

**“ECONOMIC RENEWAL, INNOVATION AND BUDGETS:  
A LONGER-TERM PERSPECTIVE”**

by

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## **ECONOMIC RENEWAL, INNOVATION AND BUDGETS: A LONGER-TERM PERSPECTIVE**

### **Introduction**

How should we think of innovation in the context of annual budgets and fiscal planning? Fiscal planning is complex: it balances the today and the beyond; it attempts to equilibrate shorter-term fiscal stability with longer-term fiscal sustainability: and it must understand that fiscal austerity is linked to economic renewal by an “and” not an “or”. The question is how well the 2012 Budget tackled fiscal austerity and economic renewal, and particularly whether it demonstrated leadership on Canada’s enduring challenges of weak productivity growth and poor innovation performance.

The starting point for any budget is the context, and the context budgets now face is pervasively global and profoundly changing. Structural trends and seismic events are reshaping economies, societies, politics, power and expectations around the world. And, this changing context is shifting the “drivers of success” for the Canadian economy. Five such pivotal trends include:

- **Pervasive globalization:** the global center of economic gravity is shifting towards Asia with the rise of dynamic emerging economies in Asia and elsewhere. The “new global reality” is increasingly a two-speed world, where the West is in the slower lane.
- **Demographics:** for the first time in a very long time, we’re collectively aging in Western countries, and this will have underestimated consequences for potential economic growth through slowing expansions in the labour force, and for longer term fiscal frameworks through increasing pension and health care costs. One consequence is that the hunt for talent is going global, and the winners, both countries and firms, will be in the driver’s seat in the new global competitiveness.
- **Information revolution:** from the Internet to Facebook to Tahrir Square, we have moved from a connected West to a hyper-connected world. This hyper-connected world is changing the reality of what a market is, how markets are accessed, and where work can be done in real-time distributed systems. It is re-defining the nature of communications, both the medium and the style of messaging and, as the Arab Spring has demonstrated, anyone with a smart phone is now a journalist.
- **The ultimate hang-over:** the global financial crisis of 2008 is like the hang-over that will never end, no matter how many aspirins governments and financial systems in many countries take. It has spawned a low growth, low interest rate, high volatility environment in the developed world, with continued de-leveraging and uncertainty a fact of life in Europe and a lingering reality in the United States.

- **New global competitiveness:** today, it is increasingly productivity and innovation that drive competitiveness. In advanced economies, it is less low costs and massive scale and more flexibility and creativity; it is less geography and more capacity.

So what will competitiveness in this future look like for Canadian firms? Two interesting intellectual glimpses, come from Tom Friedman of the New York Times and the Harvard Business School's new project on "American Competitiveness", led by Michael Porter. Both, in different ways, argue for a global orientation not a local one; a relentless focus on productivity and innovation, and a fixation with talent, creativity and entrepreneurship.

Tom Friedman argues we have progressed from a connected world to a hyper connected world where, for global innovation-driven corporations, the mantra is now: "imagined here, designed there, manufactured elsewhere, sold everywhere." "Made in America" has morphed to "made in the world", and this is disconcerting for many leaders who still inhabit a geographic world. The European debt fiasco is also, in a wonderfully unintended way, a living, breathing example of this hyper connected world, where my problem is your problem.

The Harvard Business School has launched a massive project on U.S. competitiveness, itself defined in a novel way as "the extent to which firms operating in the U.S. are able to compete successfully in the global economy while supporting high and rising living standards for Americans". Their resolution is both beguilingly simple in concept and devilishly complex in practice: competitiveness with rising wages and improving living standards hinges on continually increasing productivity. And, for high income economies, a prime driver of productivity growth over the long run is innovation.

Where does all this leave Canada? In the new two speed world, Canada is "over-invested" in the "2% growth world" and under-invested in the "6-8% growth world". We have to diversify our trade towards a focussed set of dynamic emerging economies. And, we have to increase our competitiveness in the slower growing, but rich, U.S. marketplace.

This diversification should include not only natural resources, but also a strategic focus on the emergence of a middle class in these emerging economies --- current estimates are 600-900 million "new consumers". What do newly emergent middle classes want --- simply put, better and more sophisticated nutrition for their families; better housing; better education; better health services; better financial services (particularly wealth management, and pension planning) and, better entertainment including tourism. All of these goods and services, Canada can and should provide.

While the opportunities are becoming clearer, so are the challenges. From the dismal science come some dismal facts:

- Canada's business productivity levels are now only 72% of U.S. business on average, and we no longer have a low dollar to subsidize poor productivity.

- Canada's business spending on R&D is 1.0% of GDP, well below the OECD average of 1.6%, half that of U.S. business and almost a third Swedish business. Canadian business has the dubious distinction of ranking 20<sup>th</sup> in the OECD in research, at a time when innovation is the life blood of the new competitiveness.
- Canadian business spends only 48% as much as U.S. business on ICT (information and communications technologies) and only 75% as much on leading edge machinery and equipment --- both instrumental to productivity growth.
- A recent GE Global Innovation Survey signals a glaring innovation disconnect for Canada: 91% of Canadian business leaders surveyed thought we were doing well on the innovation front; only 4% on non-Canadians surveyed placed Canada anywhere near the front ranks on innovation.

Herein lies Canada's challenge — we are a sophisticated economy, with a well-educated and multicultural workforce, but a chronic underperformer in innovation and productivity. In a world where competitiveness is increasingly defined by creativity and flexibility, Canada cannot sustain above-average living standards and below-average innovation investment, especially with a Canadian dollar around parity, weak U.S. and European demand, and growing demographic pressures.

Why is innovation so crucial? Simply put, innovation is the ability to create new products, produce existing products in new ways, and develop new markets. It drives productivity, and a more productive economy grows faster, adapts better, and supports higher wages, more jobs and improved living standards. It helps answer the question of how a high-wage economy like Canada's can compete with those of emerging countries.

When speaking with businesses and researchers about our innovation challenge, eight factors frequently surface as elements to be considered in attempting to make Canadian business, universities and government more productive and innovative. This framework is a useful "innovation lens" with which to analyze budgets, both federal and provincial, as well as corporate strategies and university plans.

- **Leadership**, creating a better understanding of why productivity and innovation are in everyone's interest --- business, workers, unions, civil society, government
- Shifting to more **direct innovation support**, with greater sectoral targeting and critical mass, and away from Canada's excessive reliance on indirect support for private sector innovation
- Retooling the **financing for innovation**, particularly building a viable and effective venture capital sector
- Strengthening our **university research underpinnings**, with a relentless focus on global excellence and better commercialization
- Expanding **public-private innovation partnerships**, because both bring essential insights to the innovation table

- Increasing **market competition and regulatory flexibility**, to stimulate new ways of doing things
- Retooling our **education norms**, to equip new graduates for success in the global marketplace of tomorrow
- Moving to greater **market diversification**, particularly towards the dynamic emerging economies of Asia and the Americas

### **Budget 2012 Through an Innovation Lens**

A number of these factors were touched upon in the 2012 federal Budget, a welcome sign that the government recognizes the importance of innovation to our long term competitiveness and prosperity. There was the beginning of a shift to more streamlined indirect innovation support and a redirection of tax expenditures to more direct support, with the budget announcing changes to the way the Scientific Research and Experimental Development (SR&ED) tax incentive works to increase simplicity and predictability, and reduce the overall tax expenditure to fund direct forms of support.

Financing for innovation, especially venture capital, is an area where Canada lags other economies, and this clearly inhibits our ability to create and build innovation-driven firms. The budget committed funds for venture capital to help increase private sector investments in early-stage risk capital, to support the creation of larger-scale private sector venture capital funds, and to support BDC's venture capital activities.

Public-private innovation partnerships support innovation because they align applied research resources on issues critical to business. Business-linked university research was highlighted, with new funding to the Canadian Foundation for Innovation to support Canada's advanced research infrastructure and to the granting councils to enhance their support for industry-academic research partnerships. The Industrial Research and Development Internship program (which helps graduate students undertake hands-on research in innovative firms), was doubled, funds were allocated to the National Research Council to refocus on business-led, relevant research, and support to IRAP was doubled.

Companies often become more innovative by necessity—in essence, when they are forced to by competition. The government took some small steps in the area of increasing competition by announcing legislative amendments to lift foreign investment restrictions in parts of the telecommunications sector. The government moved more aggressively on market diversification, particularly towards dynamic emerging economies, committing to new trade agreements with countries in Asia and elsewhere and to a refresh of the Global Commerce Strategy.

### **Innovation Nation: The Challenge Ahead**

While the 2012 Budget showed renewed federal leadership on the innovation front, the reality is that Canada's innovation challenge runs deep and broad. The keys to the solution lie in many hands --- the private sector, universities, governments, financial

markets, and individual entrepreneurs. And, the urgency of greater, faster and more sustained action rises as the world changes.

For Canada to become an 'Innovation Nation' we must build stronger innovation ecosystems. Innovation doesn't happen in the abstract, and seldom by serendipity. It must become part of the "environment" and "infrastructure" of the Canadian economy.

Effective innovation ecosystems require:

- the right "**macro innovation environment**", where governments --- both federal and provincial, play a lead role;
- the right "**community innovation infrastructure**", where incubators, mentors, accelerators, angel investors and peer support play a lead role;
- the right "**micro innovation environment**", where universities and community colleges play a lead role in developing research excellence and strong human capital; and
- the right "**organizational innovation infrastructure**", where firms play the lead role in putting structures and incentives in place within corporations to continually drive innovation.

In all of these, Canada can and must do better. Let's reflect on each of these in turn.

Canada's innovation environment needs more competitive pressures to spur and incent innovation by Canadian firms. As a sage commentator recently observed: "Most people don't change because they see the light; most people change because they feel the heat". Elsewhere, I have argued for both policy driven and information driven competition to stimulate greater focus by Canadian business managers and boards of directors on corporate innovation structures and strategies. The innovation environment also needs more specialized funding --- venture capital, angel capital, early stage capital and more specialized capacity in the banking system to support innovation lending.

Beyond the macroeconomic context for innovation, we need better community innovation infrastructure to foster and support innovation at the local level. Driving local innovation well at the community level will result in doing innovation better at the national level.

Creative people form the foundation of all innovation systems. Here, Canada's challenge is going from good to great. We need an education system, beginning with K-12, that encourages creativity and entrepreneurship in the broadest sense, employs technology as innovatively in teaching (and medical care) as we have in such essential services as electronic gaming, and focuses on world class outcomes not input metrics. We need a "Canada brand" and an immigration system that targets and appeals to the best and brightest in the world. Developing specific tools to help bridge foreign students into employment will help innovation.

Fostering local ecosystems will require stronger collaboration and consistent networking capacity, where entrepreneurs, investors, researchers and potential innovators can formally and informally network. Collaboration can often be the oxygen of innovation. Canada has a challenge in this area. Although Canadians are informally cooperative, we lack a tendency to formally collaborate, to create formal working arrangements to share risk, obligation and reward with our partners.

We also have a problem of two solitudes in Canada. For some reason, we seem to prefer to keep our best problem solvers segregated from our best problem identifiers. Today's two solitudes are epitomized by our university researchers and business leaders. The latter are very good at identifying what customers want; they are in constant contact with them. The former are very good at solving problems; that is what they are trained to do. Together, they form a much more effective innovation ecosystem than separately.

## **Conclusion**

There are a number of Canadian businesses that have demonstrated exceptional innovativeness through entrepreneurial risk taking, and these are inspirational success stories. However, such success is too often viewed as 'exceptional', and by being labelled "exceptional", it lessens the peer pressure on other firms and business leaders to emulate their behaviour. There is simply not enough competitive pressure in the Canadian economy to drive most firms to continually seek productivity growth and new innovations. As a result, our average competitive performance is well below our best performance.

There is no reason for Canada to be an innovation and productivity laggard. Governments can and should play a leadership role, and it is not all about spending—part of its role is framing the questions and convening the players. Business, university and labour all need to be part of the innovation leadership imperative. We need to make the question "What will it take for Canada to build an innovative and productive economy?" part of our ongoing public discourse, as well as the continued focus of future budgets and corporate Canada's strategic business plans.