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Seasoning highly skilled and educated personnel

By Robert James

Despite Canadian prowess in the production of highly skilled and educated personnel (HSEP), demand for these newly minted graduates appears to be relatively weak in Canadian small- to medium-sized enterprises (SMEs). This despite relentless global competition in innovation and commercialization — areas where Canada, at an aggregate level, continues to underperform.

Many Canadian SMEs have explained their reticence to hire newly minted graduates for the simple reason that it would likely take the company several years to see a return on their investment — an immediate impact is needed by most firms operating with thin operating margins. The Rotman Expert Panel on Commercialization witnessed this issue as well in 2005. By extension, these graduates would be a more attractive investment proposition with several years of “seasoning”.

So can Canada position itself to realize a greater return on its investment in higher education expenditures on R&D (HERD), and a greater return on its overall investment in its world-class innovation eco-system? And could it do so in a fiscally astute fashion? This is a complex issue that cuts across social, economic, scientific and technological, and political boundaries. There is simply no easy path forward, but much to be gained by those nations that have the courage and fortitude to move the yardsticks in the right direction.

Significant and insightful investments have been made by the Canadian federal government and its partners in Canada’s innovation ecosystem over recent decades. In an era marked by unrelenting focus on fiscal restraint, these investments remain an impressive accomplishment, providing an important innovation footprint for the nation and the basis for realizing myriad opportunities.

With Canada a perennial world leader in HERD, the nation needs to better understand how to benefit from this competitive advantage. Given that competitive advantages are fleeting, Canadians should consider how to seize this opportunity now, particularly given the forecast stability and relative robustness of the federal fiscal framework. Government and Canadians have worked hard to eliminate the deficit. Now they should reap the benefits — something that many of our competitor Western nations are not in the same position to do.

One possibility is to consider a national or regional initiative run on a competitive basis whereby the private sector, universities and colleges and various levels of government come together in a formal partnership to help “season” these graduates. The competitive nature of the initiative and its value to graduating students could help it evolve into a highly sought after seasoning institute of sorts. Competitive-based access would help ensure top talent (with criteria ranging from academic

achievement to social skills and initiative), but also to brand the institute. In some respects, it could be seen as a “MIT of the North” providing reputation and credibility to Canadian S&T.

The crux of the idea is to lever Canada’s world class S&T infrastructure and associated sunk costs (e.g. National Research Council, CANMET, NCEs, etc.). For example, with the recent transformation of NRC into a research technology organization guided largely by the intersection of market pull and public issues, newly minted graduates could serve two-year work terms honing their skills in a market-based environment and building private and public networks that will be integral to their future success and impact. Graduates would be provided an opportunity to develop R&D management skills, work with world renowned scientists, develop broad scientific and business networks, and address immediate industrial problems.

Newly minted graduates could be sponsored in a graduated fashion by SMEs who are seeking a specific skills and experiential base for their company competitiveness. Various levels of government seeking to facilitate SME demand for HESP and ultimately competitiveness/commercialization could also partner in this financial sponsorship. And the initiative could be done on a sectoral basis to better reflect Canadian industrial realities and to allow for a phased-in, pilot approach.

While at the institute, participants would also enroll, by design, in partner universities/colleges to more formally develop business and management skills. Notwithstanding immediate employment and the opportunity to broaden their skill sets, networks, and business acumen, students accepted in the institute would see their stock rise. And in the long run, a formidable and aggressive alumni network could be established to the competitive advantage of the nation. Such a finishing institute could also be a magnet to attract foreign talent to Canada.

Universities and colleges, who have a vested interest in helping their graduates succeed in the economy, stand to gain as well. One could expect an increase in demand for their graduates. And these institutions could provide two-year Master’s degree level programs in a business-related discipline to participants, thus helping to round out their skill and knowledge base from a more commercial standpoint.

The government would also benefit from:

- A positive impact on business expenditures on R&D (BERD) over time;
- Federal S&T/R&D would benefit from the employ of these graduates who would bring new ideas, knowledge, and broad academic contacts;
- As “seasoned” graduates move to the private sector, strong linkages to federal S&T would grow, facilitating a more integrated innovation system over time;
- Government would realize greater returns on its investment in HERD;
- The significant investment in federal S&T infrastructure would be levered; and,
- The institute could become a magnet to attract talent from overseas.

Such an initiative could be a fiscally astute investment for Canadian innovation system players; and help bring the private sector, universities and colleges, and other public institutions and levels of government together to collaborate on mobilizing the innovation system — the power and value of social dynamics at play (R\$, June 21/013).

While many program considerations remain such as a differentiation with successful programs such as MITACS, the underlying concept of leveraging sunk costs of a world-class S&T infrastructure to improve Canada's competitive position through the unleashing of an army of Canadian seasoned HESP is compelling. Let the debate begin!

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