Developments

Information and updates on the scientific research and experimental development program

A commentary on "Innovation Canada: A Call to Action," also referred to as the Jenkins report.

November 3, 2011

Narrowing Canada's innovation gap: PwC's observations on the Jenkins report

The report, "Innovation Canada: A Call to Action," was released by the Independent Panel on Federal Support to Research and Development (R&D) on October 17, 2011. The report stems from a 2010 federal budget proposal calling for a comprehensive review of federal programs that support business innovation.

The federal government's objective was to provide recommendations on maximizing the effect of federal programs that contribute to innovation and create economic opportunities for business. The government recognizes that, despite its high level of federal R&D support, Canada continues to lag other countries in business R&D spending, rates of commercialization of new products and services, and productivity growth.

This issue of *Developments* provides a commentary on each of the panel's recommendations. It includes our perspectives and considers what the recommendations could mean for your organization. The discussion is organized under the following headings:

1. Panel's framework
2. Panel's recommendations
3. PwC reflections
4. How PwC can help

1. Panel's framework

Mandate and approach

The panel addressed the following questions:

- What federal initiatives are most effective in increasing business R&D and facilitating commercially relevant R&D partnerships?
- Is the current mix and design of tax incentives and direct support for business R&D and business-focused R&D appropriate?

- What, if any, gaps are evident in the current suite of programming, and what might be done to fill the gaps?

It reviewed three types of federal programs intended to support R&D:
- the Scientific Research and Experimental Development (SR&ED) program tax credit;
- programs that support business R&D through:
  - general support; or
  - sector-specific support; and
- programs funded through the federal granting councils, departments and agencies that support commercially focused R&D, often performed by academic institutions.

The panel also studied business innovation in Canada and in relation to Canada's peer group of highly developed countries.

Guiding principles

The panel's framework for action reflects eight guiding principles:

1. **Support transformative programs –** Programs to support business innovation should focus resources where market forces are unlikely to operate effectively or efficiently, and should address the full range of business innovation activities.

2. **Require positive net benefit** – The total benefit of any given program should be greater than the cost of funding, administering and complying with the program.

3. **Favour national scope and broad application –** The core of the federal suite of business innovation programs should be large national programs of broad application that support business innovation activity generally.

4. **Build sector strategies collaboratively –** There is also a role for programs tailored to the needs of specific sectors that the government identifies as being of strategic importance.

5. **Require commercial success in regional innovation** – Regionally oriented programs to support business innovation should focus on creating the capacity of firms in the target region to succeed in the arena of global competition.

6. **Establish clear outcome objectives, appropriate scale and a user-oriented approach** – A program to foster business innovation should be designed to address a specific problem for which a government initiative is needed as part of the solution.

7. **Design for flexibility** – Federal innovation programs should themselves be innovative and flexible in their design, setting clear objectives and measurable outcomes, and then allowing program users to propose novel ways of meeting the objectives.

8. **Assess effectiveness** – More extensive performance management information is required to ensure an outcome-driven and user-oriented approach to federal support for business innovation.

2. Panel's recommendations

Key messages

The report includes the following key messages, which drive the panel's recommendations:
- Canada relies more heavily than most other countries on tax incentives, or indirect support, to encourage private sector innovation. Many other countries have achieved greater success by promoting innovation through a more balanced mix of direct and indirect support. Canada must be bolder—identifying and promoting collaborative partnerships in areas of strategic importance and opportunity.
- Canada's innovation support focuses too narrowly on subsidizing R&D, as opposed to other elements of the innovation value chain, including commercialization.
- Innovation programs in Canada must be more streamlined and coordinated, with businesses having a single point of contact for information and support.
- Small innovative firms must be encouraged to grow into large, globally competitive companies. Government should concentrate more on encouraging growth and rewarding success than on its current approach of providing support primarily to small businesses.

Recommendation 1

Create an Industrial Research and Innovation Council (IRIC), with a clear business innovation mandate (including delivery of business-facing innovation programs, development of a business innovation talent strategy, and other duties over time), and enhance the impact of programs through consolidation and improved whole-of-government evaluation.

PwC comments

Canadian businesses would benefit from a "single-window" approach to federal innovation programs.

The current system has often been criticized by businesses as an uncoordinated patchwork of programs that are difficult to understand and access. The recommended more central, over arching approach to innovation funding that many countries (e.g., the U.K.) have implemented successfully is consistent with the trend in Canada towards streamlining federal government programs.

Implementation of an IRIC may not be easy. The council should be market-driven—nimble and responsive to changing market needs stemming from short technology lifecycles. The IRIC must be accountable, with the effectiveness of programs measured continually, taking into account changing business needs and recognizing the inherent uncertainty of risk-taking.

The federal, provincial and territorial governments offer more than 500 programs to support businesses. The deep knowledge of the science, policies and regulatory requirements needed for the programs to be effective often resides in the host departments such as agriculture, natural resource, environment and health. Streamlining presents technical, staffing, resourcing and political challenges. The process of streamlining could be lengthy and challenging.

Recommendation 2

Simplify the SR&ED program by basing the tax credit for small and medium-sized enterprises (SMEs) on labour-related costs. Redeploy funds from the tax credit to a more complete set of direct support initiatives to help SMEs grow into larger, competitive firms.

The panel observed that federal innovation support emphasizes subsidizing R&D through tax subsidies—as opposed to other elements of the innovation value chain, including commercialization and new product development—more heavily than is common in many other countries. Instead, other countries often offer more strategic, direct support to encourage innovative firms to grow in those areas where the country can be globally competitive.

The current SR&ED program spreads funding across all regions, industries and institutions in the hope that companies become more competitive globally. The alternative to the current indirect funding approach is a direct approach, which is discretionary and may mean favouring fewer companies and institutions with more emphasis on grants.

The panel was asked to develop recommendations that could be implemented without increasing overall cost. Therefore, shifting R&D support away from tax incentives and towards direct funding will require reducing the cost of the SR&ED program. Some of the savings will support direct funding measures for SMEs.

Recommendation 2.1—Simpler compliance and administration

The tax credit benefiting small and medium sized Canadian-controlled private corporations (CCPCs) should be based on labour-related costs in order to reduce compliance and administration costs. Because the credit would be calculated on a smaller cost base than at present, its rate would be increased. Over time, the government should also consider extending this new labour-based approach to all firms, provided it is able to concurrently provide compensatory assistance to offset the negative impacts of this approach on large firms with high non-labour R&D costs.

PwC comments

This recommendation would result in a significant change to the current program. It could reduce the SR&ED funding SMEs currently receive. Longer term, it could also reduce the SR&ED funding for large corporations, particularly those that are not labour intensive.

In addition, we note the following:

1. **Reducing compliance and administrative costs**—A labour-based approach assumes that the

compliance and administration costs of the SR&ED program come from computing qualified expenditures. In fact, project eligibility of the work (i.e., meeting the definition of SR&ED, particularly experimental development) is the dominant administrative issue many companies face. While a labour-based approach undoubtedly will help to reduce some compliance and administration costs, addressing administration costs related to project eligibility would have a greater effect.

The current SR&ED eligibility rules were largely developed in 1986 and have stood the test of time. However, the framework lends itself to broad interpretations that have varied as the administration of the program has changed. Often it has been argued that the incentive nature of the program has been overlooked in favour of a cost recovery audit approach. Some believe that compliance and administrative costs were much lower in earlier years when industry and the administration worked openly together to develop project eligibility requirements.

The panel did not suggest that the Canada Revenue Agency (CRA) work more closely with industry groups regarding the definition of SR&ED while keeping in mind the incentive nature of the program. We believe that this would significantly reduce compliance and administrative costs.

Currently, the complexity of the program is mainly the result of industry being unable to consistently interpret the application policy and rules with respect to project eligibility. Perhaps a national joint conference of industry associations, government and claimants, similar to that held in Vancouver in 1998[1], would help to overcome these complexities.

2. **Labour-based calculations disadvantage some businesses**—Under the labour-based approach, small and medium-sized CCPCs will see a reduction from their current benefits if they:
    - are capital intensive and/or have high non-labour expenditures; or
    - require significant materials or components as part of the SR&ED process.

    In these businesses, the proportion of non-labour expenditures often is so high that it is difficult to imagine an equivalent labour-based credit that could replace their current incentives. A higher credit rate likely will not adequately compensate for credits lost because of material and capital being removed from the SR&ED expenditure base. The panel has recognized the negative effect that a labour-based approach could have on large non-labour based R&D firms, but there may be a similar impact on some CCPCs.

3. **Different program for large corporations**—Under this recommendation, the SR&ED program for CCPCs, based on labour costs, will be distinct from the potentially more generous one for large corporations that will be entitled to claim SR&ED investment tax credits (ITCs) based on the current rules (assuming the SR&ED rules for large corporations remain unchanged). This will allow larger corporations to claim SR&ED materials, salary and wages, contract payments for SR&ED, "all-or-substantially-all" new SR&ED capital expenditures, third-party payments, lease costs, shared-use equipment and overhead expenditures.

    Limiting the program's scope to labour expenses, as proposed, would create a bias towards labour-intensive sectors, such as the information technology sector at the expense of non-labour intensive industries such as manufacturing. Prototyping and experimental production can be expensive, especially for CCPCs, and are essential in the innovation chain. Capital investment in tangible and intangible property is also an essential element to productivity and innovation.

4. **Manufacturing industry could lose spin-off benefit**—Under current rules, new equipment used all, or substantially all, in SR&ED receive SR&ED incentives in the year it becomes available for use—a tax policy regarded favourably by the manufacturing industry. This benefit will be lost.

5. **Complexity remains regarding contract payments for SR&ED services**—The panel suggests that eligible contract payments be reduced to 50%. The current complexity around contract payments comes from determining whether the tax incentives on the contract payment will be received by the payer or the performer. Simply allowing 50% of contract payments for SR&ED does not resolve that complexity. However, allowing the expenditure to

1. See: **www.cra-arc.gc.ca/nwsrm/rlss/1998/m06/sred-rsde-eng.html**

be claimed by only one party, either the payer or the performer, could address this issue.

Recommendation 2.2—More predictable qualification

Improve the CRA's preclaim project review service to provide firms with pre-approval of their eligibility for the credit.

PwC comments

PwC has always encouraged claimants to use the preclaim review service when appropriate and we are pleased that the panel is supportive of this process. To improve this process, we note the following:

1. **Clear guidance is essential**—Before using a preclaim project review service, claimants will want to know if the work has a reasonable chance of satisfying SR&ED project eligibility rules. If not, claimants will be reluctant to go to the effort of applying for an opinion from the CRA. Therefore, the CRA will have to provide greater certainty on project eligibility that taxpayers can rely on.

2. **Demand on CRA resources**—Preclaim reviews of many or all projects will undoubtedly stretch the CRA's resources.

3. **Uncertainty will remain**—In practice, no guarantee can be provided until a project has begun, and the activities are known and can be compared to the definition of SR&ED. The current preclaim review service is informal, and does not provide predictability. The final evaluation is based on a CRA review of the SR&ED work that was carried out by the claimant. Until then, it is difficult to add certainty. If the service expands to provide pre-approval, SR&ED claimants may have to make a formal written request to the CRA. If this process is too complex, it will add to the cost of compliance and could discourage taxpayer requests for pre-approval.

Recommendation 2.3—More cost effectiveness

Reduce the amount of SR&ED tax credit assistance by introducing incentives that encourage the growth and profitability of SMEs while decreasing the refundable portion of the credit over time. Redeploy the savings to fund new and/or enhanced support for innovation by SMEs, as proposed in the Panel's other recommendations.

PwC comments

1. **Implications of reduced ITCs**—How the reduction of refundable ITCs would be implemented is unclear. The reduction would require CCPCs to find alternative funding for SR&ED projects. This could make it difficult for some to continue their R&D projects and possibly reduce the risk (and the potential rewards) that companies take in performing R&D.

2. **Targeting benefits to CCPCs**—This is a significant shift from a market-driven approach to R&D investment. A tax credit incentive regime has benefits: the playing field is levelled and the rules are established. Claimants that meet the three criteria are eligible for an incentive. Under the panel's new approach to funding SMEs, claimants must convince the funding authority that they have a greater probability of achieving high R&D-based growth and profitability. Direct funding programs could also have significant compliance costs, because companies must try to demonstrate the potential for their innovation to be successful.

3. **Provincial and territorial disparities**—The provinces (except Prince Edward Island) and the Yukon have mirrored the federal SR&ED program. Regional disparities are likely to arise because the regions will want to ensure that their R&D funding is directed to the specific needs of their constituents.

Recommendation 2.4—More accountablity

Provide data on the performance of the SR&ED tax credit on a regular basis to permit evaluation of its cost-effectiveness in stimulating R&D, innovation and productivity growth.

PwC comments

Understanding and evaluating the cost effectiveness of government programs is important. However, any data collected by the CRA to evaluate the performance of the program must neither add unnecessarily to the taxpayer's compliance cost nor breach confidentiality.

Recommendation 2.5—Phased implementation and consultation

Adopt the proposed changes through a phased-in approach to give the business sector time to plan and adjust. There should be early consultations with the provinces on the proposed changes, given that they may want to consider adopting the same base as the federal government.

PwC comments

If any of the recommendations are adopted by the federal government, a gradual phase-in will be crucial to allow businesses to adjust.

The SR&ED program is better known and understood than other incentive programs. Taxpayers conducting R&D rely on the SR&ED program as an important source of funding. Certainty and stability of funding programs is critical for companies investing in R&D because it is a long-term commitment and the payoff is not necessarily immediate.

PwC observations on Recommendation 2

1. **Maintaining simplicity**—The recommendations propose shifting towards direct funding and extending support to more phases of the innovation cycle. However, these changes must be achieved while maintaining a simple, predictable, cost-effective and competitive SR&ED program.

2. **International trade agreements**—Any direct funding programs derived from these recommendations must not contravene international trade agreements.

3. **Alternative tax mechanisms**—The report does not consider alternative ways of supporting R&D through the tax system. Canada's competitors are moving to greater use of "pull" drivers—low taxes on the rewards of innovation. In particular, a growing trend spreading across Europe is the adoption of patent boxes—a pull incentive that permits income derived from intellectual property to be taxed at low rates.

   The patent box mechanism targets the commercialization stage of innovation; firms benefit only if their R&D generates outputs. The U.K. has announced that it will introduce its version of a patent box in 2013. The Netherlands has recently made income from R&D projects eligible by expanding the patent box to an "innovation box."

Recommendation 3

Make business innovation one of the core objectives of procurement, with the supporting initiatives to achieve this objective.

PwC comments

Government procurement has been a key driver of innovation, especially in the United States and European countries. In Canada, common procurement practices focus on being highly prescriptive to ensure that bids are comparable. Bidders typically must show that they have repeatedly offered similar services of a similar scope. These two practices inhibit innovation.

The panel has recognized that Canada needs to leverage procurement. Using the Canadian Innovation Commercialization Program (CICP) is one way of doing this. However, the CICP will never be more than a fraction of total government spending, and we encourage the government to examine all areas of procurement to ensure that all relevant objectives, including promotion of innovation, are taken into account.

In addition, revising procurement practices to shift the focus to dictating required needs and outcomes, rather than prescribing practices for achieving them will also substantially encourage innovation.

Recommendation 4

Transform the institutes of the National Research Council (NRC) into a constellation of large-scale, sectoral collaborative R&D centres involving business, the university and the provinces, while transferring NRC public policy-related research activity to the appropriate federal agencies.

PwC comments

The Executive Summary of the report emphasized that collaborations should take place in areas of strategic importance and opportunity for the economy. This is both critical and challenging.

Prioritizing and selecting areas of importance is a difficult task in government. Perceptions of importance are complicated by legitimate differences in opinions, compounded by varying degrees of technological understanding and expectations about future returns.

Moreover, ensuring that investments in infrastructure are refreshed and evolve will not be straightforward. The Innovation Advisory Committee (IAC) recommended by the panel will be an important vehicle for contributing to this prioritization. This change implies a shift from low-risk investments spread broadly across the Canadian economy to higher-risk investments concentrated in areas based on subjective (informed, but nonetheless subjective) opinions. Achieving the desired changes in both culture and processes will require substantial investments in change management.

Recommendation 5

Help high-growth innovative firms access the risk capital they need through the establishment of new funds where gaps exist.

PwC comments

We fully support consideration of programs to provide firms access to risk capital. This is a key issue for growing companies, and will be particularly important if there is a move to a lower SR&ED base and more emphasis is placed on direct funding. We also encourage the government to consider the best practices of other countries when developing guidelines for investment incentives.

In PwC's report "Government's Many Roles in Fostering Innovation."[2] PwC considered the important tax, legal and fiscal factors government can use to foster innovation. We found that countries that have been successful at fostering innovation have tended to build a tax platform that includes advantages for corporate owners and investors, such as low taxes, an R&D tax incentive regime and an intellectual property (IP)/royalty payments tax regime, as well as other tax incentives and programs for capital investment.

Altering the competitive landscape that has driven large multinationals to own and exploit their IP outside Canada, will likely require more than R&D incentives and a fund that provides risk capital. The exit strategy for emerging technology companies has been to sell their assets to foreign owned companies, particularly larger organizations that have access to more capital to allow future growth. When these companies sell their assets, larger organizations move ownership of the IP to more tax advantaged countries.

A competitive tax regime on royalty income could encourage both foreign-based companies as well as large multinationals to retain ownership of the IP in Canada. IP development and commercialization are both highly mobile activities. In a 2007 study, the Organisation of Economic Co-operation and Development (OECD) acknowledged that many countries promote these activities by providing a more lenient tax regime. For example, France taxes income at a 15% rate (less than half the normal corporate rate) on income derived from patents developed there. More recently, the U.K. promised to introduce a "Patent Box"

2. See: **www.pwc.com/gx/en/technology/pdf/How-governments-foster-innovation.pdf**.

regime, similar to that in the Netherlands and Belgium, under which income from patents developed in the U.K. will be subject to a 10% tax rate rather than the normal 28%.

Creating funds for which the government selects the "winners" that benefit has risks. At the same time, we recognize that many countries concentrate limited funds in areas of strategic importance. We believe the use of a broad-based IAC (see Recommendation 6), along with the "side car" funding approach, are important tools to consider. We also urge the government to consider adopting more competitive rates to encourage IP ownership to remain in Canada, as well as the immigration of IP acquired outside Canada.

Recommendation 6

Establish a clear federal voice for innovation, and engage in a dialogue with the provinces to improve coordination and impact.

PwC comments

The panel argues that innovation is a national priority and the federal government should show leadership. It calls for a "whole of government" approach to innovation support, under which the existing Science, Technology and Innovation Council (STIC) would be transformed to the IAC, charged with achieving goals related to business, science and social innovation. Reporting on performance should be system-wide as opposed to just program-specific.

An IAC, comprising representatives from industry, academia and government across the country, is critical to making the transition in innovation programming and achieving the benefits of innovation, such as knowledge spillovers across provincial and territorial boundaries. We agree that the federal government must take a leadership role and coordinate support across the provinces. We anticipate that the federal government will explore ways to avoid unnecessary duplication among levels of government.

We urge the federal government to monitor the effectiveness of its programs continuously, so that they remain relevant and responsive to shifts in the global economy and changing business needs.

3. PwC reflections

While it is important to support other elements of the innovation value chain, including commercialization, Canada must also maintain a strong SR&ED program to allow market-driven R&D to continue to flourish alongside business innovation.

Effectively promoting innovation entails taking risks and choosing areas of strategic opportunities, along with government willingness to make the appropriate investment. This recipe is not straightforward, because it can involve allocating scarce taxpayer dollars through procurement projects, direct funding to businesses and indirect funding through tax incentives and other programs.

Clearly, time is needed for more evaluation and dialogue by industry and governments to ensure that desired outcomes are attainable under the panel's recommendations. In particular, further study is needed on whether:

- the recommended Industrial Research and Innovation Council will make government programs more effective;
- more direct programs can be designed to achieve greater success in identifying profit-making innovations and products;
- government decision makers will be able to respond to business innovation and product development needs in a timely and strategic fashion;
- eligibility criteria could be developed for a tax-based incentive that would apply to both labour and capital;
- incentives could be developed that are tied to private-sector investment, such as flow-through shares, where the private sector picks the winners and losers; and
- tax incentives could be introduced to encourage the exploitation of IP in Canada.

4. How PwC can help

PwC professionals would be happy to discuss the panel's recommendations and evaluate their possible effects on your organization. With the assistance of tax policy practitioners in our Canadian National Tax Services group, which includes former Department of Finance and CRA officials, we can help ensure your views are heard and understood through dialogue with industry associations and the government. We encourage you to contact us.

PwC SR&ED contacts

Alberta	Calgary	Shawn Reain	403 509 6373	shawn.d.reain@ca.pwc.com
		David Van Den Beld	403 509 6643	d.vandenbeld@ca.pwc.com
	Edmonton	Rick Barnay	780 441 6832	rick.barnay@ca.pwc.com
Atlantic	Atlantic	Dean Landry	902 491 7437	dean.landry@ca.pwc.com
		Tim Ellis	506 653 9461	tim.w.ellis@ca.pwc.com
British Columbia	Vancouver	Ted Bell	604 806 7705	ted.bell@ca.pwc.com
Manitoba	Winnipeg	Kevin Koziey	204 926 2431	kevin.s.koziey@ca.pwc.com
Ontario	National & GTA	Vik Sachdev	416 869 2424	vik.sachdev@ca.pwc.com
	GTA	Cathy Wraggett	416 869 2446	cathy.a.wraggett@ca.pwc.com
		Greg Garland	905 949 7440	greg.garland@ca.pwc.com
		Chris A. Bodnar	905 949 7311	christopher.a.bodnar@ca.pwc.com
	Hamilton	Doug Boyce	905 777 7020	doug.boyce@ca.pwc.com
	London	Kevin Robertson	519 640 7915	kevin.c.robertson@ca.pwc.com
	Ottawa	Kent Smith	613 755 8742	kent.b.smith@ca.pwc.com
		Mel Machado	613 755 5664	mel.machado@ca.pwc.com
	Waterloo	Jay McLean	519 570 5759	jay.mclean@ca.pwc.com
	Windsor	Loris Macor	519 985 8913	loris.macor@ca.pwc.com
Quebec	Montreal	Lucie Bélanger	514 205 5439	lucie.belanger@ca.pwc.com
	Quebec City	Rémi Tremblay	418 691 2488	remi.tremblay@ca.pwc.com
Saskatchewan	Saskatoon	David Van Den Beld	403 509 6643	d.vandenbeld@ca.pwc.com

Other PwC contacts	Consulting & Deals	Joanne Johnson	613 755 5955	joanne.johnson@ ca.pwc.com
	Canadian National Tax Services	Wally Conway[1]	416 365 2710	wallace.g.conway@ca.pwc.com
		Nick Pantaleo[1]	416 365 2701	nick.pantaleo@ca.pwc.com

1. See **www.pwc.com/ca/cnts**

Related PwC releases

See our related PwC releases (at: **www.pwc.com/ca/jenkins-report**):
- our previously released *Developments* “Jenkins report provides much-anticipated recommendations”;
- our podcast on the Jenkins report; and
- our written submission to the panel in response to the panel’s consulation questions on business innovation and federal R&D initiatives.

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