

Senate Liberal Open Caucus on Research and Development: Summary of Meeting

On Wednesday February 4th we held an open Caucus on Research and Development (R &D). This meeting was inspired by the recent decline of Canada in global R & D rankings, and the subsequent announcement by the Government of a new science strategy entitled *Seizing the Moment; Moving Forward in Science, Technology and Innovation*. The centerpiece of said announcement was the creation of the Canada First Research Excellence Fund (CFREF), which commits \$1.5 billion over 7 years to R & D Projects. Our discussion on R & D in Canada was inspired by a few basic questions: What can our government do to best foster a healthy environment for R & D in Canada. Is it doing enough? And what role does it have to play?

In light of these questions, the Senate Liberal Open Caucus invited four experts to speak on the state of R & D in Canada:

- Suzanne Corbeil (Executive Director at the U15)
- Martin Lavoie (Director of Manufacturing Policy at Canadian Manufacturers & Exporters)
- Scott Findlay (Associate Professor at the University of Ottawa)
- Sylvain Schetagne (Associate Executive Director, Canadian Association of University Teachers)

Presentations

Ms. Corbeil began by speaking about the work of her group, the U15, which works with research focused universities and helps foster breakthrough discoveries. Ms. Corbeil thought that the CFREF was a step in the right direction, though she warned that we cannot stop there if Canada is to be a top destination for innovative minds. To accomplish this, Ms. Corbeil stated we need to create a stronger “innovation pipeline,” one that “links the ideas and enterprises our faculty and students create on campus to the businesses, entrepreneurs and innovators off-campus.”

Dr. Findlay focused his statements on the role of government in fostering innovation. He stated that a government’s main responsibility with the science file is a fiduciary one. This means that when a government considers strategies and tactics for investment in R & D, it should “do so from the perspective of public interest.” In recent years he noted that there has been a government shift in focus from basic research to technology and commercialization. This had led to too much focus on short term economic benefit rather than long term public interest.

Mr. Schetange asked the question, how do we stimulate innovation? He shares similar concerns about the lack of focus on basic research as Dr. Findlay and questioned whether the new scientific strategy will be able to do much in the way of stimulation. He worries that this new strategy is just “old wine in a new bottle” as it is virtually identical to the 2007 strategy. Most importantly, the funds promised in this new strategy will not make up for the ground we have lost over the last 5-7 years.

Mr. Lavoie spoke of an example of an emerging trend in Canada's industrial sector, that of the "maker movement." These individuals, typically younger in age, use recent technological advancements to create and spread their ideas. These groups meet in "maker spaces" which have spread to community centers and universities. With the advent of 3D printing they have become much more sophisticated, and the depth of complexity of the items these individuals are creating is growing every day. Mr. Lavoie uses this example to show that government funding is not always the answer, as the maker movement has grown on its own without any government assistance.

Comments

In our efforts to discuss the important issues of the day in a non-partisan fashion, the Senate Liberal Caucus opens its doors to all parliamentarians, as well as members of the public. For our meeting on R & D we were fortunate enough to be joined by Senator Kelvin Ogilvie, who's background as a leading expert on biotechnology, bioorganic chemistry and genetic engineering gives him a great deal of experience when it comes to this topic. Senator Ogilvie stressed that "Canadian basic researchers still perform above their weight in international comparisons in basic research output," but that "it is the translation of that into social and economic benefit where we in Canada are at the bottom of OECD nations." Senator Ogilvie noted the example of San Diego where there is more bio technology companies in one city than there are in all of Canada, which leads to a critical mass in this one area of innovation. Senator Ogilvie stated that this is what is missing in Canada; "We have very few areas of critical mass in Canada...the networks have been largely on the research side, but not on the business application side."

How to best stimulate R & D

Prompted by a comment from Senator Cowan who questioned this government's focus on short term results, Mr. Findlay expressed his worry that there is too much focus on the issue of job creation. He stated that this fixation on the potential to create jobs can detract from the very purpose of the research in the first place. Mr. Findlay noted that in the field of healthcare for example, money spent on prevention would save the public more than treating specific diseases. Though preventative care may not stimulate the most job growth, it will certainly save far more money in the long run. Ms. Corbeil echoed these concerns, and stated that the fundamental questions are, what is the problem that needs to be resolved, and who is best equipped to address it? She stressed that the CFREF is a good start, but the program needs to be flexible enough to allow an institution to put forward something they can advance which allows them to build on their critical capacity and the strengths. Mr. Schetagne stated that recently the main change has been that the government has shifted more money toward market driven research, rather than basic research, and as a result Canada is conducting more of one at the expense of the other.

How to improve Canada's Place in the World

The conversation also took a look at what other countries are doing to stimulate R & D in their own populations. Mr. Schetagne warned that you must look at the industrial makeup of other countries before comparing their R & D spending, particularly R & D investment in the private

sector. While Korea for example focuses a great amount of R & D spending in companies such as Hyundai, Canada's focus on banking and natural resource sector does not require a great amount of private spending on R & D. He worries that though the federal government has set out 5 priorities in its R & D strategy, they have not addressed these priorities in their overall monetary policy. Mr. Schetange mentioned that the government did not look at the effects of a high Canadian dollar on manufacturing as a result of our natural resource extraction, or how to "transfer some of the money that we are making...to fund R & D in manufacturing to compensate."

With regard to private investment in R & D in Canada, incentives such as the Scientific Research and Experimental Development Tax Incentive Program (SHRED) are meant to encourage private investment in R & D, but may be out of date. Mr. Lavoie noted that the definition of "innovation" in the SHRED program was established in 1964, and this definition could skew how Canada reports R & D spending relative to other countries. When it was mentioned that countries that rank ahead of us have more direct government funding in R & D, rather than the tax incentives offered by SHRED, Mr. Lavoie stated that while that may be so, we must have plan if we are to alter SHRED or move away from it completely.

Federal Scientists

Our discussion then moved to the direct role of government in R & D, proffered by Senator Munson's question of what Canada's "muzzled" federal scientists would have to say about the current federal approach to science in Canada if they were in the room. Building on his idea that the government should be at the forefront of science in the public interest, Mr. Findlay lamented that he detects a certain malaise amongst federal scientists because they have seen an erosion in support from this government. When asked about the effect of getting rid of the long form census, both he and Ms. Corbeil stated that, from a scientific point of view, the less stats there are, the harder it is to report in a constructive manner. Mr. Findlay went on to state that there is an assumption that Universities can fill the void left by a cut in federal scientific research, but that this is a misplaced hope. Universities and private business cannot cover important science in environmental protection or public health for example. He went on to state that in these and other important subjects, "there is no other game in town" but the government.

These are but a few of the matters we spoke on during our two hour meeting with our guests, and we encourage you to listen to our proceedings on this website to find out more. Ultimately we were left with the idea that Canada's educated population leaves it well placed to be a world leader in R & D. The global R & D environment is extremely competitive, with emerging economies begging to get ahead in certain areas. Therefore the economic benefits of R & D cannot be overlooked and should be encouraged. To abandon basic research in an attempt to get ahead economically would be a mistake however, and the government still has a vital role to play in funding basic research, and even conducting its own research in the interests of the public good.