Budget 2014: Re-balancing Innovation Support Programs
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Panel Discussion

Perspectives from Industry

Moderator: **Paul Dufour**, Principal, PaulicyWorks

Paul Howarth, Innovation and R&D Manager, Cisco Canada
Vicki Saunders, Founder, SheEO
Tim Angus, Energy Efficiency, Smart Grid, and Technology CEO

During his introduction, Dufour described his participation on the panel of Grand Challenges Canada, a Toronto-based organization that supports a range of health care innovations in the developing world. “What’s interesting about this group is that it’s funded by the government but has partnerships around the world with VenCap organizations, including of course the Gates Foundation,” he said, noting that it represents a showcase for bright ideas that originate in Canada. This is reason for optimism, he maintained.

By way of inciting discussion, he then offered up a quote from one the previous day’s speakers. “Most innovations have at best indirect origins in technology, if any at all,” stated Richard Hawkins and Fred Gault in an article. “Many of Canada’s most significant innovations have primarily social origins that yield an extraordinary array of impacts.”

Howarth recalled a question he had posed to Ken Coates the previous evening, asking for a detailed definition of innovative enterprises. “They tend to have products or services in the marketplace that are the most expensive by far,” said Coates. “They have an incredible sales and marketing force attached to them, because you can’t be the most expensive in the marketplace and have a distribution arm that sells on price. And the third key point is that they’re not hung up on the invention. Innovative companies tend to be huge acquirers of other companies, big or small.” Cisco fits this profile, Howarth observed, building unique value with some of the most skilled people in the world. “Cisco’s very committed to Canada,” he concluded. "We’re committed to R&D, we’re committed to university research, and we’re committed to bringing capital here.”

Saunders acknowledged the energy and excitement of the technology space, along with the enthusiasm young people are bringing to entrepreneurship. She portrayed them as “CMEs” — creators, makers, and entrepreneurs — whom she expects to be every bit as important as SMEs in terms of their impact on the economy. Nevertheless, she voiced concern over the emphasis on app development amongst these individuals, which tends to waste their talents on products that are not all that innovative. “But we have a success metric that’s all around this kind of stuff, flipping these kinds of useless businesses,” she said. She added that the interchangeable use of the words “research” and “innovation” is similarly unsettling to her, given the dramatic differences in the cultures driving each type of activity. “That’s something we need to get better at as Canadians: really distinguishing between those two activities, showing examples of what those two words mean.” The specific problem, she noted, is that too often money supposedly dedicated to innovations that would make their way into the marketplace yields research results with no market presence.

Angus recalled his first insight into these issues when he began working with Johnson Controls, a power technology firm that oversaw a number of major innovations, but which did little innovation of its own. “All that innovation happens from small companies with great ideas and the

tenacity and pace to develop innovation," he said. His desire to work more directly with innovation led him away from large companies into the entrepreneurial world.

Howarth responded by insisting that some large companies are at the forefront of innovation, but he conceded the point that acquisitions of smaller, innovative firms often drives this process. He also characterized Cisco's corporate culture as one that admitted the possibility of making mistakes with technology that can be corrected with fresh ideas from outside the firm. Where such a culture is absent, however, Howarth said a large firm could drain most of the momentum from any innovative activities.

Dufour posed the question of what role culture plays in determining the success of entrepreneurship, and whether Canada stimulates or smothers such a culture. Saunders explained that her career started in Prague just after the Berlin Wall fell, an event that energized individuals with a sense of freedom and ambition that she found infectious. "I became an entrepreneur there," she said. "I never would have become an entrepreneur here. It's hard to hold onto your big vision when you're here surrounded by people who just aren't dreaming as big." That being said, she finds signs that this reticence to dream big may be waning.

As the CEO of two Canadian clean technology firms, Angus said he spent a great deal of time in the US, which is the leading market Canadian firms must approach. "As you work in that space and you associate with large US strategic companies and investors, you just learn the difference between Canadian early stage companies and their US counterparts," he said. "They're just so much more aggressive. They shoot for the moon, and they have it right. There's a reason why the US turns out the best entrepreneurs in the world and the most rapidly growing success stories. They have a real culture of 'go for it' and it's hard to break out of that Canadian stigma."

Angus suggested that a goal for any innovative Canadian company should be to get US capital into the firm as quickly as possible. "That's what's driving Canadian entrepreneurs to access the US market," he said, speaking from his own experience of doing just that. His experience also emphasized another key point of contrast with the United States, where the failure of an enterprise is not regarded negatively, but instead as evidence that you will perform better the next time around.

In spite of such glowing recommendations about life in the US, Howarth insisted that Cisco is satisfied to be in the Canadian market because employees here are very loyal, a feature that restricts the punishing churn rates you find in places like Silicon Valley and other technology centres abroad.

On the question of the federal government's desire to frame a science and technology policy, Angus recalled being offered support from the Sustainable Development Technologies Canada program for his small company. Although the amount was significant, so too were the stipulations that went with the funding, and so they turned it down. "There were just so many challenges with

it," he said. "We were going to have to raise $4 million in equity-based matching funding." More recently, he added, SDTC has become more flexible in its approach to getting small firms into the US market.

"I find in the Canadian environment that we incubate companies to death," Angus argued. "What's missing is an ability to link Canadian companies to US strategics. When you bring a US venture capitalist into a Canadian company, it links you very strongly to US strategics."

Saunders agreed, emphasizing that US investors care less and less about the location of their investments, which enables her to use American support to get Canadian enterprises up and running in a fraction of the time that it would take to do everything from Canada. She also encouraged a move to expand STEM (Science, Technology, Engineering, and Math) as the driving force behind new enterprises to STEAM, which adds "Arts" into the mix. "The hottest hires in Silicon Valley are not the tech people anymore, it's the people who understand psychology," she said. Finally, with respect to the role of government, she said she would like to see 1% of the Canadian economy dedicated to supporting the most innovative and perhaps riskiest enterprises, funding that would be exempt from standard auditing practices because it would be understood that this money is dedicated to entirely uncertain outcomes.

Howarth endorsed that recommendation, along with the idea that failure leads to the greatest success. Speaking more specifically, he suggested that government could make it possible for established business people to take risks through mechanisms such as a tax break if they mortgage their home to start a new enterprise. This would make it possible to mine the older, more experienced members of the population, who are far more likely to develop successful innovative enterprises than new university graduates.

A member of the audience offered the definition that innovation turns knowledge into money while research turns money into knowledge, and then asked how to marry up these two types of activities, and who should be responsible for doing so. Howarth suggested that innovation is just one facet of how a firm can structure itself to serve a market. Companies that have strong track records of innovation, such as IBM or Xerox, do well for themselves even though they do not undertake innovative ventures; in contrast, Apple does far less invention, but leads the way in innovation. "You need a mix of both within your economy," he said.

Saunders pointed to the large financial management firm D+H, who make no attempt to innovate in-house but consciously seeks out relevant innovation from elsewhere. This is just one way of incorporating innovation into your business without attempting to alter an existing business culture that might not lend itself to nurturing innovation from within. "There are all kinds of models to outsource or add these things to your business, as long as you know what you're good at," she said.

Angus noted that while organizations such as MARS attempt to promote this dynamic between research and innovation, these efforts regularly fall flat. "There seems to be a missing link between Canadian capital that's trying to stimulate the VC economy and US VC investors," he said. "I'm wondering if there's a better way. If we're doling out so much capital into Canadian VCs, why aren't we doing it into US VCs, on condition that they look at Canadian deal flow and Canadian universities and research institutes, in order to stimulate cross-border business and help our young companies grow."

Angus also argued that the most influential VC investors were going directly into universities to seek out new ideas and talent, a way of capturing the best new ideas as soon as possible. "I'm not sure if enough of that is happening in Canada," he concluded. Saunders drew attention to the Digital Media Zone at Ryerson University, where tours for prospective investors are mounted all the time. In that light, Jerome Nycz was invited to comment, and he maintained that the deeper pockets and more aggressive, demanding attitude of these prospective investors made it well worth trying to introduce them into Canadian university settings.

Doug Barber speculated on the extent to which the post-secondary learning environment may be responsible for shaping the profound difference in attitude between Canadian and American business culture, even to an extent that the people responsible for these environments do not fully appreciate. "Certainly in Canada we tend to worship the universities, so we don't criticize them," he said. "Are they different from the American ones, or other countries, and does that mean we have ground to make up?"

Saunders described how she recently co-taught an MBA course on corporate and social innovation. She was struck by the comparatively puerile attitude the students took toward assignments, asking questions such as double-spacing of texts or desired word counts. When she took the matter up with the university, she was told it should be viewed as a contract, and the students should know what it takes to pass, or get an "A". That being said, she admitted that the situation in the US may be little better in this regard.

Howarth underscored Saunders' point by naming Bill Gates, Steve Jobs, and Mark Zuckerberg as being among the world's most famous drop-outs. "There's no place where I can point anybody to go to learn how to sell," he said. "It's a great deal of psychology, a great deal of self-understanding." More striking to him, when he began to look into this question, was his discovery that advanced business programs include nothing in their curricula about selling. "How could you possibly go through four years of an MBA and never learn how to set compensation plans that motivate sales people? If there were a cultural change in universities, it might be to recognize that the top sales people at any multinational make way more than a lawyer, a doctor, the CFOs in most cases. In fact at Cisco, they make way more than the managers. It's set up like a baseball team — the coach does not make what the players make. The players are paid to hit that ball out of the park, they're worth it, and they're compensated for it."

Angus praised the quality of the Canadian post-secondary system, but he acknowledged the poor links between those institutions and the business community. This is in distinct contrast to American universities, where this linkage is much more profound, and reflected in physical form by large buildings on campuses that have been erected with commercial investment.

Helmut Reichenbächer, of the Ontario College of Art and Design University, expressed his enthusiasm for the concept of STEAM. In this context, then, he asked how to integrate the "A" of arts with the other fields represented by this acronym. "How can we create 'maker spaces', playgrounds if you like, where the STEM disciplines can play together nicely with the artists and designers, to break technology and put it together in new forms?" he asked.

Saunders indicated that she is working on a SheEO program, an accelerator for women-led ventures, which will be held at OCAD University. She suggested that there were probably 15-20 of these kinds of maker spaces in the Toronto area alone. "It's kind of a throwback, to get back into using your hands to build things and create," she said.

Howarth confessed that he did not have an immediate answer to this question, but confirmed that he had seen incubators where precisely this kind of environment thrived. Angus agreed, suggesting that he was not sure how to establish this environment, but knows that it is possible and necessary.