Analysis of Budget 2013 from an innovation policy perspective

David Watters
President, Global Advantage Consulting

Watters began with three points to take away from a consideration of the federal budget: the amount of money set aside for research and innovation is very small, a trend away from university-based research is continuing, and there is a new emphasis on sector strategies. With regard to the last item, he identified no fewer than 12 initiatives in the budget related to technology development in the Canadian economy.

Watters divided the budget into three distinct components. One consists of an assessment of the country's overall economic performance, which is more than satisfactory when compared to other countries in the G8 and OECD. Nevertheless, projected revenue increases that had been forecast well before the budget turned out to be much lower in the final document, largely because of declining oil and gas revenues. Similarly, job creation was lower than expected, which Watters outlined in order to portray the tenuous economic circumstances that could affect support for many of the announced federal initiatives.

Secondly, with respect to the government's stated bid to balance the budget by 2015, he noted that the anticipated surplus is given as 0.8 billion. "This is smoke, this is nothing," said Watters, voicing some skepticism. "That is a very small amount of money when you're beginning to look over a three-year period. It's a very tight figure to focus on."

Finally, the budget contained measures to support jobs and growth, such as job grants supported jointly by the federal and provincial governments, in collaboration with employers. Although infrastructure programs were not touted as a highlight, Watters observed that these investments totalled no less than $70 billion over the next decade. This amount is much more than the $454 million for research and innovation, even if much of the funding is being sourced internally, i.e. represents no new money, but is instead diverted from previous commitments.

Watters built a hierarchy that culminates in the country's quality of life, which is in turn dependent on standard of living, which itself depends on competitiveness, which stems from productivity. According to him, productivity is sustained by inputs from labour, innovation, and capital; and innovation can be further subdivided to include inputs from R&D based on goods and services, process, organizational or marketing innovations.

Watters noted that of these various inputs to innovation, the vast majority of activity is dedicated to R&D toward goods. "We are not so good a designing programs to be able to get the other four components of innovation. Arguably, this may be one of the challenges we face in terms of improving Canadian productivity."

Watters broke down the $454 million that the 2013 budget contained for research and innovation over the next two years. He noted that while $37 million for the granting councils might seem like a lot in absolute terms, relative to their combined budget that amount barely enables them to keep pace with inflation. Similarly, much of the $141 million for Atomic Energy of Canada Ltd. is narrowly targeted to the challenge of medical isotope production. He praised the $165 million for Genome Canada as an outstanding investment, along with the $325 million for Sustainable Development Technologies Canada. He was also enthusiastic about the $60 million being provided for business accelerators, as well as another $100 million dedicated to the companies that emerge from those accelerators, though he cautioned that the particular design of this initiative was still unknown. On the other hand, the $225 million being provided to the Canada Foundation for Innovation is actually not new money, but actually the interest on money already provided to the organization.

He cited two statements made by Prime Minister Stephen Harper in 2012, both of which endorsed the value of investments in science and technology but criticized the country's lacklustre return on such investments. Watters takes such criticism to be the publicly voiced rationale for a strategy to improve that return.

Looking again in absolute terms, the budget's $454 million investment in R&D might seem impressive, until it is compared with the $59 billion that Canada will spend on R&D over the next two years. Placing these amounts in an even larger international context, Canada is clearly in the middle of the global pack in terms of our investment relative to GDP. Looking at the amount in altogether different terms, Watters observes that Walmart is spending $450 million on its stores in Canada to brace itself for the competitive pressure of rival Target's arrival in this country.

In the wake of last year's budget, a number of policy initiatives have also emerged, including:
— the Emerson report on aerospace
— a report on international education
— the Defence Procurement Strategy
— the $400 million Venture Capital Action Plan
— the Hands-Off Healthcare approach assigning responsibility for these services to the provinces
— strong trade initiatives into regions such as India and the EU
— the Foreign Direct Investment Review highlighted by the ownership of Canada's potash industry
— immigration guidelines to welcome entrepreneurs
— renewal of the Automobile Innovation Fund
— intervention on mortgage rates

Looking more closely at how funds will flow through organizations in various sectors, Watters stressed the significant amounts of money that have been dedicated to aerospace and defence measures such as the Strategic Aerospace and Defence Initiative ($1 billion over five years), the Aerospace Technology Demonstration Program ($110 million over four years), the new National Aerospace Research and Technology Network, and the very ambitious Defence Procurement Strategy ($49 billion in regional benefits by 2027). More modest amounts are being dedicated to the transformation of the National Research Council, Agriculture and Agri-Food Canada, Natural Resources Canada, Environment Canada, the Canadian Space Agency, and Fisheries and Oceans. He reiterated his earlier observation that the increase to the granting councils would have no real impact, although he acknowledged the new emphasis on activities involving colleges.

Watters singled out a telling phrase from page 266 of the budget: "The Government will introduce legislation as needed to consolidate operations and eliminate redundant organizations."

"If that doesn't send a shiver down the spine of every public servant, I don't know what will," he said. "When you put a statement like that in the budget, you obviously have a plan to look at some restructuring and some reorganization."

He also described a sizeable "war chest" being assembled in the form of $920 million over five years to the Federal Economic Development Agency for Southern Ontario, with the potential for many new prospects in terms of research and technology development.

Watters examined access to risk capital, noting that of $1.5 billion in Canadian venture capital invested in 444 companies in 2011, almost half went into information technology, almost a quarter went into life sciences, and another 16 per cent went toward clean technology. Meanwhile another 134 firms shared $82.4 million worth of angel investment. Given that these funds benefitted fewer than 600 firms, he compared that number with the 20,000 Canadian firms that conduct R&D, and the 40,000 Canadian firms that have moved into export markets.

"Are those firms accessing the kind of capital that they need?" he asked, challenging the assumption that a

larger pool of risk capital will have a sweeping economic impact. “You may find that you’re only helping, per year, 40 or 50 additional companies.”

In order to take stock of Canada’s Business Expenditures on Research and Development (BERD), which is only about half the rate of the United States, he put the size and structure of Canada’s private sector into a more accurate perspective. He began by noting that of some 1.1 million businesses in the country, just over 2,500 are large (with an average size of 1,550 employees). The remainder, still around 1.1 million, count as SMEs, with an average size of just six employees. Concentrating specifically on businesses performing R&D, he counted slightly more than 19,000 of them, all but some 500 of them being SMEs. “Again, these are firms with six people,” he said. “So you’ve got six people trying to run the business, worry about cash flow, hire employees, trying to do research and development. Maybe some of the challenges they’re facing, if they’re in an area that has a public benefit, needs some additional assistance.”

Watters returned to the question of whether industry sector strategies are being developed, given how often the same areas — such as forestry, aerospace, automotive, and advanced manufacturing — show up in various budgets. Meanwhile, although a great deal of attention went to the amalgamation of the Canadian International Development Agency into Foreign Affairs and International Trade, a new trade agenda has been emerging, with China supplanting the UK as our second largest export partner. As for who is exporting, of more than 36,000 businesses that do so, all but some 1,200 are SMEs; again, he observed, the challenges associated with a six-person firm trying to engage in export would seem to call out for some assistance.

By way of conclusion, Watters identified a shift away from funding to university research towards industrial sector strategies, which will be led by Technology Development and Demonstration. He also highlighted 12 specific budget measures that were designed specifically to help many different types of firms through the notorious “valley of death” between technology development and market launch. Nevertheless, he left the audience with the lingering question of whether $454 million would be enough to address this challenge over the next two years.

Doug Barber asked if the very provocative facts Watters had just presented would in fact be discounted or even dismissed by many Canadians, who would insist that major change is not imminent and the current changes will give way to the economy’s former status quo. Watters suggested that with a deep enough understanding of how Canada’s private sector operates, it should be possible for everyone to see what is happening, and whether the budget’s allocations will be sufficient for the demands of domestic and international marketplaces.

Terry Anne Boyles, of the Association of Canadian Community Colleges, pursued the point about the trend away from university research. She noted that while the proportion of granting council funds garnered by community colleges is still only around 2.5% of the total, the real growth in such funding is coming through other streams such as IRAP. Watters concurred that new funding avenues, such as the job grants program, are ushering in new ways of thinking about R&D activities. “I’ve even suggested that we create a carve-out from that $300 million for skills training for innovation and commercialization training,” he said, noting that this sort of novel approach would open up new prospects for combining federal and provincial efforts to promote research and innovation.