‘Canadian style’ innovation strategy has to stop being nice and start picking winners

Business leaders call for a return to focusing on companies or specific areas rather than labs, and making bigger bets on fewer innovative firms

By Jesse Snyder
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Oilmen often fancy themselves as self-reliant innovators, never in need of government handouts. But it was a Crown corporation, the Alberta Oil Sands Technology and Research Authority, that rode to its rescue in the 1970s with funding for steam-assisted gravity drainage technology, which eventually unlocked a new wave of growth in the oilpatch.

SAGD revived the sputtering industry, and is now expected to drive growth in the oilsands.

“Without it there wouldn’t have been an oilsands industry in Alberta,” said Dan Breznitz, professor and Munk Chair of Innovation Studies.

AOSTRA was seen as a template for how government-funded innovation ought to work: a temporary program crafted to meet private sector needs, and singularly focused on achieving one goal. But fast forward nearly 50 years, and it seems Canadian policymakers have taken few lessons from the program.

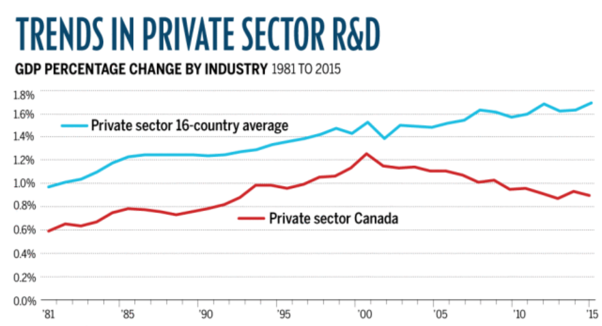
Despite spending piles of money on research and development in recent years, Canada’s innovation space remains a messy tangle of government grant programs, tax credits and the newly-minted “supercluster” initiative, often with sprawling and ill-defined goals. Business investment in R&D, meanwhile, has stagnated. Many Canadian business leaders are calling for a reset.

Business sector spending on research and development has been in steady decline since 2001, falling from 1.2 per cent of GDP down to 0.9 per cent in 2015, well below a 16-country average of 1.7 per cent, according to the Conference Board of Canada. That decline has come despite a steady rise in R&D spending in the public sector, particularly by higher education institutions, which has outpaced spending in other developed nations.

“We spread around incentives like peanut butter — evenly — and that has a very negative set out of outcomes associated with it,” said Anthony Lacavera, founder of Globalive Holdings, a Toronto-based investment firm, and of WIND Mobile. WIND began as a startup telecommunications firm that Lacavera later sold for $1.6 billion to Shaw Communications.

In his book ‘How We Can Win: And What Happens to Us and Our Country If We Don’t’, a study of Canadian innovation policy, Lacavera points to the various pitfalls that have hindered innovative Canadian companies from growing into multinational “anchor” firms.

“Business is about winners, and we need in Canada to start recognizing that we need to pick winners, and we need to help our companies become global success stories,” he said.



Lacavera is advocating a return to an older form of innovation policy that focuses more on companies or specific areas rather than laboratories, and making bigger bets on fewer innovative firms. In short, that would mean taking a far less egalitarian, or perhaps "Canadian," approach to innovation.

"Structurally, we are trying to excel in too many digital and knowledge economy areas," Lacavera said. "It's the Canadian style — spread it around, give everyone a shot. And then no one wins."

Experts have long called for an overhaul that could simplify Canadian innovation policy, starting with a streamlining of the various programs aimed at supporting promising companies. Ottawa went at least part way toward that goal in its 2018 budget, after promising to whittle down the total number of federal grant programs from 92 to around 35.

Lacavera points to the Scientific Research and Experimental Development (SR&ED) tax credit as an area ripe for improvement. The tax credit dishes out more than $3 billion every year to reimburse research and development spending for thousands of companies, either at 15 per cent or 35 per cent.

But the program has been criticized for being geared too specifically towards smaller companies, effectively incentivizing laggard companies to remain small, even as they enjoy subsidies year after year. The issue has become so prevalent that the program has long been called the "Walking SRED" in some business circles, a nod to the zombie TV series Walking Dead.

"You have companies that really should have already failed, or should have already been consolidated, or are really never going to get to scale, just sort of walking around," Lacavera said.

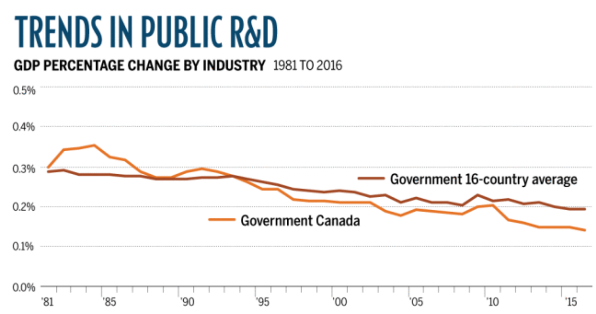
Innovation programs can also add an administrative burden for entrepreneurs.

Katchen, the co-founder and CEO of Wealthsimple Financial Inc., raised around $1 million through government programs in the early days of his company, from both the Industrial Research Assistance Program (IRAP), a long-standing federal program aimed at small and medium-sized companies, and The Federal Economic Development Agency for Southern Ontario, which offers early-stage loans to firms.

Katchen said the process was administratively intensive, forcing the small firm to hire a consultant just to assist with the mounds of paperwork. What's more, the application process for FedDev effectively repeated the due diligence already carried out by Impression Ventures, a Toronto-based venture capital firm that invested $1.9 million in Wealthsimple in September 2014.

"The most bizarre part of it was I had just raised $1.9 million from really sophisticated investors, and I had to start from scratch on an even more arduous process, this time from a much less sophisticated government agency," Katchen said.

Still business owners are also quick to defend Ottawa's innovation efforts under Navdeep Bains, the minister of Innovation, Science and Economic Development.



"In general the current government has been very supportive," Katchen said, but added that in meetings with Bains he has suggested Canada needs to be more ambitious in attracting talent and innovative companies. "We can't match dollar for dollar investments that other bigger countries are making, so we need to pick our spots and really double down."

Prime Minister Justin Trudeau made innovation a central part of his mandate in 2016, underpinned by a new initiative to create several innovation superclusters that he hopes will create the the next technological breakthrough.

Those policy efforts were then bulked up again in the 2017 budget when Ottawa raised spending on university research and development.

Even so, critics argue the $950-million superclusters program is ultimately a drop in the bucket when considering it is spread across five different groups, encapsulating everything from protein-rich potatoes to marine sensors that track animal activity.

“It’s what you would call an accounting error if you look at the overall budget,” Munk’s Breznitz said.

Breznitz suggests Canada should instead unleash its capital from various government programs and funnel it directly into a few select sectors where Canada has demonstrated potential: artificial intelligence, stem cell research, autonomous car manufacturing or financial services, to name a few. Most importantly, he says, the funding should go directly toward technologies that can be sold on the market, rather than focusing on tests in the laboratory.

“Where the federal government should be focusing is on what needs to be done to move more Canadian companies towards R&D — full stop,” Breznitz said. “Instead, any time there’s a hot new trend, something new and shiny, we spend a lot of money on it. And we spend almost no time looking at how to turn this into an industry.”

Such solutions come with their own set of challenges, however. By loosening government controls over how capital is spent, and by funnelling capital more directly into companies and technologies, Ottawa runs the risk of throwing billions of dollars at abject failures.

Indeed, Jack Mintz, fellow at the University of Calgary’s School of Public Policy, is wary of government-directed innovation that can be subject to the vagaries of politics.

“Governments are not great at picking winners, but losers are great at picking governments,” he said.

Take, for example, Ottawa’s recent decision to use its Strategic Innovation Fund (SIF) to pay out $250 million in reimbursements for steel and aluminum producers hurt by U.S. President Donald Trump’s trade tariffs.

But observers argue that direct programs are nonetheless preferable to the more passive, and widespread, tax credit system. A 2011 report by Tom Jenkins, now the chair of the National Research Council of Canada, recommended Ottawa scrap much of its tax credits for corporations in favour of higher direct spending on innovation.

It’s an approach that even skeptics are warming up to.

“I’ve been leaning more towards grants these days,” said Mintz. “The one criticism of a grant rather than a tax credit is it can be used politically. But I think if it’s administered well, it can certainly be subjected to far less political intervention.”

The way forward for Canada then, is perhaps to embrace a policy that is much bolder than its current form. The right government program helped usher in the second wave of oilsands development in northern Alberta. Similar breakthroughs are crucial, especially if Canada wants to be front and centre of the next industrial shift.

“In Canada we do two things that employ every single person: we pull resources out of the ground and we finance that activity,” Wealthsimple’s Katchen said. “That’s our economy in a nutshell. Twenty years from now that will not be true—or if it's true, we're in trouble."

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A Short List of Innovation-Inducing Programs

Canada has a long list of government grant programs and tax credits available to innovative—or even not-so-innovative—businesses. That list could soon get a lot shorter after Ottawa announced in its 2018 budget it would streamline the number of existing federal grant programs from 92 down to around 35. Here is a brief rundown of some of the most prominent programs.

Scientific Research and Experimental Development (SR&ED): A tax credit program that effectively reimburses Canadian businesses for investments in research and development. It is administered by the Canada Revenue Agency. Companies can claim input tax credits (ITCs) at either 15 per cent or 35 per cent, depending on the company and size of investment.

Industrial Research Assistance Program (IRAP): A program aimed at scaling up innovations in small and medium sized companies. IRAP is one of the oldest programs in Canada, founded shortly after the Second World War. Contributions come in the form of anything from consultations to financing for innovation. It is administered by the National Research Council of Canada, and is widely considered one of the most effective programs of its kind.

Canada Small Business Financing Program (CSBFP): A program that offers loans to businesses with gross revenues of $10 million or less. Loans can be a maximum of $1 million.

Southern Ontario Fund for Investment in Innovation (SOFII): A federal initiative that offers loans to companies in southwestern Ontario. Loans range from $150,000 to $500,000, and are geared toward helping small and medium-sized companies scale up technologies. It is supported through the Federal Economic Development Agency for Southern Ontario (FedDev Ontario).

Strategic Innovation Fund (SIF): A fund focused on "encouraging R&D", attracting investments, facilitating growth and advancing industrial research. The fund will spend $1.26 billion over five years (ending in 2023) in both repayable and non-repayable contributions to companies and post-secondary institutions.

Sustainable Development Technology Canada (SDTC): An agency focused on developing clean technologies. SDTC oversees two separate funds. One is the SD Tech Fund, totalling $550 million, which provides money to pre-commercial clean technology projects aimed at greening air, water and soil. The other is the NextGen Biofuels Fund, totalling $500 million, which is aimed at developing renewable fuels through private equity financings. The fund is currently being wound down.