controls); however, the point is what American politicians believe and claim to be true during their discussions.

References

- Barry, Donald (2005). Chrétien, Bush and the War in Iraq. *American Review of Canadian Studies*, 35.
- Berelson, B. (1952). *Content Analysis in Communications Research*. The Free Press.
- Herman, Bill, and Oscar Gandy (2006). Catch 1201: A Legislative History and Content Analysis of the DMCA Exemption Proceeding. *Cardozo Arts & Entertainment Law Journal*, 24 (2006): 121–190.
- Hix, Simon, Abdul Noury, and Gerard Roland (2006). Dimensions of Politics in the European Parliament. *American Journal of Political Science* 50, 2 (April): 494–511.
- Moens, Alexander, and Nachum Gabler (2009). *Measuring Parliament’s Attitude Towards Canada-US Cooperation*. (June) Fraser Institute.
- Moens, Alexander, and Nachum Gabler (2011). *What Congress Thinks of Canada*. (May) Fraser Institute.
- Neuendorf, Kimberly A. (2002). *The Content Analysis Guide Book*. Sage Publications.
- Thomas Archives. United States Library of Congress (2010). Thomas Archives. <<http://thomas.loc.gov/>>, as of March 29, 2011. ■

Quarterly Research Alert

Fiscal policy

Alesina, Alberto, Dorian Carloni, and Giampaolo Lecce (2010). *The Electoral Consequences of Large Fiscal Adjustments*. <http://www.economics.harvard.edu/faculty/alesina/files/Electoral%2BConseq%2Bof%2BLge%2BFiscal%2BAdjust.pdf>.

It is no secret that many Canadian governments are facing large budget deficits that will require tough choices, such as spending cuts, to bring them back to balance. But, according to conventional wisdom, the political costs of budget deficit reductions are high, as voters are typically expected to punish deficit-cutting politicians in the next election. This paper examines whether this conventional wisdom is true. Specifically, it examines whether the governments that quickly and significantly reduce budget deficits are eventually voted out of office. The paper uses data on 19 highly developed countries (including Canada) from 1975 to 2008. The results show that deficit-cutting governments do not face high political costs—that is, they are not systematically voted out of office. In fact, contrary to convention, governments that avoid addressing the deficit tend to lose subsequent elections more often than average. The paper also explores the relationship between the strength of a government (i.e., whether it is a coalition or single-party government) and its ability to reduce the deficit. Although the authors acknowledge the difficulty of measuring a government's strength accurately, they find no "convincing evidence" that only "strong and popular" governments can cut deficits without political costs (12). In other words, governments of varying strengths can "tackle decisively budget deficits without electoral losses" (2).

—Charles Lammam

Cogan, John F., and John B. Taylor (2010). *What the Government Purchases Multiplier Actually Multiplied in the 2009 Stimulus Package*. NBER Working Paper No. 16505. National Bureau of Economic Research.

This paper considers the possible economic impact of government purchases of goods and services under the *American Recovery and Reinvestment Act* (ARRA). This legislation enacted the United States government's fiscal

stimulus package of 2009. The paper examines various types of government spending data—including federal government purchases (e.g., national defence, equipment, and law enforcement spending) and non-purchases (e.g., transfer payments), state and local government net lending and borrowing, and ARRA grants—from the first quarter of 2009 to the second quarter of 2010. Considering all three levels of government (federal, state, and local), the authors find that government purchases made up only 2% of the \$862 billion ARRA. While state and local governments received large sums of money from ARRA, the money was used mainly to reduce debt and increase transfer payments (such as Medicaid). The findings are significant because they show that even if one assumes that government purchases have a large multiplier effect—that is, that each dollar of government purchases increases economic output by much more than one dollar—government purchases under ARRA still did not have a noticeable impact on the US economy. Specifically, the authors note that "the effect of ARRA on purchases appears to be so small that the size of the government purchases multiplier does not matter much compared to many other factors affecting the growth of GDP" (3). —Alex Gainer

Tax Policy

Blomquist, Soren, and Hakan Selin (2010). *Hourly Wage Rate and Taxable Labor Income Responsiveness to Changes in Marginal Tax Rates*. *Journal of Public Economics*, 94, 11–12: 878–889.

Economists typically study the relationship between taxes and the number of hours people work—i.e., whether hours worked decline as taxes increase. In recent years, a growing body of literature has emerged suggesting that individuals may also respond to lower taxes by attempting to increase their wages. In response to lower taxes, workers might impact their wages by seeking better paying jobs, undertaking more challenging and remunerated tasks, putting more effort into wage bargaining and compensation, or working more intensely. This study empirically analyzes how hourly wages and labour income respond to a lower marginal tax rate—tax paid on the next dollar of income earned. Using survey data from Sweden from 1981–1991, the authors

New studies, new ideas

find that a lower marginal tax rate does in fact increase hourly wages. Specifically, a 10% drop in the marginal tax rate leads to a 1.4%–1.6% increase in hourly wages for men and a 4.1%–5.7% increase in hourly wages for women. The authors also find that a lower marginal tax rate increases labour income: a 10% drop in the marginal tax rate leads to increases of 1.9%–2.1% and 9.6%–14.4% in labour income for men and women, respectively.

—Milagros Palacios

Government performance

Afonso, António, and Davide Furceri (2010). *Government Size, Composition, Volatility, and Economic Growth*. *European Journal of Political Economy* 26, 4: 517–532.

While few would dispute that some level of government activity is necessary for a well functioning economy, the negative effects of too much government activity cannot be understated. Using data from 28 countries (including Canada) over the period 1970 to 2004, this paper measures the effect of government size and volatility on economic growth. Two indicators measure government size: total spending and total revenue as a proportion of GDP. The volatility of each indicator is measured as the variation from the cyclical average (standard deviation)—i.e., the difference between current spending and the average spending over a business cycle. The results suggest that larger governments reduce economic growth. Specifically, a one percentage point increase in the proportion of total government spending and total revenue decreases economic growth by 0.12 and 0.13 percentage points, respectively. In addition, the volatility of government spending has a negative impact on economic growth for countries in the sample belonging to the European Union. The paper also considers the particular effects of components of government spending and revenue on economic growth. The analysis of the components of total spending indicates that the size and volatility of government consumption, the size of subsidies, and the volatility of government investment have large and statistically significant negative effects on economic growth. Meanwhile, breaking down total revenue into its components shows that the size and volatility of both indirect taxes and social contributions reduce growth.

—Charles Lammam



Bigstock

Brollo, Fernanda, Tommaso Nannicini, Roberto Perotti, and Guido Tabellini (2010). *The Political Resource Curse*. NBER Working Paper No. 15705. National Bureau of Economic Research.

The authors examine whether an increase in government revenues increases political corruption and decreases the quality of politicians. They use data from Brazil from 2001 to 2008 where transfers of money from the federal government to municipal governments are determined by the size of the local population. The measure of corruption is broad and derived through publicly available reports from the Brazilian government; it accounts for whether a mayoral politician engaged in fraud, non-competitive bidding in procurement contracts, over-invoicing, diversion or non-utilization of funds, lack of completeness, budget irregularities, etc. The authors find that an increase of federal transfers to municipal governments

Quarterly Research Alert

of 10% increases local political corruption by 17%. It is easier for politicians to be corrupt, the authors argue, when they have higher revenues at their disposal, since they have more funds/options to keep voters happy and distract them from the corruption. The authors also find that an increase of 10% in federal transfers reduces the fraction of political candidates challenging the incumbent mayor with college degrees by 7%. This latter result occurs because corruption is more beneficial to individuals with fewer career opportunities, so lower quality individuals are attracted into politics when government revenues are increased.

—Alex Gainer

Labour markets

Tiagi, Raaj (2010). Public Sector Wage Premium in Canada: Evidence from Labour Force Survey. *Labour*. 24, 4: 456–473

The gap in pay and benefits between public and private sector workers has been a topic of much interest and debate among scholars, politicians, and taxpayers. Usually, public sector workers receive significantly higher wages for similar work compared to their private sector counterparts. This study estimates how much of the wage differential is driven by the “pure” public sector wage premium for both male and female workers in Canada using data from Statistics Canada’s September 2008 Labour Force Survey. Since public sector workers might receive higher wages due to “observable characteristics,” the study accounts for such individual differences among workers in the two sectors as education, marital status, occupation, job tenure, unionization—among others. The “pure” wage premium is the difference in public and private sector pay that is not explained by these observable characteristics. The findings suggest that while both male and female public sector workers earn a pure wage premium, the premium is higher for women. The estimated average public sector wage premium for men is 17.3%, while it is 38.2% for women.

—Milagros Palacios

The public sector premium is higher for women



Bigstock

Poverty

Aaberge, Rolf, Manudeep Bhuller, Audun Langørgen, and Magne Mogstad (2010). The Distributional Impact of Public Services When Needs Differ. *Journal of Public Economics*. 94, 9–10: 549–562.

Unlike much of the existing literature, this study examines the role of both cash and non-cash income in measures of inequality and poverty. Non-cash income, otherwise known as “in-kind benefits,” is measured as the value of public services that low-income individuals receive (i.e., health insurance, subsidized housing, etc.). Using data from municipal accounts and administrative registers in Norway, the authors find that after accounting for non-cash income, inequality decreases by 15% and poverty decreases by nearly a third. Since some individuals have different needs for public services—the elderly, for instance, require more health services than the young—the authors then adjust the data to reflect the needs of different population sub-groups. Making this adjustment reduces the effect of non-cash income on inequality by about half; it also reduces the effect on poverty to about one quarter.

—Amela Karabegović

New studies, new ideas

Sen, Anindya, Kathleen Rybczynski, and Corey Van De Waal (2011). *Teen Employment, Poverty, and the Minimum wage: Evidence from Canada*. *Labour Economics*. 18, 1: 36–47.

The authors examine the impact of minimum wage increases on teen employment and poverty in nine Canadian provinces from 1981 to 2004. They find that increasing the minimum wage by 10% leads to a 3%–5% decrease in teen employment among those 15–19 years old. They also find that a 10% hike in the minimum wage increases rates of poverty by 4%–6%. Poverty in this case is measured by Statistics Canada's Low Income Cut Offs (LICOs), which gauges the percentage of individuals who spend more than 64% of their income on basic necessities. The authors note that higher minimum wages increase poverty by increasing the unemployment rate of low-income individuals, resulting in a reduction in their incomes.

—Amela Karabegović

Foreign investment regulation

Bandick, Roger, Holger Görg, and Patrik Karpaty (2010). *Foreign Acquisitions, Domestic Multinationals, and R&D*. IZA DP No. 5252. Discussion Paper Series. <http://ftp.iza.org/dp5252.pdf>

Recent attempts by foreign multinationals to “take over” domestic firms have sparked debate about whether governments should block these deals to “protect” the interests of Canadians. We often hear that foreign ownership will hurt Canada because highly skilled jobs at a company's headquarters will, like the office itself, be relocated elsewhere. This paper examines this concern for a specific type of headquartered activity: research and development (R&D). Using data on Swedish firms from 1993 to 2002, the authors examine what happens to R&D activities in a domestic firm once it gets taken over by a foreign multinational. Contrary to the claim of relocation, they find R&D activity in Swedish firms does not decline after foreign multinationals acquire them. In fact, R&D intensity increases between 3% and 10% after foreign acquisition. The positive R&D effects are stronger

for the acquisition of domestic non-multinationals than for Swedish multinationals. Based on the Swedish experience, Canadians need not fear foreign multinationals relocating R&D activity abroad.

—Charles Lammam

Health policy

Gaynor, Martin, Rodrigo Moreno-Serra, and Carol Propper (2010). *Death by Market Power: Reform, Competition, and Patient Outcomes in the National Health Service*. NBER Working Paper No. 16164. National Bureau of Economic Research.

The authors estimate the impact of competition on hospital outcomes following policy reforms introduced in the United Kingdom's National Health Service (NHS). Specifically, they use NHS data to measure the effects of competition on patient outcomes in UK hospitals after the introduction of a new payment scheme in 2006 when hospitals began receiving set payments based on a patient's diagnosis. Prior to the reform, public agencies negotiated prices with certain providers in exchange for services. In addition to the new payment structure, patients were also given a choice of five hospitals at which to obtain treatment. The objective of the NHS reforms was to increase competition among hospitals. As prices became uniform across providers and patient choice increased, hospitals were forced to compete on quality. In analyzing 68,000 discharges per year per hospital from 162 hospitals, the authors find that the 2006 reforms resulted in significant reductions in mortality and length of stay without changes in hospital expenditures. They estimate that increased competition among hospitals resulted in a net benefit of approximately £227 million, which only included the value from decreased death rates. The authors conclude that monopoly power for hospitals is harmful to patients as it significantly increases their risk of death. Overall, their findings suggest that competition among hospitals saves lives without raising costs.

—Mark Rovere



Minimum wages don't help the poor

Fotolia

NIELS VELDHIJS AND AMELA KARABEGOVIĆ

Last year, seven provinces increased the minimum wage (HRSDC, 2010). An eighth province, BC, joined course on May 1st. While poverty activists, politicians, and policy makers who push for higher minimum wages might do so with good intentions, the unpleasant reality is that minimum wage increases do not help the poor.

Start with one of the most common misconceptions, that the majority of minimum wage earners are adults struggling to make ends meet while supporting families. In fact, the typical minimum-wage worker is young and lives at home. According to Statistics Canada, nearly 60% of minimum wage workers in Canada are between the ages of 15 and 24, and of these about 86% live at home with their parents (Statistics Canada, 2011). In addition, many of the adults earning minimum wage are supplementing their family income

with part-time work during child-bearing years and retirement.

Since the benefits of increased minimum wages largely accrue to young people still living at home and adults supplementing their family incomes, it is hard to see how they are a solution to poverty. Yet, it gets worse. The single largest problem with minimum wage increases is that they result in job losses; they increase labour costs for employers who respond by reducing the number of employees and/or the number of hours worked.

Studies consistently show minimum wage increases have negative employment effects

A recent study by renowned minimum-wage experts Professor David

Neumark, of the University of California, and Dr. William Wascher, US Federal Reserve Board economist, comprehensively reviewed the academic studies on minimum wages over the past 15 years. In total, they reviewed more than 100 studies covering 20 countries and found that the “overwhelming majority” of studies consistently show that minimum wage increases have negative employment effects (Neumark and Wascher, 2007).

The empirical evidence from Canada shows much of the same. At least 14 academic studies have examined the impact of minimum wage increases in Canadian provinces. Based on these studies, a 10% increase in the minimum wage is likely to decrease employment by an average of 3–6% for young workers (aged 15 to 24) (Godin and Veldhuis, 2009). For young workers most directly affected—those earning between the current minimum wage and the proposed higher wage—the

impact is more acute, with employment losses of up to 20%.

Lost job opportunities for young people are especially unfortunate given that entry-level positions, which generally pay the minimum wage, are a stepping stone to better-paid employment. These jobs enable workers to develop skills and gain experience that ultimately lead to higher productivity and wages. In

Young workers are most affected



Fotolia

fact, research shows that after one year, more than 60% of minimum wage workers earn more, with a typical wage increase of about 20% (Smith and Vavrichuk, 1992). After two years, the percentage of workers earning more than the minimum wage increases to more than 80% (Long, 1999).

Of course, some workers will be lucky enough to keep their jobs and maintain their hours worked after a minimum wage hike, but even they will likely not be better off. Research shows that employers often respond to a minimum wage increase by reducing other benefits and on-the-job training. One study found that the proportion of young workers receiving formal training fell by two percentage points for every 10% increase in the minimum wage (Neumark and Wascher, 2001).

Given that higher minimum wages decrease employment opportunities, benefits, and on-the-job training, it is not surprising that recent evidence from Canada shows that minimum wages increase, rather than decrease, poverty. A study published in *Labour Economics* earlier in 2011 examined minimum wage increases in nine Canadian provinces over two decades, from 1981 to 2004 (Sen et al., 2011). The authors found that a 10% increase in the minimum wage increases poverty rates by 4–6%.

While it might feel good to jump on the “raise the minimum wage” bandwagon, a look at the facts indicates that such policies have very negative consequences. The truth is that minimum wage hikes actually hurt the poor.

References

- Godin, Keith, and Niels Veldhuis (2009). *The Economic Effects of Increasing British Columbia's Minimum Wage*. Studies in Labour Markets. Fraser Institute.
- Human Resources and Skills Development Canada [HRSDC] (2010). *Hourly Minimum Wages in CANADA for Adult Workers*. Government of Canada. <<http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?dec=5>>, as of March 28, 2011.
- Long, James (1999). Updated Estimates of the Wage Mobility of Minimum Wage Workers. *Journal of Labor Research*. 20(4), 493–503.
- Neumark, David, and William Wascher (2001). Minimum Wages and Training Revisited. *Journal of Labor Economics* 19, 3: 563–95.
- Neumark, David, and William Wascher (2007). Minimum Wages and Employment. *Foundations and Trends in Microeconomics* 3, 1-2: 1–82.
- Sen, Anindya, Kathleen Rybczynski, and Corey Van De Waal (2011). Teen Employment, Poverty, And The Minimum Wage: Evidence From Canada. *Labour Economics*. 18: 36–47.
- Smith, Ralph, and Bruce Vavrichuk (1992). The Wage Mobility of Minimum Wage Workers. *Industrial and Labor Relations Review* 46, 1: 82–88.
- Statistics Canada (2011). *Labour Force Survey. Special Request To Statistics Canada*. ■

Ontario's budget lacks a credible plan



Wikimedia Commons

**NIELS VELDHUIS, CHARLES LAMMAM,
AND MILAGROS PALACIOS**

In his March budget speech, Ontario Finance Minister Dwight Duncan trumpeted his government's fiscal record, saying: "Our government has a strong track record of fiscal prudence and discipline" (Duncan, 2011: 9). He called the government's plan to tackle Ontario's deficit a "prudent, proven, and responsible approach" (Duncan, 2011: 7).

The unfortunate reality for Ontarians is that this government's fiscal record has been nothing short of a disaster and their most recent budget did little to bolster its credibility.

Since being elected in 2003, Premier Dalton McGuinty and his colleagues have proven inadequate at managing Ontario's finances. Our recent study, *Measuring the Fiscal Performance of Canada's Premiers*, found that Premier McGuinty performed worst among ten provincial premiers at managing the government's spending, tax policy, and deficits and debt (see Lammam et al., 2010). As a result, Ontario desperately needed a budget that actually turned a corner in managing the province's finances, and not one that just paid lip service to doing so.

Duncan's proposed deficit reduction plan allows deficits to continue until 2017/18.¹ All told, the Ontario government proposes to rack up another \$67.5 billion in debt due to deficits from the current fiscal year through to 2017/18.² With this

plan, the provincial debt will swell to 40.6% of GDP in 2014/15 from 29.0% in 2008/09. The continued deficits stem from the McGuinty government's unwillingness to address its spending problem. Rather than cut spending to help Ontario balance its books in the near term, the government is relying on the hope that it will be able to constrain spending growth in the future and eventually match revenues to spending.

In other words, the McGuinty government is delaying the tough decisions into the future in the hopes that revenues will grow robustly over the next seven years. Specifically, the 2011 budget plan assumes revenues will grow at an average rate of 4.3% from 2011/12 to 2017/18 while the government holds spending increases to an average rate of 2.0%.

This plan would, of course, be more believable if the current government had a track record of prudent spending. However, as figure 1 demonstrates, this is simply not the case. During its first term in office, the McGuinty government ramped up spending from \$79.8 billion in 2003/04 to \$103.0 billion in 2007/08, an increase of nearly 30%. Then came the recession, and spending increased by \$19.5 billion from 2008/09 to 2010/11 in the hope of "stimulating" the economy.

Now, rather than return spending to pre-stimulus levels, it is set to grow again for 2011/12 (albeit modestly) and for the remaining years of the

government's fiscal plan. If Premier McGuinty and Minister Duncan are able to stick to their plan, spending will reach \$141.2 billion in 2017/18, another 15% above where we are today.

Instead of continually increasing spending, a credible plan for balancing the budget would have involved some deep self-reflection on what brought the government's finances to this situation—that is, its wild-spending spree (Veldhuis and Palacios, 2009).

To return to balance within a reasonable time, Minister Duncan should have reduced spending to pre-stimulus levels. In fact, reductions in spending of \$5.9-billion, or 4.8%, over the next three years would have balanced the budget by 2013/14, four years earlier than the current plan.

But Minister Duncan deferred the hard decisions—conveniently until after the provincial election later this year—and announced the creation of a new commission that is being asked to provide advice on how the government can "accelerate its plan to eliminate the deficit" and to make recommendations for how government can reform the way public services are delivered.

Rather than discussing how to close the deficit, what Ontario needed from Duncan was the type of straight-shooting language that former prime minister Paul Martin used when he tackled the federal deficit in 1995: "The debt and deficit are not inventions of ideology.

They are facts of arithmetic....The only thing Canadians want is clear action” (Martin, 1995: 2). Martin’s tough language was supported by a plan that led to the elimination of a federal deficit much larger than the one with which Duncan is now grappling (4.8% of GDP compared with Ontario’s current deficit of 2.7%) within three years, not seven.

While reforming the public sector to “get better value for taxpayers’ money” is a notable goal, Duncan was quick to note that the increased use of the private sector in doing so would be an unlikely result. He stated: “The commission will not make recommendations that would...lead to the privatization of health care or social services” (Ontario, Ministry of Finance, 2011: 71).

That is unfortunate since most other developed nations with the same health care goals as Canada (universal access) allow competition from the private sector in the delivery of publicly funded care. As a result, these countries are able to purchase more health care for less money (Skinner and Rovere, 2010). Similarly, education and other

government services could be improved vastly through program reform and increased private-sector involvement, while spending less.

Ontarians needed a new fiscal direction and a serious plan to return fiscal sanity to the province. What they got was the same old unsustainable spending increases, large deficits, and additional debt.

Notes

1 Please note that, unless otherwise stated, all figures cited in this article are taken from Ontario’s 2011 budget (see Ontario, Ministry of Finance, 2011).

2 This follows \$42.4 billion in deficits incurred between 2008/09 and 2010/11.

References

Duncan, Dwight (2011). *2011 Ontario Budget: Budget Speech*. <<http://www.fin.gov.on.ca/en/budget/ontariobudgets/2011/statement.pdf>>, as of April 1, 2011.

Lammam, Charles, Milagros Palacios, Amela Karabegović, and Niels Veldhuis (2010). *Measuring the Fiscal Performance of Canada’s Premiers*. The Fraser Institute.

Martin, Paul (1995, February 27). *Budget Speech*. Department of Finance.

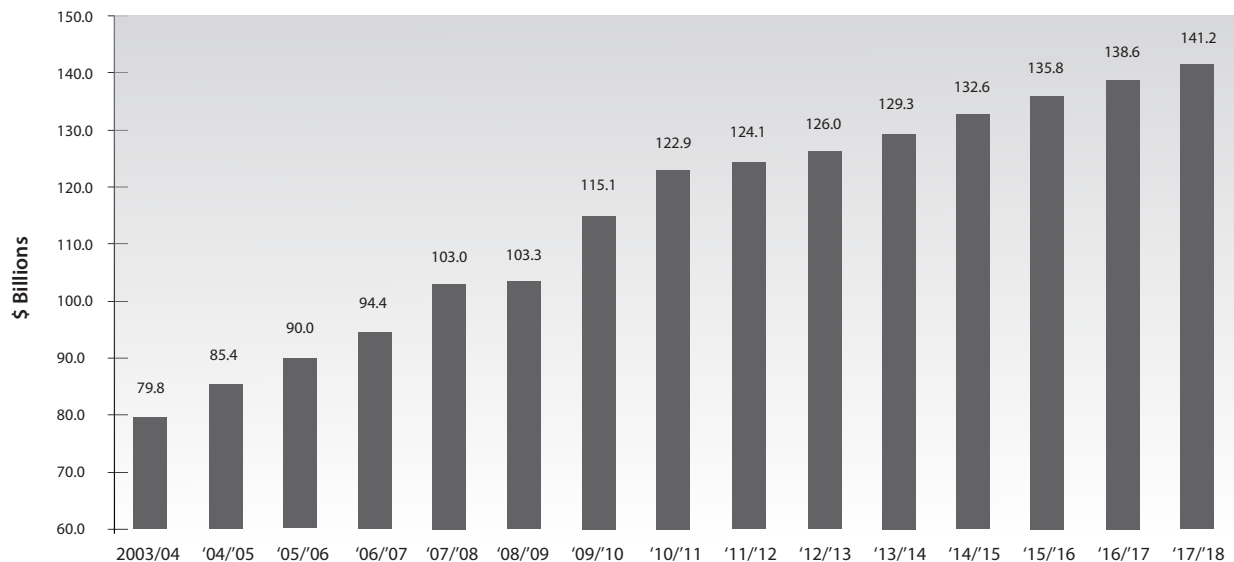
Ontario, Ministry of Finance (2011). *2011 Ontario Budget: Turning the Corner to a Better Tomorrow*. <http://www.fin.gov.on.ca/en/budget/ontariobudgets/2011/papers_all.pdf>, as of April 1, 2011.

Skinner, Brett J., and Mark Rovere (2010). Value for Money from Health Insurance Systems in Canada and the OECD. The Fraser Institute. <<http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/value-for-money-health-insurance-systems.pdf>>, as of April 1, 2011.

Veldhuis, Niels, and Milagros Palacios (2009). Ontario’s Spending Problem. *Fraser Forum* (December): 12-13. <<http://www.fraserinstitute.org/research-news/research/display.aspx?id=10953>>, as of April 1, 2011.



Figure 1: Increased spending not a credible deficit reduction strategy



Source: Ontario, Ministry of Finance (2011).

Canada should follow Wisconsin's lead

Continued from page 5

public sector. Those in management enjoy an 18% premium; child-care and home-support workers receive a 15% premium; while financial, secretarial, and administrative occupations receive a 13% premium. Even chefs and cooks receive 15% more in the public sector (authors' calculations).¹

This is just the wage premium; factor in pension, health, and other benefits such as job security, and there is no wonder there is a growing backlash against public sector compensation.

Typically, public sector services (health care, education, garbage collection, transit services, etc.) are provided in a monopoly environment. That is, very few services are exposed to competition. When governments have a monopoly on service provision, public sector unions can extract a significant wage premium by threatening to strike. And if they do, we have no alternatives to the monopolized services.

A dramatically different situation exists in the private sector. Suppose unionized workers at a grocery store decide to exercise their right to strike. First, the strike does little more than inconvenience consumers because so many alternatives are available. Second, competitive pressures push both the employer and union to settle their differences quickly. Unions facing such pressures generally understand that unreasonable wage increases and other demands will ultimately be detrimental to the company and result in reduced employment. Meanwhile, the employer must balance the negative effects of a prolonged dispute (lost market share, customer dissatisfaction, reduced profitability, etc.) with demands for wage increases.

In the private sector, competitive pressures on both parties help

resolve disputes on terms with which both sides can live. No such mechanism exists when the service is provided by a government monopoly. That is why public sector unions can extract significant premiums for their services.

To rectify the problem, and restore the fiscal health of Canadian governments, our politicians should learn from Governor Walker and roll back the wage premium. Canadian governments should also restrict collective bargaining in the public sector by banning the right to strike for all public sector employees, and by having their wages and benefits linked to private sector counterparts.

Rather than the inherently political negotiation process that currently exists, public sector compensation should be determined by wage boards—independent governmental bodies responsible for collecting, analyzing, and setting wages in the public sector on the basis of wages and benefits in the private sector.² One of the main benefits of this approach is to better match public sector wages with economic conditions of the times.

During the recession and into the recovery, Canadians in the private sector have unfortunately dealt with job losses as well as reduced wages and benefits, while public sector workers enjoy their premiums and demand even more.³ It is time our politicians fixed this imbalance.

Notes

1 The calculations presented in this paper are based on Statistics Canada Microdata file: Labour Force Survey, which contains data collected in September 2008.

2 Please see Christensen (1980) for a more complete discussion of wage boards.

3 Examples are the recent strikes involving garbage collectors and transit workers in Toronto. See Kirby (2009).

References

- Alberta, Ministry of Finance (2011). *2011-2014 Fiscal Plan*. <<http://budget2011.alberta.ca/index.html>>, as of March 30, 2011.
- Canada, Department of Finance (2011). *The Next Phase Of Canada's Economic Action Plan: A Low-Tax Plan For Jobs And Growth*. <<http://www.budget.gc.ca/2011/home-accueil-eng.html>>, as of March 30, 2011.
- Christensen, Sandra (1980). *Unions and the Public Interest*. The Fraser Institute.
- Kirby, Jason (2009, July 15). Demanding Times. *Macleans*. <<http://www2.macleans.ca/2009/07/15/demanding-times/>>, as of March 30, 2011.
- Ontario, Ministry of Finance (2011). *2011 Ontario Budget: Turning the Corner to a Better Tomorrow*. <http://www.fin.gov.on.ca/en/budget/ontariobudgets/2011/papers_all.pdf>, as of March 30, 2011.
- Quebec, Ministry of Finance (2011). *Budget Plan*. <http://www.budget.finances.gouv.qc.ca/Budget/2011-2012/index_en.asp>, as of March 30, 2011.
- Statistics Canada (2008). *Labour Force Survey*. Microdata File.
- Walker, Scott (2011, March 1). Facts Are Clear—Wisconsin's Broke. *Toronto Sun*. <<http://www.torontosun.com/comment/columnists/2011/03/01/17457981.html>>, as of March 30, 2011. ■

Spending challenges leave BC's new premier with less budget flexibility than promised

NIELS VELDHUIS, CHARLES LAMMAM,
AND MILAGROS PALACIOS



BC Gov

In the midst of a party leadership race, BC's then finance minister Colin Hansen did the right thing in February 2011, by delivering a status-quo budget, one that was void of major new policy initiatives (British Columbia, Ministry of Finance, 2011). Now

that the BC Liberals have elected their new leader, however, it is up to Premier Christy Clark to determine whether she will stick with the budget plan or alter priorities. Either way, Premier Clark faces some daunting challenges.

For starters, consider the \$2.55

billion Mr. Hansen indicated is available for the new premier's top priorities.¹ While the 2011 budget contains \$2.55 billion in "flexibility" funding over the next three years (\$950 million in 2011/12 and \$800 million in each of the following two years), it also plans for deficits to-

Competition produces higher-quality health care

talling \$1.19 billion over the same period. Because deficits are money the government does not have, this so-called “flexibility” should not be used for new spending.

The real “flexibility” built into the budget is \$1.36 billion: \$2.55 billion minus the cumulative deficits over the next three years (\$1.19 billion); \$1.36 billion sounds like a lot, but it’s just 1% of the \$128 billion the government plans to spend during the next three years. And the 1% is only available if Premier Clark can stick to the budgeted spending plan. Herein lies a major problem. The 2011 budget assumes average growth in program spending of 1.5% over

the next three years. However, nothing in the Liberal government’s track record suggests that it will be able to stick to this plan.

“Overruns” have been historically common with actual spending coming in significantly above budget projections. For example, the Liberals’ 2010 budget proposed spending \$38.2 billion in 2010/11 (British Columbia, Ministry of Finance, 2010), but actual spending is set to come in \$500 million higher at \$38.7 billion (British Columbia, Ministry of Finance, 2011).

Over the past three years, spending has been \$1.2 billion higher than what the Liberals initially budgeted. If the same trend holds for the next three years, the \$1.36 billion in “flexibility” will essentially be wiped out.

Also troubling is the looming referendum on the harmonized sales tax (HST). If British Columbians vote down the HST, the province could be forced to repay the

\$1.6 billion in transitional funding provided by the federal government. Because the budget does not explicitly account for the possibility of repaying the \$1.6 billion, the budget’s bottom line could suffer a serious hit.²

If that is not concerning enough, the single largest budgetary threat is health care. BC’s aging population presents a looming budget challenge as health care spending continues to consume a larger portion of government resources. By 2013/14, health care will account for nearly 46% of the government’s program spending, up from 37% when the Liberals were first elected in 2001. If Premier Clark does not bring health care spending under control, she will be unable to finance other priorities, including much needed tax relief.

The solution to the health care challenge is to get more for the money the province already spends. To do so, Premier Clark and her colleagues should look to countries with universal access health care that are able to buy more and higher quality care for less money. Experience in these nations suggests that BC should adopt two key health policies: cost sharing and competition in the delivery of publicly funded care (Esmail, 2009).³

International evidence shows that competition produces higher-quality care than monopolistic public provision of services. In addition, research illustrates that when patients are responsible for some of the cost of their care, they use fewer resources and end up no worse off in terms of health outcomes. By introducing just these two sensible health policies, BC would reduce public health spending and improve service quality.

Fixing BC’s health care system to free up money for other key priorities might not be easy, but it is achievable. Let’s hope Premier Clark is up for the challenge.

Notes

1 Please note that, unless otherwise stated, all figures cited in this article are taken from BC’s 2011 budget (British Columbia, Ministry of Finance, 2011).

2 Beyond the fiscal impact to the government, cancelling the HST and reverting back to the PST-GST system would have major negative consequences for BC’s economy in terms of reduced investment, employment, productivity, and wage growth (Lammam et al., 2010).

3 Esmail’s discussion of these two health care reforms pertains to Ontario, but the implications for BC are similar.

References

- British Columbia, Ministry of Finance (2010). *Budget and Fiscal Plan 2010/11–2012/13*. <http://www.bcbudget.gov.bc.ca/2010/bfp/2010_Budget_Fiscal_Plan.pdf>, as of April 1, 2011.
- British Columbia, Ministry of Finance (2011). *Budget and Fiscal Plan 2011/12–2013/14*. <http://www.bcbudget.gov.bc.ca/2011/bfp/2011_Budget_Fiscal_Plan.pdf>, as of April 1, 2011.
- Esmail, Nadeem (2009). Getting More for Less. *Fraser Forum* (November): 28–29. <<http://www.fraserinstitute.org/research-news/research/display.aspx?id=10735>>, as of April 1, 2011.
- Lammam, Charles, Niels Veldhuis, and Milagros Palacios (2010). *Countering the Myths Surrounding British Columbia’s Harmonized Sales Tax*. The Fraser Institute. <<http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/Countering-the-Myths-surrounding-HST.pdf>>, as of April 1, 2011. ■

Canada's health spending



Bigstock

MARK ROVERE

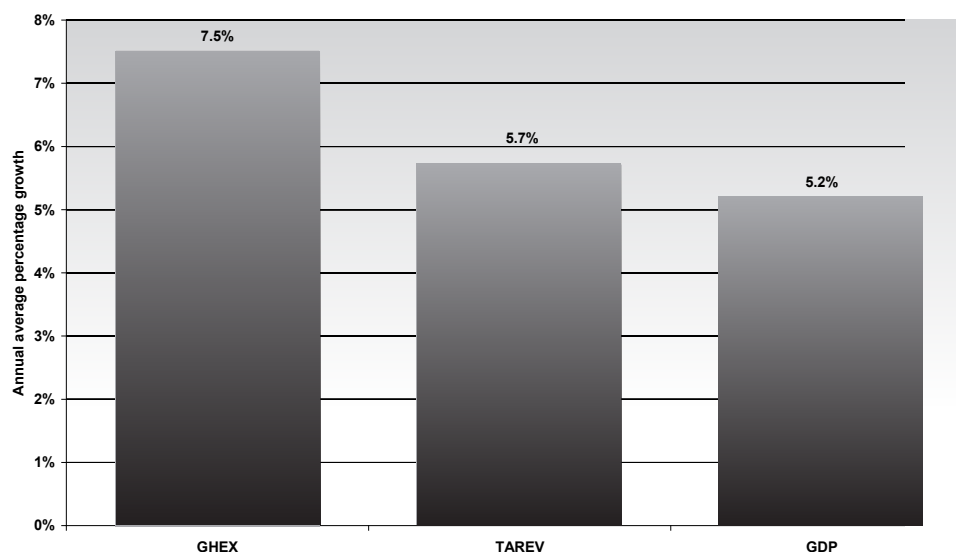
Provincial governments across Canada are facing a serious crisis in public finances as government health spending is growing at unsustainable rates. The most recent data indicate that in nearly every province, health costs continue to follow their long-term trends of growing much faster than government revenues. At the same time, patients are facing shortages of medical resources and declining access to necessary medical care (Barua et al., 2010). Unless provincial governments are willing to deviate from the status quo and acknowledge that the current means of financing medical services in Canada is not working, Canadians will continue to pay more for health care services while getting less in return.

According to *Canada's Medicare Bubble: Is Government Health Spending Sustainable without User-based Funding?*, our annual study that measures the sustainability of provincial government health spending,¹ total government spending on health grew at an average annual rate of 7.5% across all provinces over the period 2000/2001 to 2009/2010. During the same time, total

available provincial revenue from all sources, including federal transfers, grew at an average annual rate of 5.7%; while the economy, measured by gross domestic product (GDP), grew by only 5.2% (figure 1). By definition, government health spending is deemed unsustainable when it grows faster on average than total revenue. Thus, the most recent data show that averaged across the provinces (over the most recent ten-year period), provincial health expenditures have been growing at unsustainable rates as they have grown faster than revenues and the economy.

If these trends continue, provincial governments will be allocating the bulk of their revenues to pay for health care, taking money away from other important government services. Critically, this is not a recent problem, it is systemic. Government spending on health has grown faster on average than GDP over the entire history of Medicare. The result is that total government health expenditures accounted for 8.4% of GDP in 2009 up from 5.4% of GDP in 1975 (Canadian Institute for Health Information, 2010).

Figure 1: National 10-year average annual percentage growth rates for provincial government health expenditures (GHEX) and total available revenue (TAREV), 2000/2001–2009/2010; and gross domestic product (GDP), 2000–2009.



Sources: Department of Finance (2010); Provincial Public Accounts (2006–2010); calculations by authors.

Future projections

Future projections based on the most recent ten-year growth trends show that health costs in eight out of ten provinces are on pace to consume 50% of total revenues by 2028 (figure 2). By the end of 2011, both Ontario and Quebec will already be spending half of their total available revenues on health care, and four additional provinces (Saskatchewan, Alberta, British Columbia, and New Brunswick) are on pace for government health spending to consume 50% of revenues by 2017. While Manitoba and Prince Edward Island are not expected to spend half of provincial revenues on health care until 2026 and 2028 respectively, they are still faced with the same predicament and will soon be forced to make tough policy decisions. Simply put, while some provinces are worse off than others, this fundamental sustainability problem exists in each one.

Although the projections are alarming, the severity of the

situation becomes much more severe when federal transfers are excluded from provincial revenues. As figure 3 shows, in the 2009/2010 fiscal year, government health spending consumed over 50% of total available *own-source* revenue (TAOREV)—total revenue minus federal transfers—in every province except for Alberta (48%). Nova Scotia consumed the largest share of own-source revenue on health expenditures (87.7%), compared to 74.2% in New Brunswick, 71.9% in Quebec, 65.5% in Prince Edward Island, 63.1% in Ontario, 62.8% in Manitoba, 60.3% in Newfoundland and Labrador, 55.2% in Saskatchewan, and 54.6% in British Columbia.

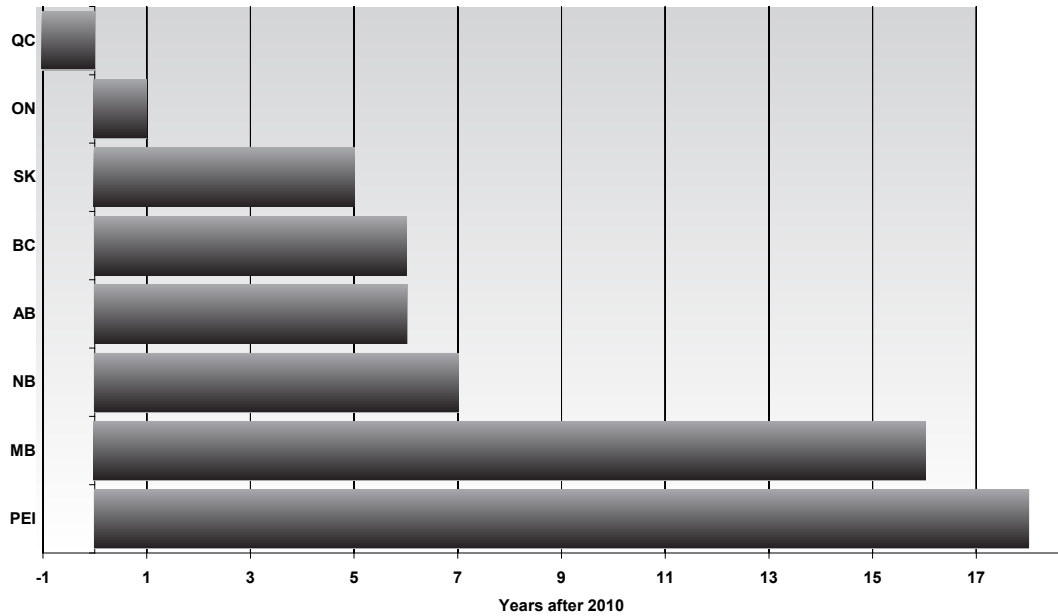
More money is not a solution

Allocating more money to provincial health care has not resulted in increased access to, or the availability of, medical services and resources,

thus is not a solution to the problem. For example, despite significant increases in health spending across Canada, the most recent data show that wait times for access to medical services have increased in every province over the ten-year period (Barua et al., 2010). In 2010, patients waited approximately 18.2 weeks from the time they obtained a referral from a general practitioner to the time they received treatment from a specialist. This means that Canadians waited 96% longer for elective surgery in 2010 than they did in 1993, when wait times were 9.3 weeks.

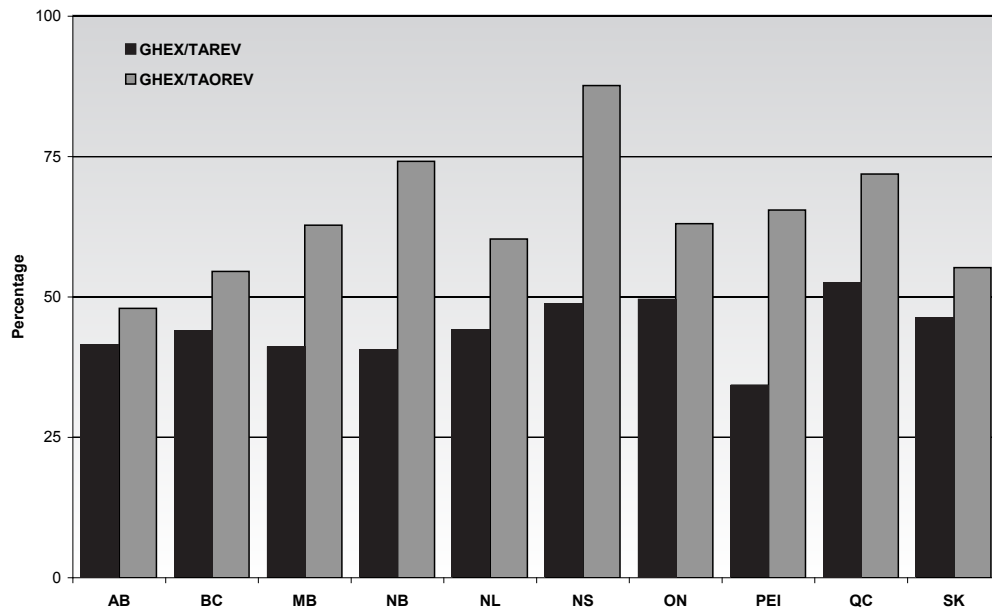
In addition, research shows that in comparison to its international counterparts, Canada lags behind many developed nations in the size of its medical technology inventory (for instance the number of CT and MRI machines per population) and the availability of medical resources such as physicians and nurses, even though it is one of the most expensive universal-access health care systems in the world (Esmail, 2008; Skinner

Figure 2: Number of years until government health expenditures (GHEX) consume 50% of total available revenue (TAREV), 2010 forward, by province, based on the most recent 10-year trends in GHEX and TAREV.



Sources: Department of Finance (2010); Provincial Public Accounts (2006–2010); calculations by authors.

Figure 3: Government health expenditures (GHEX) as a percentage of total available revenue (TAREV) and total available own-source revenue (TAOREV), 2009/2010, by province.



Sources: Department of Finance (2010); Provincial Public Accounts (2006–2010); calculations by authors.

and Rovere, 2010a). At the same time, provincial publicly funded drug programs are increasingly covering only a small percentage of new medicines. As of December 31st, 2009, only 20.3% of new drugs approved by Health Canada as safe and effective in 2008 had actually been approved for reimbursement by the provinces (Skinner and Rovere, 2010b).

Rationing access to health services has the effect of slowing growth in government health spending in the short term. However, the rationing of health goods and services cannot continue indefinitely without increasing medical risks for patients. Unfortunately, under the current financing model, policy makers do not have many tools at their disposal—cutting medical services or increasing taxes are the only two options. With that in mind, it is absurd to suggest that governments can sustain the health system indefinitely by raising taxes. Not only is this political suicide, but rising taxes discourages economic growth and reduces the long-term potential revenue base for governments (Karabegović et al., 2004).

User-based funding

We must change the way in which health care is financed in Canada before health expenditures absorb *all* public revenues. The ways to do this are quite simple: introduce policies that create sensible economic incentives for users and providers to use (and provide) the system more responsibly and efficiently. This can be achieved by introducing patient cost-sharing (such as user fees or percentage based co-payments) and allowing both for-profit and non-profit health providers to compete for the delivery of publicly insured services. These policies are common in the majority of industrialized countries, and would introduce the necessary competitive incentives that would naturally regulate the supply

and demand of medical services and resources. In addition, provincial governments should relinquishing their health insurance monopoly and allow Canadians to purchase parallel private health insurance for all types of medical goods and services. Echoing what the Fraser Institute has been advising for years, these sensible policy solutions have recently been recommended for Canada by the Organization for Economic Cooperation and Development and the International Monetary Fund (OECD, 2010; IMF, 2010).

Private financing schemes are common in many other countries that guarantee universal access to medical care. There is no reason that policy makers should continue to disregard other European countries such as Switzerland and the Netherlands, which are achieving the social goal of universal health care without facing unsustainable health expenditures and rationed medical services. As the 2004 federal/provincial health accord is set to expire in 2014, the federal government should not get more involved in the management of provincial health systems. Instead, the federal government should suspend enforcement of the *Canada Health Act* for five years to allow the provinces to experiment with private sources of funding. Canadians cannot afford to wait any longer—it is time that policy makers face economic realities and introduce meaningful reform.

Notes

1 In previous years the annual study was titled *Paying More, Getting Less: Measuring the Sustainability of Government Health Spending in Canada*.

References

Barua, Bacchus, Mark Rovere, and Brett J. Skinner (2010). *Waiting Your*

Turn: Wait Times for Health Care in Canada, 2010 Report (20th edition). Fraser Institute.

Canada, Department of Finance (2010). *Provincial and Territorial Governments Public Accounts*. <asp/www/fom/gc/ca/frt-trf/2010/frt-trf-1004-eng/asp>, as of October 12, 2010.

Canadian Institute for Health Information [CIHI] (2010). *National Health Expenditure Trends, 1975–2010*. CIHI.

Esmail, Nadeem, and Michael Walker (2008). *How Good Is Canadian Health Care? 2008 Report: An International Comparison of Health Care Systems*. Fraser Institute.

International Monetary Fund [IMF] (2010). *IMF Country Report No. 10/377* (Canada). December 2010.

Karabegović, Amela, Niels Veldhuis, Jason Clemens, and Keith Godin (2004). Do Tax Rates Matter? *Fraser Forum* (July): 13–16.


Organisation for Economic Co-operation and Development [OECD] (2010). *OECD Economic Surveys: Canada 2010*. <<http://titania.source-oecd.org/upload/1010141etemp.pdf>>, as of September 13, 2010.

Public Accounts, various provinces, 2000–2010. Provincial Ministries of Finance.

Skinner, Brett J., and Mark Rovere (2010a). *Value for Money from Health Insurance Systems in Canada and the OECD*. Fraser Alert (October). Fraser Institute.

Skinner, Brett J., and Mark Rovere (2010b). *Access Delayed, Access Denied: Waiting for New Medicines in Canada (2010 Report)*. Fraser Institute.

Statistics Canada (2010). *Table 384-0002—Gross Domestic Product (GDP), Expenditure-Based, Provincial Economic Accounts, Annual*. Statistics Canada. ■



Old and outdated medical equipment

NADEEM ESMAIL

Bigstock

Medical technologies are an important component of medical care and can provide significant benefits to patients. Medical technologies can advance the identification and treatment of disease, provide more comfortable treatment regimes and reduce pain, offer new treatment options where none previously existed, and provide a safer environment for both patients and providers (Esmail and Wrona, 2008). Put simply, advanced and sophisticated medical technologies improve health outcomes and the quality of life for patients fortunate enough to have access to them.

Numerous reports and studies show that Canada lags behind many other developed nations in the size of its medical technology inventories (see for example, OECD, 2010; Esmail and Wrona, 2008). Notably, this is occurring in spite of \$3 billion in targeted federal transfers to Canada's provincial governments between 2000 and 2006, and in spite of the fact that Canada maintains one of the developed world's most expensive universal-access health insurance programs (Esmail and Wrona, 2008; Esmail and Walker, 2008). The lack of access to advanced medical technologies can seriously affect the comfort of patients undergoing

treatment, the success of treatment, patient longevity, and quality of life following treatment (Esmail and Wrona, 2008).

Apart from the size of medical technology inventories, their age and sophistication are also important because they determine the quality of services. Relative to their newer counterparts, older medical technologies are generally less reliable and need more maintenance; may provide a lower quality output or be less accurate; may be less safe for patients and operators; and may expose patients to greater risk (Esmail and Wrona, 2008). Newer, more sophisticated medical technologies can allow for shorter examination or operation times, higher quality output, and can provide additional services (Esmail, 2008; Esmail and Wrona, 2008).

The inventory of Canada's medical technologies can be compared against guidelines published by the Canadian Association of Radiologists, and by the European Coordination Committee of the Radiological and Electromedical Industries.¹ The comparisons indicate whether or not Canada's current, limited inventory of medical technologies is up to date. The comparisons give some insight into the investment in new

technology and the replacement of older, outdated equipment by Canada's health care system.

The analyses below treat medical equipment located in hospitals² separately from equipment in free-standing facilities; it is important to separate these two classifications because in-hospital technologies are generally available to patients through taxpayer-funded health care programs, while equipment in free-standing facilities is not always available through these channels.

ECCREI

The rules published by the European Coordination Committee of the Radiological and Electromedical Industries (ECCREI) for the evaluation of medical equipment can be found in a report by Ontario's Expert Panel on MRI and CT (Keller, 2005). The guidelines divide the age of equipment into three categories. Equipment up to five years old is considered to reflect the current state of technology, and the rules state that at least 60% of the installed equipment should fall within this category. Equipment six to ten years old is still fit for use, but replacement strategies must be developed for it;

the ECCREI rules state that not more than 30% of the installed equipment base should be in this category. Technologies older than ten years are considered to be no longer “state-of-the-art,” and the ECCREI rules specify that it is essential that this equipment be replaced. No more than 10% of the installed equipment should be older than ten years.

A careful examination of the age of Canada’s medical technologies, using these standards to stratify technologies into three distinct groups (current state of technology; still fit for use but should be replaced soon; and no longer “state-of-the-art”) is shown in table 1 (hospital-based technologies) and table 2 (free-standing facility-based technologies).

In all but the case of MRI and PET¹, Canada’s hospital-based inventories of technologies conform to the standards outlined by ECCREI for machines zero to five years old. Only SPECT/CT and PET/CT² inventories conform to the ECCREI standards for the percentage of machines six to ten years old. Finally, only PET inventories do not conform to the ECCREI standards for

machines greater than ten years old. It should be noted that when PET and PET/CT inventories are combined, the all-PET-capable inventory conforms to the ECCREI standards. Interestingly, this performance is little changed from that measured for Canada’s technology inventory at January 1st, 2007 in Esmail (2008).

Canada’s clinics generally perform worse than Canada’s hospitals under the ECCREI guidelines for newer and middle-aged MRI and CT scanners, and do not conform to the standards in either case. For older machines, Canada’s clinics have a slightly higher proportion of MRI machines aged ten years or older and a lower proportion of CT scanners aged ten years or older than hospitals, and do conform to the ECCREI guidelines for the proportion of medical technologies that can be tolerated to be older than ten years.

Canadian Association of Radiologists

Another set of guidelines for the appropriate age of medical technologies comes from the Canadian

Association of Radiologists (CAR). Their recommended lifecycle guidelines for select technologies can be found in *The Province-wide Diagnostic Imaging Review and Framework for Strategic Planning* report for the Saskatchewan Department of Health (ProMed Associates Ltd., 2004). These guidelines provide a slightly different set of standards by defining the maximum life expectancy of machines. As the report notes, “When machines exceed their maximum life expectancy, concerns arise related to equipment age, availability of parts, utilization capabilities, upgrade ability, clinical relevance, operational reliability and performance, safety, redundancy, serviceability, and increased operational costs” (ProMed Associates Ltd., 2004: 72). Put succinctly, machines past their lifecycle guideline can be unreliable and can have limited clinical relevance.

A comparison of Canada’s medical technology inventories to the CAR guidelines is given in table 3 (hospital-based technologies) and table 4 (free-standing facility based technologies). It should be noted that PET is not included in the discussion below as a guideline for PET

Table 1: The age of Canada’s hospital-based medical technology inventories, relative to the rules from the European Coordination Committee of the Radiological and Electromedical Industries (ECCREI), January 1st, 2009

| ECCREI rules | | Hospital-based inventories | | | | |
|----------------------------------|--|----------------------------|-------|----------|--------|-------|
| | | MRI | CT | SPECT/CT | PET/CT | PET |
| Number of units | N/A | 225 | 442 | 64 | 27 | 6 |
| 0-5 years old | At least 60% of the installed equipment base should be younger than 5 years | 56.9% | 61.1% | 93.8% | 85.2% | 16.7% |
| 6-10 years old | Not more than 30% of the installed equipment base should be between 6 and 10 years old | 35.1% | 32.6% | 6.3% | 14.8% | 50.0% |
| >10 years old | Not more than 10% of the installed base can be tolerated to be older than 10 years | 7.1% | 5.9% | 0.0% | 0.0% | 33.3% |
| Age not reported | N/A | 0.9% | 0.5% | 0.0% | 0.0% | 0.0% |
| Age of oldest machine(s) (years) | N/A | 24 | 17 | 8 | 7 | 13 |

Sources: Keller, 2005: 38; CIHI, 2010; calculations by author.

Table 2: The age of Canada's free-standing facility-based medical technology inventories, relative to the rules from the European Coordination Committee of the Radiological and Electromedical Industries, January 1st, 2009

| ECCREI rules | | Free-standing facility-based inventories | | | | |
|----------------------------------|--|--|-------|----------|--------|--------|
| | | MRI | CT | SPECT/CT | PET/CT | PET |
| Number of units | N/A | 54 | 23 | 2 | 2 | 3 |
| 0-5 years old | At least 60% of the installed equipment base should be younger than 5 years | 38.9% | 47.8% | 100.0% | 100.0% | 100.0% |
| 6-10 years old | Not more than 30% of the installed equipment base should be between 6 and 10 years old | 48.1% | 43.5% | 0.0% | 0.0% | 0.0% |
| >10 years old | Not more than 10% of the installed base can be tolerated to be older than 10 years | 7.4% | 4.3% | 0.0% | 0.0% | 0.0% |
| Age not reported | N/A | 5.6% | 4.3% | 0.0% | 0.0% | 0.0% |
| Age of oldest machine(s) (years) | N/A | 12 | 11 | 2 | 3 | 5 |

Sources: Keller, 2005: 38; CIHI, 2010; calculations by author.

was not provided in ProMed Associates Ltd. (2004).

Canadians should be concerned that more than 12% of hospital-based CT scanners, and more than 36% of hospital-based MRI machines were beyond their life expectancy at the start of 2009 (see table 4). In addition, at the start of 2009, a further 6.3% of MRI machines, 8.4% of CT scanners, and 3.1% of SPECT/CT units were at their lifecycle guideline. Put simply, a sizable portion of Canada's MRI and CT scanners were due to be replaced at the start of 2009 with a large portion due to be replaced soon after that.

Across all of Canada's hospital-based technologies for which data is available from the CIHI (except PET scanners), 18.0% (136 of 754 units) was beyond its CAR lifecycle guideline at the beginning of 2009. This means that a little less than 2 out of every 10 units were due to be replaced at the start of 2009. A further 7.0% was at its CAR lifecycle guideline at the start of 2009.

For comparison, at January 1st, 2007, 29.9% of MRI scanners and 11.6% of CT scanners were past their lifecycle guideline. This means that the state of Canada's installed medical technology inventory has deteriorated according to the guidelines

set by the Canadian Association of Radiologists between 2007 and 2009.

Free-standing facilities fared worse than hospitals according to the CAR standards. Specifically, more than 13% of CT scanners, and 45% of MRI scanners were past their CAR lifecycle guideline at the start of 2009 with another 9.1 and 13.7% at their lifecycle guideline respectively in free-standing facilities. This is a deterioration from the state of affairs at January 1, 2007 when 36.8% of MRI machines and 9.5% of CT scanners were past their guideline.

This being said, the maximum ages of medical technologies in free-standing facilities is much lower than in Canada's hospitals.

Conclusion

The CIHI's data on medical technology inventories reveals that Canada's health care system often fails to provide the quality of technology specified by the Canadian Association of Radiologists, and the European Coordination Committee of the Radiological and Electromedical Industries. These failures of the Canadian approach to health care policy are particularly alarming in light of

the fact that Canada maintains one of the developed world's most expensive universal access health care systems (Esmail and Walker, 2008). Canada's health care system could be doing much more to replace older equipment to the benefit of both patients and health care providers.

Notes

1 Unlike previous analyses by Esmail (2008) and Esmail and Wrona (2008), this article does not examine the age of gamma cameras, lithotriptors/lithotripsy units, angiography suites, cardiac catheterization labs, or bone densitometers as data for these technologies was not available from the CIHI's website. Interestingly, Esmail (2008) finds that these technologies tended to be much older (in terms of adherence to the guidelines examined below) than the technologies examined here.

2 According to the CIHI, hospitals are defined as "an institution where patients are accommodated on the basis of medical need and are provided with continuing medical care and supporting diagnostic and therapeutic services. Hospitals are licensed or approved as hospitals by a provincial/territorial government, or are operated by the Government of Canada and in-

Table 3: The age of Canada's hospital-based medical technology inventories, relative to CAR guidelines, January 1st, 2009

| Hospital-based inventories | | | | |
|----------------------------------|---------|---------|--------------|--------------|
| | MRI | CT | SPECT/ CT | PET/CT |
| Number of units | 223 | 440 | 64 | 27 |
| CAR lifecycle guideline | 6 years | 8 years | 8 years (CT) | 8 years (CT) |
| Percent beyond guideline | 36.3% | 12.5% | 0.0% | 0.0% |
| Percent at guideline | 6.3% | 8.4% | 3.1% | 0.0% |
| Age of oldest machine(s) (years) | 24 | 17 | 8 | 7 |

Sources: ProMed Associates Ltd., 2004: 72; CIHI, 2010; calculations by author.
Note: Machines whose age was not reported in the CIHI data are not included in this table.

Table 4: The age of Canada's free-standing facility-based medical technology inventories, relative to CAR guidelines, January 1st, 2009

| Free-standing facility-based inventories | | | | |
|--|---------|---------|--------------|--------------|
| | MRI | CT | SPECT/ CT | PET/CT |
| Number of units | 51 | 22 | 2 | 2 |
| CAR lifecycle guideline | 6 years | 8 years | 8 years (CT) | 8 years (CT) |
| Percent beyond guideline | 45.1% | 13.6% | 0.0% | 0.0% |
| Percent at guideline | 13.7% | 9.1% | 0.0% | 0.0% |
| Age of oldest machine(s) (years) | 12 | 11 | 2 | 3 |

Sources: ProMed Associates Ltd., 2004: 72; CIHI, 2010; calculations by author.
Note: Machines whose age was not reported in the CIHI data are not included in this table.

clude those providing acute care, extended and chronic care, rehabilitation and convalescent care, psychiatric care" (CIHI, 2008a). On the other hand, free-standing facilities "range from specialized services run privately by physicians, radiologists, dentists, chiropractors, or mammography programs to broad-based imaging centres offering a wide range of tests" (CIHI, 2008a).

3 PET (Positron Emission Tomography): a highly specialized imaging technique that uses short-lived radioactive substances. This technique produces three-dimensional coloured images. Unlike CT and MRI, which look at anatomy or body form, PET studies metabolic activity or body function. PET scanning has been used primarily to evaluate problems of the heart and nervous system and to demonstrate the spread of cancer.

4 PET/CT and SPECT/CT: These newer fusion technologies combine functional and anatomical imaging from SPECT or PET and CT in the same display.

References

- Canadian Institute for Health Information [CIHI] (2010). *National Survey of Selected Medical Imaging Equipment, CIHI, 2009*. <www.cihi.ca>, as of April 4, 2011.
- Canadian Institute for Health Information [CIHI] (2008a). *National Survey of Selected Medical Imaging Equipment, 2007*. <www.cihi.ca>, as of April 4, 2011.
- Canadian Institute for Health Information [CIHI] (2008b). *Medical Imaging in Canada 2007*. Canadian Institute for Health Information.
- Esmail, Nadeem, and Dominika Wrona (2008). *Medical Technology in Canada*. Studies in Health Care Policy (August). The Fraser Institute.
- Esmail, Nadeem, and Michael Walker (2008). *How Good is Canadian Health Care? An International Comparison of Health Care Systems. 2008 Report*. Fraser Institute.
- Esmail, Nadeem (2008). *How Good is Canada's Medical Technology Inventory?* Fraser Institute.
- Keller, Anne (2005). *MRI and CT Expert Panel Phase I Report* (April). <www.health.gov.on.ca>, as of April 4, 2011.
- Organisation for Economic Co-operation and Development [OECD] (2010). *OECD Health Data 2010: How Does Canada Compare*. <www.oecd.org>, as of April 4, 2011.
- ProMed Associates Ltd. (2004). *A Province-Wide Diagnostic Imaging Review and Framework for Strategic Planning*. ProMed Associates Ltd. ■



Canada's nuclear liability

JOEL WOOD

Fotolia

Canada's *Nuclear Liability Act* came into effect in 1976. The act sets a limit of \$75 million in liability for operators of nuclear power generating facilities in Canada. This cap limits operator liability for off-site damages caused by accidents at Canadian nuclear facilities; proof of fault and/or negligence is irrelevant to the liability. Damages above and beyond \$75 million are the responsibility of the Government of Canada, not the facility operator. The Government of Canada is not legally liable for excess damages, but Parliament does have the ability to authorize further compensation from public funds (*Nuclear Liability Act*, 1970). Thus, the guaranteed total compensation is limited to the \$75 million. Although the liability cap may result in lower cost electricity, it requires many citizens to bear the risk of catastrophic damages. The liability cap is an implicit subsidy to the nuclear industry and should be replaced with unlimited liability.

Liability caps act as an implicit subsidy because the *Nuclear Liability Act* also requires operators to carry sufficient insurance to cover the \$75 million of damages for which they are potentially liable. A cap on liability reduces the insurance premium paid by the operator. The higher the liability cap, the more insurance the operator must hold, which then requires the payment of a larger insurance premium. Liability caps also make it easier to obtain private financing to build nuclear facilities. These facilities have large up-front costs and low year-to-year operating costs, so the ability to raise initial funds is extremely important. This issue is not as applicable to Canada as to other jurisdictions, such as the United States, since the vast majority of Canadian nuclear facilities are owned by public utilities, meaning that they do not rely on private financing. Therefore, in the case of Canada, there is even less justification for a liability cap.

The most recent, peer-reviewed estimates of the value of the implicit subsidy in Canada were made by Heyes and Heyes (2000). The study uses data derived from actual nuclear insurance premiums to calculate the cost of covering the risk of damages under the Canadian liability cap. They use a range of damage scenarios for low-probability, catastrophic nuclear accidents. In the majority of cases, the implicit subsidy is less than 1 cent per kilowatt hour, and

is never above 5 cents per kilowatt hour (4.76 cents is the largest estimate).¹ Canada generated 7.55 billion kilowatt hours of electricity from nuclear energy in September 2010² (Angevine and Murillo, forthcoming), thus the implicit subsidy for that month falls somewhere between \$100,421 and \$35.95 million in 2010 dollars (author's calculations).

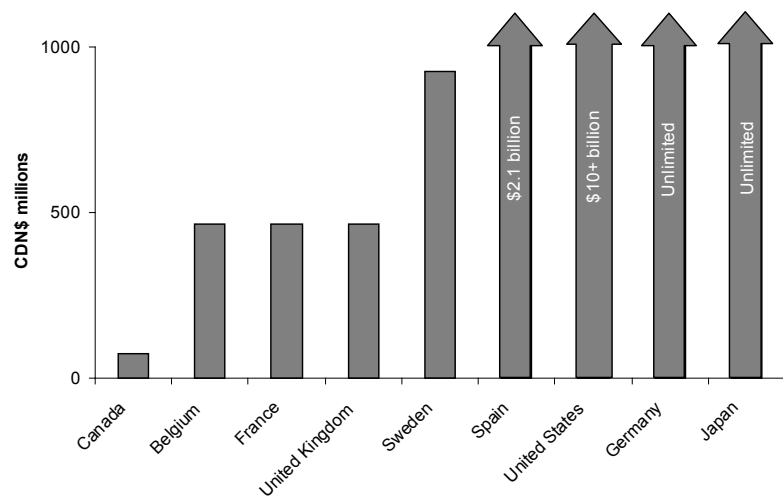
The current liability cap in Canada is not indexed to inflation. This presents a problem since a dollar in 1976 could purchase approximately 275% more than a dollar in 2010 (Statistics Canada, 2011; author's calculations). Therefore, the Canadian liability cap, although constant in nominal terms, is actually decreasing in real terms. The implication of this is that the implicit subsidy is currently increasing on an annual basis.

Canada's liability cap does not compare favourably to nuclear liability frameworks in other developed countries. The nuclear liability caps for several other developed countries are displayed in figure 1. The liability caps in all of the developed countries listed are significantly higher than \$75 million. Japan and Germany have unlimited liability.³ The current nuclear liability cap in the United States is outlined in the *Price-Anderson Amendments Act of 2005*. Individual operators are liable for damages up to \$95.8 million with an additional \$10 billion in liability covered through an industry-wide pool of funds. Both amounts are explicitly set in 2003 US dollars and are therefore indexed to inflation.

Prior to the recent dissolution of Parliament, there was legislation pending that would increase the liability cap to \$650 million and would allow it to increase in the future through ministerial directive (*Nuclear Liability and Compensation Act, Bill C-15*, 2010). This amount is comparable to caps in other jurisdictions and can be increased to reflect inflation without having to pass further legislation. Increasing the cap only decreases the subsidy; it does not eliminate it. The Government of Canada should proceed with legislation that removes the liability cap entirely rather than legislation that maintains it, or increases it to be harmonious with other jurisdictions.

Calls for removal of subsidies for electricity generation from renewable sources (Wood, 2011) need to be accompanied by calls for removal of nuclear subsidies as

Figure 1: Total nuclear liability in selected countries



well. The electricity prices people pay should reflect the true cost of generation including the risk of catastrophic damages. Removing the liability cap allows this risk, no matter how small, to be internalized into the cost of electricity from nuclear sources. The new session of Parliament presents a perfect opportunity for the government to remove the nuclear liability cap.

Notes

1 Currency is in 2010 cents, converted from 1995 cents using Consumer Price Index data from Statistics Canada (2011).

2 Total Canadian electricity production in September 2010 from all sources was 39.86 billion kilowatt hours of which 19% was from nuclear sources (Angevine and Murillo, forthcoming).

3 In the Japanese system, operator liability is waived in the event of nuclear accidents resulting from natural disaster or armed conflict. Canada's *Nuclear Liability Act* has the armed conflict exemption, but not the natural disaster exemption.

Sources: Bank of Canada, 2010; IMF, no date; NEA, 2009; NEA, 2010a; NEA, 2010b; OAG, 2005; OECD, 2008; author's calculations.

Notes: Sweden's liability cap includes government compensation. Belgium, France, United Kingdom, and Spain use a three-tier system involving a cap on operator liability, government liability, and a pool of funds between European states. The exchange rates used are: 1 Special Drawing Right=1.58706USD, 1USD=0.9748CAD, 1Euro=1.3841CAD, 1Swedish Krona=0.1545CAD. A Special Drawing Right is a weighted basket of major currencies developed by the International Monetary Fund.

References

- Bank of Canada (2010). *Daily Currency Converter*. <<http://www.bank-banque-canada.ca/en/rates/converter.html>>.
- Heyes, Anthony, and Catherine Heyes (2000). An empirical analysis of the Nuclear Liability Act (1970) in Canada. *Resource and Energy Economics* 22,1: 91-101.
- International Monetary Fund [IMF] (n. d.). *SDR Valuation*.
- Nuclear Energy Association [NEA] (2009). *Nuclear Operator Liability Amounts & Financial Security Limits as of December 2009*.
- Nuclear Energy Association [NEA] (2010a). *2004 Protocol to Amend the Brussels Supplementary Convention on Third Party Liability*.
- Nuclear Energy Association [NEA] (2010b). *Brussels Supplementary Convention Latest Status of Ratifications or Accessions*.
- Nuclear Liability Act*, R.S., C. 1970, (1st Supp.), c. 29, s. 1.
- Nuclear Liability and Compensation Act*, Bill C-15. House of Commons of Canada 3rd Session, 40th Parliament, 59 Elizabeth II, 2010.
- Organization for Economic Cooperation and Development [OECD] (2008). *Nuclear Legislation in OECD Countries Regulatory and Institutional Framework for Nuclear Activities Sweden*.
- Office of the Auditor General of Canada [OAG] (2005). *Report of the Commissioner of the Environment and Sustainable Development*. Government of Canada.
- Price-Anderson Amendments Act of 2005*, 42 U.S.C. §§601-610 (2005).
- Statistics Canada (2011). *Consumer Price Index, 2005 Basket, Annually, Canada; All-items*. v41693271.
- Wood, Joel (2011). "Feed-in" tariffs in Ontario: UnFIT energy policy. *Fraser Forum* (January/February): 31-34. ■