A Question of Productivity

Outline notes for remarks
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Thesis: Canada's standard of living is on a worrying downward slope. While we are still one of the world's wealthiest and best educated nations, our historic wealth depended on finite natural resources and on manufacturing, a declining sector where we are not able to compete against low-cost producers in emerging markets. The key to sustaining and improving the standard of living and the quality of life we cherish is to improve our productivity. And the key to improved productivity is not to work harder or longer but to develop and apply our intellectual resources in more sustainably productive ways:

1. By getting more value from our R&D investment and increasing innovation
2. Through partnerships that lead to greater commercialization of research particularly in knowledge-based businesses and new ways of thinking about how to fulfill our potential.
3. By ensuring that we are developing and benefitting from the full potential of every Canadian.

Opening
In 2002 I called on Canadians to aim for a standard of living that would exceed that of the United States in 15 years. I believed then, and still believe, that a higher standard of living is not an end in itself but a means to an end, and that end is a higher quality of life. Only with a higher standard of living will we be able to choose the quality of life Canadians desire.

I suggested that the key was to increase productivity. This suggestion inspired considerable media debate. Many experts came forward to offer ideas about how we could achieve the goal I had set. I felt quite optimistic at the time.

Fast forward to today (pause) --- whether it reflects my powers of persuasion or is a measure of some deep resistance in the Canadian psyche, I regret to say that we have not yet met the target. Seven years later a more prudent soul would adopt the old maxim: "When your horse dies, it is best to dismount" but, as you see, I trod on. It is discouraging that although we are still one of the world's wealthiest and best educated nations, for the better part of three decades our standard of living has been stuck in neutral.

Canadian median wages, a measure of individual living standards, have not advanced in real terms since 1980. In 1984 the average Canadian had 87 per cent of an American's standard of living based on purchasing power parity. In 2008, admittedly

an unusual year, it was 84 per cent despite our southern neighbour's self-inflicted burdens.

Even more troubling is the ever-widening gap between rich and poor in this country.

I am saddened but not surprised that many people tell me they don't feel they are better off. Or that many parents worry that their children will face greater economic hardship than they did.

But I am not here to spread doom and gloom. On the contrary, I am exceedingly optimistic.

In the last year, Canada has enjoyed a rare moment in the sun. In the past Canadians were content simply to be included in any international endeavour. The recent movie "In the Loop" cruelly conveyed the attitude: "Don't worry about the Canadians; they will be happy just to have been invited." And Al Capone infamously observed: "I don't even know what street Canada is on."

Today we've moved the public relations dial from 'innocuous' to 'a model for the world' led by our stellar financial services industry. And we feel good about ourselves. Indeed, in a recent index of trust and admiration in your country by The Economist magazine, Canada ranked second in the world, only marginally below Australia.

Rather than let Emmanuel Rahm's dictum: "never let a crisis go to waste" become simply a clever platitude, our challenge is to seize this moment and build a stronger Canada for future generations.

I shall attempt to kick start the conversation by suggesting how innovation, partnerships and education can all play a role. In that vein, bitter experience has taught me that people are much more receptive to my ideas if I attribute them to Bill Gates and accordingly, I shamelessly do so.

The productivity problem

Before tackling that, let me outline our productivity problem. Economists agree that the single most important determinant of a country's standard of living is its productivity. The faster the growth in productivity, the higher the standard of living.

Unfortunately, Canada's story is not comforting. In 1960 Canada had the third highest productivity of the OECD nations. Today we sit at 17th and all but two of the original OECD countries [Italy and Switzerland] have outperformed us. In the last decade, Canada's 1% per annum growth in output per hour worked was dwarfed by the US's 2.5% which perhaps explains why our overall productivity is less than three quarters of that of the United States.

Historically our wealth has come from our reliance on natural resources and on tariff-protected manufacturing. While the economy seems to be improving and the demand for commodities escalating, I am concerned that we shall ride the commodity cycle and not face our very real problems. The salient facts are that natural resources are finite and that we are losing the competitive battle in manufacturing, especially in lower value-added goods. We cannot nor should we compete with emerging market wages. It's high time we recognized that our future prosperity depends on becoming leaders in the knowledge-based economy. As W.C. Fields admonished: "There comes a time in the affairs of men when you must grab the bull by the tail and face the situation."

What can we do?

What then can we do? A first solution is not to reduce jobs, but to create more valuable, higher paid, more sustainable jobs. Research In Motion is an interesting example. RIM employs about 7500 people in Canada. Its hardware is primarily made offshore which means that the jobs RIM has created in Canada are exactly what we need for future success – jobs in software development, research, sales and marketing, and supply chain management. These are skilled knowledge jobs with better salaries and greater growth potential than many hourly-paid jobs in manufacturing. We need more companies like RIM but the paucity of other examples of their size and scope is disheartening.

Innovation

A second solution centres on innovation and, within that broad heading, innovation through research and development. As members and supporters of this Foundation, this aspect is of particular concern to you.

Here again Canadian statistics do not reflect our potential. Canada has the fifth most generous Scientific Research and Experimental Development Tax Credit of the OECD countries.[1] We have the lowest marginal effective tax rate among all the OECD countries. The manufacturing tax, which had encouraged imports and discouraged exports, was eliminated with the introduction of the productivity-enhancing GST.

This is just the latest move in a dramatic overhaul of corporate taxation in Canada since 2000. The combined federal–provincial corporate tax rate will shortly be 25% in most places, down from 45%. Both the federal capital tax and provincial general capital taxes have been eliminated. Import tariffs on machinery and equipment are about to be eliminated. All of these measures will, hopefully, eliminate something else – the excuse that high taxation prevents businesses from re-tooling with cutting edge equipment. Perhaps it will also ensure that where we do manufacture, we operate with a smarter ratio of jobs to capital invested. That the US almost doubles Canadian capital intensity undoubtedly accounts for a good deal of our productivity gap.

[1] OECD 2005 (if you combine federal and provincial incentives).

Since 1997, the Canadian Foundation for Innovation has played a key role in funding research infrastructure – the equipment, buildings, laboratories and databases required to conduct research. Since then CFI has provided $5.2 billion in support of over 6,000 projects across Canada. The federal budget in January allocated $750 million in new funding to CFI.

Despite these incentives, in 2003, Canada ranked 12th and 14th in R&D expenditures as a percentage of GDP in the non-business and business sectors of our economy[2] and our spending is dropping.[3] We also lag other countries in the commercialization of research. These statistics suggest we may need to rethink our research incentives – they clearly are not optimizing what they set out to do.

Technology companies account for roughly the same percentage of economic output in Canada as they do in the US[4]. Yet we create few technology giants and have a history of selling our startups to international companies.

Interestingly, more R&D in Canada is carried out in universities than in the private sector[5]. Internationally, the reverse is true. This matters because the more R&D you undertake in the private sector, the higher the commercialization rate of innovation and not surprisingly, the greater the growth in productivity. Yet business spending on R&D in Canada is 1.0% of GDP versus 1.89% in the US and 1.56% in OECD countries.

Partnerships

Clearly the research that will propel us towards higher productivity is research that companies find attractive. This brings me to a third solution – partnerships. The best way to guarantee commercialization of innovations is to have the private sector directly involved in funding the research. However, if we are to recognize that government funding is part of the Canadian landscape, then we should, at the very least, tie the allocation of university research grants more closely to private sector partnerships and to projects with commercialization potential.

This is already beginning to take place in organizations like GreenCentre Canada. A first for Canada, it brings together our leading green chemistry researchers, industry partners and commercialization professionals. The goal is to develop cleaner, less energy intensive solutions for traditional chemical products and manufacturing processes. Another example is MaRS, a non-profit innovation centre in Toronto connecting science, business and capital and fostering collaboration among them.

We don't need to compete on all fronts; in fact we shouldn't try to spread our research dollars too thinly. Instead we should focus them on some very specific areas where we possess expertise and a strong potential competitive advantage. Examples

[2] (OECD study).
[3] according to the research think tank Council of Canadian Academies
[4] Source: Wall St Journal 21/09/09
[5] 36% of Canada's R&D is performed in universities compared with an OECD average of just 17%.

might be information and communication technology, bio-technology and healthcare – all sectors that offer export opportunities.

Perhaps we can leverage the tremendous knowledge we have in resource extraction to become world experts in environmental practices in resource industries. Greater emission controls are inevitable. We would be much better off developing and exporting the relevant technology than paying other countries' companies for it.

The idea of specialization raises the contentious issue of whether federal research dollars should be more or less evenly spread across post-secondary education institutions or allocated to a small number of large institutions. In California, preferential funding goes to Berkley and UCLA and the role of state campuses is limited.

Some natural consolidation of post-secondary research in Canada is already taking place although it is not limited to the five institutions some academics have recently promoted. Limiting the number to five may be self-defeating as the University of Waterloo may not have appeared on the research leader board 20 years ago but unarguably does so today. As its President, David Johnson, recently said: "One wants to be a little careful with a system that perpetuates what you have done in the past 10 or 15 years to help you have a leg up on the future." Or to paraphrase Einstein: you can't solve a problem if you keep doing what created it in the first place.

Increasing specialization creates much more profound knowledge in narrower fields, making partnership with public or private interests critical to ensuring the cross-pollination of ideas that is at the heart of innovation. This will require greater alignment, communication and collaboration amongst the various pillars of this country - academia, business, the not for profit community, government and labour. Each brings knowledge, experience and insights that can inspire new and better ways of doing things.

During the Renaissance, when there were huge advances in intellectual development, the world's experts could have sat around one table. While that's not possible today, social media offer a virtual table for fast and unfettered community building and idea sharing. For example, IBM created a wiki where external software developers could create policies to govern their work. It took less time and received greater buy-in than any corporate attempt to write policy could have done.

One initiative that may foster greater innovation is the current federal consultative process to update Canadian copyright laws. The intention is to ensure that, in this digital age, Canadian creators and consumers are not hampered by outdated legislation and have access to the tools they need to keep Canada competitive internationally.

Let me turn now to my fourth suggested solution to our productivity challenge -- education.

Education – create a rising tide for all ships

I am very concerned about the widening gap between rich and poor in Canada and the societal tensions it fuels. I do not believe it would be practical to reduce these income gaps through taxation unless joined in that initiative by our southern neighbour. While we can hope that income gaps will contract as we recover from the recent financial and economic maelstrom, a degree of inequality of outcomes appears to be a fact of life. I believe the best response is to provide the greatest possible equality of opportunity thereby assisting every Canadian to realize his or her full potential. That alone would have outstanding implications for Canadian productivity. Unlike Oscar Wilde who opined: "Education is an admirable thing, but it is well to remember from time to time that nothing that is worth knowing can be taught," I believe the greatest contributor, bar none, to equality of opportunity is access to education. In other words, I believe that education can be the tide that raises living standards for everyone.

As long as we have members of our society who do not have the opportunity to function at their full potential, we are limiting our ability to compete.

It is well known that the curiosity, self esteem and positive learning habits needed to succeed in life are formed in a child's earliest years. A schooling system focused on intensive early childhood education can increase the average IQ of a country overall. Yet, over the past decade, Canada's education expenditures have declined relative to other developed countries. In particular, Canada spends the least of our OECD peers on early childhood education.[6]

When you look at secondary and post secondary education the statistics are also worrying. Canada produces 25% fewer high school graduates than the OECD average. The dropouts are predominantly male. We have a high number of post secondary education graduates but even that number has fallen below the OECD average.

Family income has a big influence on whether or not you acquire a university degree. More than half of children from high income families go to university but just 30% of children from low income families. Moreover, children from wealthier families tend to have higher marks and tend to graduate.

The gap in educational attainment between rich and poor has a significant impact on the wealth and quality of life of society at large. A recent New York Times article attributes soaring inequality and slowing productivity growth in the United States to the fact that only half the students who enroll in a university actually graduate.

[6] TD Economics paper Social Policy and the Recession August 24, 2009

In Canada, in 2005, workers who graduated with a bachelor degree earned 50% more on average than high school graduates. Attaining a post-graduate degree increased average earnings by a further 19%.

There is evidence of other positive outcomes from increased education, such as better health for both graduates and their children. The social and economic benefits include increased civic participation, reduced involvement in criminal activities, higher rates of innovation and increased growth in living standards.

All of which validates the solution of providing children of poorer families and certain communities, such as our rapidly growing Aboriginal population, with the same opportunity not just to attend school but to do it well. At the post secondary level that suggests ensuring admissions are income blind and converting outstanding loans above a certain amount into grants upon graduation.

We also need to address the fact that we have relatively few graduates in engineering, science and business. These are all areas with great potential to create future, sustainable employment.

In an industrial economy what you know matters. In a knowledge economy, where you have instant access to information, how you think is what matters. We need to foster curiosity in students at every level and encourage them to think in innovative ways and to connect ideas creatively. That's one certain route to greater innovation and to future productivity.

As Richard Riley, former US Secretary of Education, said: "We are currently preparing students for jobs that don't yet exist; using technologies that haven't yet been invented in order to solve problems we don't even know are problems yet." That is a daunting prospect for educators and one that clearly calls for innovation in education at every level.

Meanwhile we can improve our ability to quickly utilize the skills, experience and creativity of the internationally educated professionals who come to Canada to start new lives. Too often they are overlooked or under-employed. A recent TD Bank study found that pre-1996 immigrants to Canada experienced a similar employment outcome to our native-born population but that post-1996 immigrants fared much worse. Although the later immigrants possessed much superior educational achievement, there was a significant shift from immigrants whose first language was English or French. The researchers attribute much of the deterioration in employment experience to language. Inadequate language and literacy skills then cost Canada billons of dollars every year.

We have two possible ways to address this problem. One is to make proficiency in one of Canada's two official languages a prerequisite for landed immigrant status. The other is to more effectively equip new Canadians with the mastery of English or French required to ensure that their skills and experience are appropriately recognized

and valued. Many new policy initiatives have been launched with this end in mind but the private sector can also play a role by subsidizing language skill courses and encouraging improved literacy.

Conclusion

I have offered a long shopping list of solutions but I want to stress that all of them are achievable in a wealthy country like Canada. The key to improved productivity is not to work harder or longer but to develop and apply our intellectual resources in more sustainably productive ways. We are in a highly enviable position. Compared with the United States, we have outstanding opportunities for growth and accelerated productivity.

Despite our prolonged federal minority government, we have political stability. We are not hampered by the polarization that is short-circuiting efforts to address social inequalities in the United States and our twin deficits are modest compared to our peers.

We have an effective healthcare system which should be a competitive advantage, particularly in manufacturing. We have access to the US market for our goods and services. We have sought-after natural resources and we have a well-educated workforce. The US cutback on student visas affords us access to more of the world's brightest and best.

I believe we have the potential to become an economy that can not just withstand the buffets of a changing world but thrive in it. With the right investments and a commitment of national will, we have a marvelous opportunity to redraft the blueprint for Canada's future. The time to boost productivity is now and I'm hoping that you will be in the vanguard of the effort.

Given the centrality of innovation to the CFI, I would like to close with some reflections of the 43rd president of the United States on innovation: "Our enemies are innovative and resourceful and so are we. They never stop thinking about new ways to harm our country and neither do we."

Conscious, perhaps a little late, that "A closed mouth gathers no foot", I shall thank you and sit down.