



The Scientific Research and Experimental Development (SR&ED) Tax Incentive Program

Policy Brief

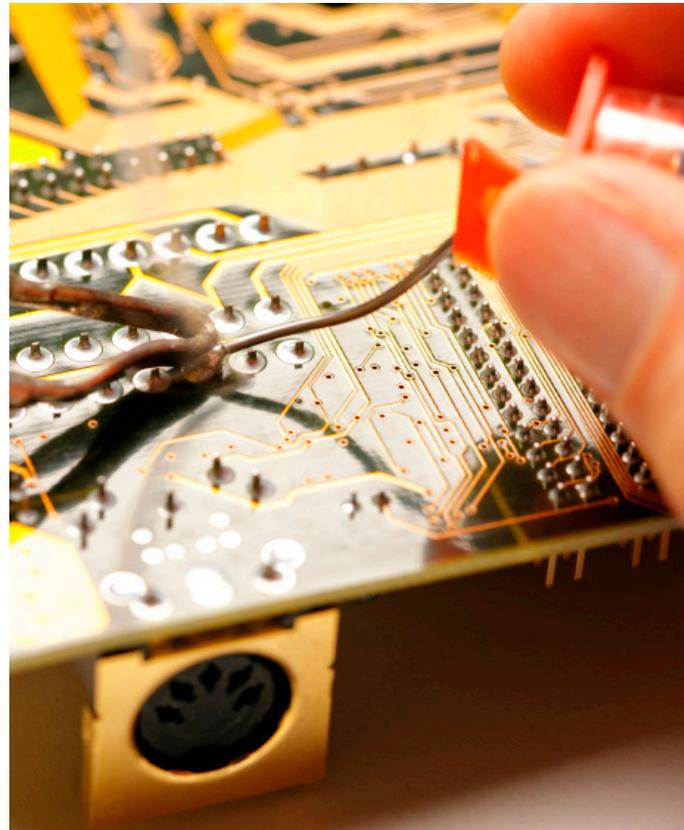
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Introduction

Introduced in the 1980s, the federal Scientific Research and Experimental Development Investment Tax Credit (SR&ED ITC) provides an incentive to Canadian businesses to conduct research and development (R&D) in Canada that will lead to new, improved or technologically advanced products or processes. The Canada Revenue Agency (CRA) administers the program and the Department of Finance Canada is responsible for governing legislation (i.e. the Income Tax Act).

About \$3.5 billion in assistance is provided annually via the SR&ED ITC to about 18,000 businesses. Small- and medium-sized enterprises represent about three-quarters of the claimants but less than one-quarter of qualifying SR&ED expenditures. About half of the ITCs are earned by the manufacturing sector. In addition to the SR&ED ITC, the federal government provides direct support for business R&D.

The majority of Canada's provinces and territories also provide tax incentives (as well as direct support) to qualifying businesses carrying out



The Canadian Chamber is committed to fostering a strong, competitive and profitable economic environment that benefits all Canadians. This paper is one of a series of independent research reports covering key public policy issues facing Canada today.

We hope this analysis will raise public understanding and help decision-makers make informed choices. The papers are not designed to recommend specific policy solutions, but to stimulate public discussion and debate about the nation's challenges.

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SR&ED in their respective jurisdictions. These incentives essentially piggy-back on the federal government's SR&ED program.

Canada's SR&ED tax incentives are among the most generous in the world. Thus, one would expect Canada's business sector to be among the top global performers when it comes to R&D. This is not the case. In 2008 (the last year for which internationally comparable data are available), Canada's business enterprise R&D expenditure as a percentage of GDP ranked 16th in the OECD.

Canada's SR&ED tax incentive program has encouraged companies to invest more in R&D and has helped to stimulate technological advancement in Canada. It has been especially important to the development and survival of start-up and early-stage companies because they can benefit from the SR&ED ITC even though they may not be earning enough income to pay income taxes. However, the design of the SR&ED program precludes many of Canada's large R&D performers from achieving any benefit. Sadly, the program is not leveraged to its full potential.

The Canadian Chamber of Commerce has long suggested that the federal government reform the SR&ED tax incentive program to make it useful to all R&D performing businesses. The Canadian Chamber also calls on the government to immediately take action to improve the administrative

management of the program. Many of our members are frustrated and dismayed that the SR&ED tax credits are not being delivered in a predictable, timely and cost-effective manner. Additionally, the current narrow focus of the CRA as to what is supported and how SR&ED claims should be documented is simply not delivering the broad-based incentive that Parliament has historically intended. The program is not working as it should.

The world is witnessing one of the most pronounced changes in the nature of innovation—the internationalization of R&D. Private-sector R&D activities are becoming more decentralized as businesses increasingly offshore R&D activities to benefit from lower costs and to gain access to large, more rapidly growing markets, highly-skilled labour and technological know-how. About one-third of the world's R&D is now conducted in Asia. Canada must work hard to remain an attractive location and destination for R&D.

This paper examines Canada's business-sector R&D performance, draws attention to global trends in R&D spending, outlines the concerns raised by Canadian businesses regarding the design and administration of the SR&ED program, and offers suggestions on how to improve the program so it stimulates more private-sector investment in R&D.

The Federal SR&ED Tax Incentive Program

The SR&ED tax incentive program has two parts. The first is an income tax deduction which allows immediate expensing of qualifying, current SR&ED expenditures. The second is an SR&ED investment tax credit (ITC) that is applied to income taxes otherwise payable.

There are two rates of SR&ED ITCs: a general rate of 20 per cent and an enhanced rate of 35 per cent available to small Canadian-controlled private corporations (CCPCs). Unused ITCs may be carried back three years or forward 20 years.

Small CCPCs with prior-year taxable income of up to \$500,000 and prior-year taxable capital employed in Canada of up to \$10 million can receive a refundable tax credit of 35 per cent of up to \$3 million in qualifying current and capital SR&ED expenditures carried out in Canada per year.¹ Over the \$3 million SR&ED expenditure threshold, the credit rate is reduced to 20 per cent, of which 40 per cent may be refundable. SR&ED ITCs are also partially refundable to unincorporated businesses. The refund takes the form of a cheque and, therefore, provides an important and predictable contribution to cash-flow.

The 20 per cent SR&ED ITC is non-refundable for large CCPCs and public or foreign-controlled corporations. The tax credit can be used to offset Canadian federal taxes payable.

Eligible Activities

Basic research, applied research, experimental development and certain support activities.

Eligible Expenditures

Most current or capital expenditures in respect of SR&ED performed in Canada by, or on behalf of, a taxpayer and related to a business of the taxpayer, including a possible extension of that business.

Current expenses eligible for SR&ED tax incentives include: salaries and wages of employees directly engaged in SR&ED, the cost of materials consumed or transformed in SR&ED, lease costs relating to machinery and equipment used substantially for SR&ED, and certain expenditures associated with contracts to perform SR&ED directly on behalf of the taxpayer or payments to third parties where the taxpayer is entitled to exploit the results of SR&ED. Capital expenditures generally include machinery and equipment that is substantially used in the performance of SR&ED in Canada. Taxpayers can choose how to treat overhead and administrative expenses specifically identified and allocated in respect of SR&ED.

¹ The \$3-million expenditure limit is reduced to zero on a phased basis as the CCPC's taxable income rises from \$500,000 to \$800,000 and its taxable capital increases from \$10 million to \$50 million.

SR&ED Tax Incentives Stimulate R&D and Have Positive Net Economic Benefits

“The rationale for this tax support is that the benefits of SR&ED extend beyond the performers themselves to other firms and sectors of the economy. The existence of these spillovers or externalities means, that, in the absence of government support, firms would perform less SR&ED than desirable for the economy.”² Society also benefits from new discoveries that serve as a catalyst for the creation of new or improved products, services, technology and processes. Over time, R&D spending can lead to a more innovative economy and higher productivity growth, economic growth and living standards.³

Finance Canada and the Revenue Canada (1997) found that the federal SR&ED credit generates \$1.38 in incremental R&D spending per dollar of foregone tax revenue, and that private sector R&D spending is 32 per cent higher than it would be

in the absence of SR&ED tax incentives.⁴ Klassen, Pittman & Reed (2004) reported a similar result: every dollar of foregone tax revenue stimulates \$1.30 in R&D spending.⁵

The SR&ED ITC generates additional spillovers. Finance Canada has estimated for every dollar of assistance provided via the SR&ED ITC, there is a net economic gain of 11 cents.⁶ Thus, the approximately \$3.5 billion spent annually by the federal government generates a net economic gain of about \$385 million per year.



- 2 Department of Finance Canada. (2011). “Tax Expenditures: Notes to the Estimates/Projections 2010.” Ottawa: January 18.
- 3 Nicholson, Peter J. (2004). “The Growth Story: Canada’s Long-run Economic Performance and Prospects.” *International Productivity Monitor*. No. 7. Fall.
- 4 Department of Finance Canada and Revenue Canada. (1997). “The Federal System of Income Tax incentives for Scientific Research and Experimental Development: Evaluation Report.” Ottawa: December. This research built on ABT & Associates (1996).
- 5 Klassen, Kenneth J., Jeffrey A. Pittman and Margaret P. Reed. (2004). “A Cross-National Comparison of R&D Expenditure Decisions: Tax Incentives and Financial Constraints.” *Contemporary Accounting Research*. Vol. 21, No. 3. pp. 639-680. Toronto: Canadian Academic Accounting Association. Fall.
- 6 Parsons, Mark and Nicholas Phillips. (2007). “An Evaluation of the Federal Tax Credit for Scientific Research and Experimental Development.” *Department of Finance Working Paper 2007-08*. Ottawa: Department of Finance Canada. September.

Business Enterprise Expenditures on R&D Fall Short

Canada's SR&ED tax incentive program is one of the most generous in the world, yet business enterprise expenditure on R&D as a share of GDP is the second lowest among G7 nations and well below the OECD average (see Figure 1). Businesses perform 54 per cent of R&D in Canada compared to 70 per cent in the OECD (see Figure 2).

Canada's relatively weak private-sector R&D investment may reflect the structural characteristics of the Canadian economy. The Department of Finance has noted that Canada has some high research-intensive industries (like pharmaceuticals, office and computer machinery, and communications equipment); however, their relative smaller size accounts for the weak aggregate R&D performance in Canada.⁷ Indeed, the comparatively small scale of Canadian firms in general may explain Canada's continued poor performance of industrial R&D.

Approximately 35 per cent of business expenditure on R&D is performed in high-tech industries in Canada (aerospace, office and computer equipment, pharmaceuticals, communications, medical and precision equipment) compared to an average of 42.5 per cent in the G7.⁸

Other structural causes often mentioned include the high degree of foreign ownership in Canada. There has been a tendency for global corporations, like those in the automotive and chemicals sectors, to conduct R&D near their headquarters located outside of Canada.

Less than 10 per cent of business expenditure on R&D is performed in medium-tech industries in Canada (motor vehicles, other transport, chemicals, electrical machinery, and other machinery and equipment) compared to an average of 26.5 per cent in the G7.⁹

Finally, Canada is intensely competing with other nations for the best and brightest from around the world. "As opportunities increase in China, India, and other developing countries, fewer scientists will want to or need to uproot themselves from their country and culture in order to make a better living."¹⁰ Countries, including the U.S., the UK, Germany, Australia and China have adopted favourable strategies to attract world-class researchers and scientists from overseas. Canada must do the same to ensure it is a magnet for the world's most qualified and mobile researchers and scientists.

These structured impediments make it even more important that Canada's public policies support and unleash higher levels of R&D activity. The stakes are high. Productivity growth is central to national prosperity and productivity is driven to a large extent by innovative products, services and processes – the fruits of research and development.

⁷ ab Iorwerth, Aled. (2005). "Canada's Low Business R&D Intensity: The Role of Industry Composition." *Department of Finance Working Paper 2005-03*. Ottawa: Department of Finance Canada. March.

⁸ Organisation for Economic Cooperation and Development (OECD). (2009). "Main Science and Technology Indicators." Paris.

⁹ Ibid.

¹⁰ Zakaria, Fareed. (2009). "Is America Losing Its Mojo?" *Newsweek*. November 14.

Figure 1
Business Enterprise Expenditures on R&D As a Percentage of GDP
 (G7 Countries - 2008)

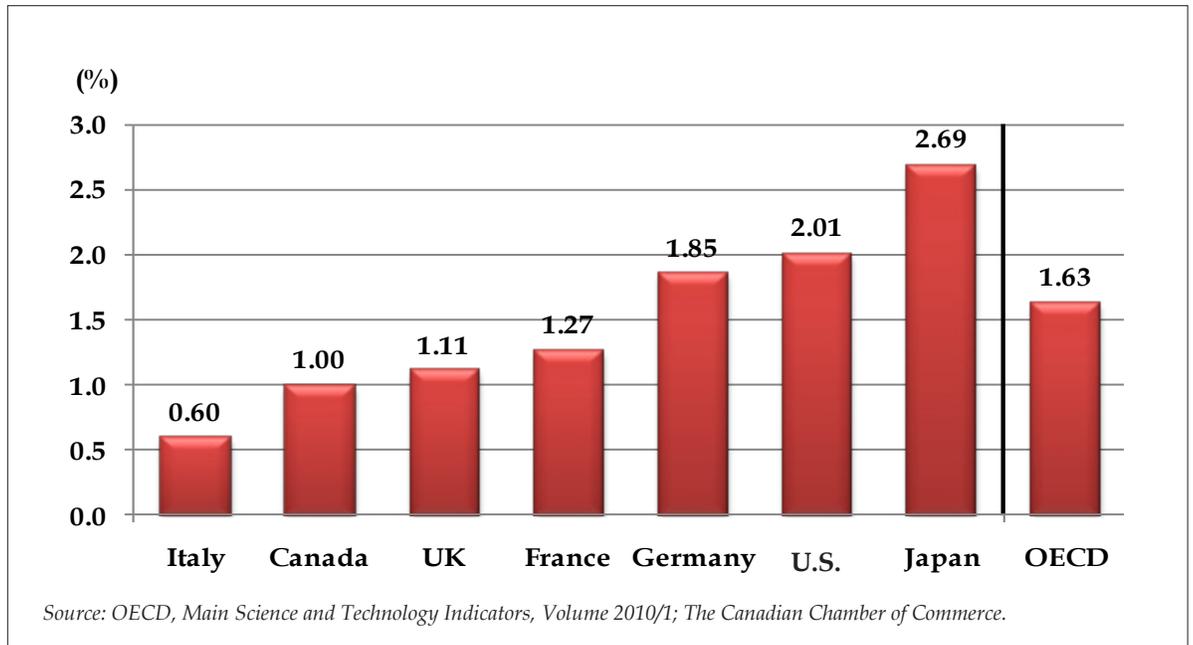
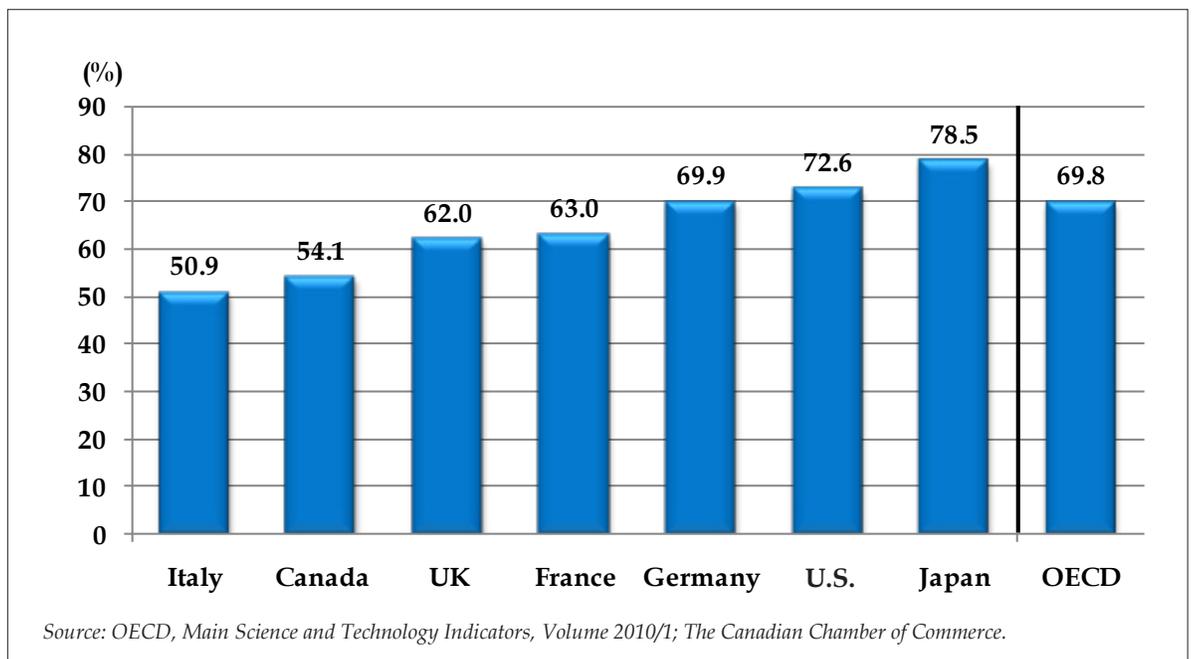


Figure 2
Percentage of Gross Domestic Expenditure on R&D Performed by Industry
 (G7 Countries - 2008)



Global Competition for R&D Dollars Is Intense

The global R&D landscape is undergoing rapid transformation. The R&D prowess of North America and Europe is increasingly threatened. Developing countries like China, India, South Korea, Malaysia, Thailand and Vietnam are quickly expanding their innovative capacity. Asia's share of the world's gross domestic expenditure on R&D (in particular, private sector R&D investment) is rapidly growing and more foreign companies are establishing R&D centres in the region. Asia now accounts for about one-third of the world's expenditures on R&D and over 40 per cent of the world's researchers. China is on the verge of overtaking the U.S. in terms of sheer numbers of researchers.

India is becoming a major location for offshore R&D, much of it conducted in R&D centres owned by multinationals like Cisco, Motorola, General Electric and Hewlett-Packard as well as a growing number of R&D-intensive small and medium-sized companies. "The India R&D bases of multinationals increasingly are becoming the leading sites for developing particular products sold globally, whether they be new chips, software packages, or telecom devices."¹¹

Chinese companies are also performing more advanced and sophisticated types of R&D for multinational corporations. "Most of the R&D in China appears to target the domestic market.

India is developing technology for a global market. India appears far ahead, but China is investing massively in building R&D capacity by subsidizing state-of-the-art labs in biochemistry, nanotech materials, computing, and aerospace technologies."¹²

In *Bloomberg BusinessWeek's* 2010 list of "The 50 Most Innovative Companies," 15 are Asian, up from just five in 2006. Research and Motion is the only Canadian company on the list, ranking at number 14.

Canada's share of global R&D expenditures fell from 2.4 per cent in 2002 to 2.1 per cent in 2007.¹³ To win the global innovation race, Canada must strive to become the most attractive location and destination for R&D investment in the world. We must build on our strengths which include the lowest overall tax on new business investment in the G7, excellent public infrastructure, vibrant research and post-secondary institutions, effective protection for intellectual property rights, openness to international competition, a highly skilled and educated workforce and the superior management practices of our business enterprises.

To further stimulate business R&D investment and spur innovation we must modernize and reform Canada's SR&ED tax incentive program.

¹¹ Engardio, Pete. (2008). "India: R&D Stronghold." *Bloomberg BusinessWeek*. August 11.

¹² Wadhwa, Vivek. (2008). "Losing Our Lead in Innovative R&D." *Bloomberg Business Week*. June 10.

¹³ United Nations Educational, Scientific and Cultural Organization. (2010). "UNESCO Science Report 2010." Paris: November 10.

Jump-starting Business R&D Spending

Correcting the design flaws of the SR&ED program

Small CCPCs and unincorporated businesses qualify for refundable SR&ED ITCs and, therefore, can receive a cash infusion even if they do not have taxable income. For all other businesses, including large publicly-traded Canadian companies, the SR&ED ITC is only marginally effective because the credit can only be used to offset Canadian federal taxes payable. In a period of economic downturn, large companies may not have taxable income and cannot access the full value of their credits. Billions of dollars of credits go into “carryforward” pools.

“Companies with large carryforwards of SR&ED deductions and credits receive no benefit from credits earned on ongoing SR&ED expenditures even once they return to profitability, until those carryforwards are used up. As a result, companies with some of the largest R&D establishments in the country employing thousands of Canadians and producing world class innovation receive no credit for their R&D activity.”¹⁴

“The problem is that the structure of the SR&ED tax credit rules is an all-or-nothing structure. Either one can use credits (through refundability for small CCPCs or against taxes payable for profitable companies) or one cannot.”¹⁵ For businesses that do not qualify for refundable tax credits, the program does not provide the critical assistance

they need to weather a sustained downturn. In fact, because it discourages continued R&D spending during an economic downturn, it puts companies at a competitive disadvantage when the business cycle turns up.

A number of business organizations have called on the federal government to expand refundability of the SR&ED ITCs to all R&D performers. While the Canadian Chamber supports this, it would be very costly. A less expensive alternative would be to allow companies that do not currently qualify for refundable SR&ED ITCs to choose between a refundable R&D wage tax credit (similar to that available in Quebec) and the existing non-refundable SR&ED tax credit. The refundable tax credit would be a percentage of wages paid to SR&ED personnel. This would particularly benefit companies with significant R&D work forces in Canada and would help attract and retain knowledge workers. It would help maintain and expand domestic R&D centres. The wage credit would be set at a percentage resulting in an acceptable level of tax expenditure for the federal government.

For profitable Canadian subsidiaries of multinational corporations (MNCs), the non-refundable SR&ED ITC provides no direct incentive to maintain or expand R&D in Canada. ITCs reduce corporate income taxes payable in Canada making foreign MNCs less eligible to receive tax credits in their home country and increasing their income tax liability abroad. The SR&ED

14 Information Technology Association of Canada. (2007). “Tax Measures to Mobilize Science and Technology to Canada’s Advantage.” *A Pre-Budget Submission by ITAC*. Ottawa: August.

15 Information Technology Association of Canada (2007). “An Alternative for Extending Refundability of SR&ED Tax Credits.” Ottawa: January.

tax incentive program can be made more attractive to foreign investors by allowing Canadian subsidiaries of multinationals to offset the ITC against a pre-tax levy, like employer Employment Insurance premiums. This would result in an increase in Canadian corporate income tax payable and an equal offsetting decrease in the pre-tax levy. Because Canadian corporate income tax payable is not reduced, the amount of foreign tax credit available to the foreign investor would not change. Canada would be able to attract more foreign investment in SR&ED activities.

The government should also consider expanding the ITC for collaborative R&D. Firms are likely to underinvest in collaborative research (whether in partnership with a university, national laboratory or industry consortium) because it tends to be more basic and exploratory. Moreover, because research results are shared, firms cannot capture the full benefits.¹⁶ Countries like Norway, Spain, the UK, Denmark, Hungary and Japan provide tax incentives/deductions for collaborative R&D.

Improving the delivery of the SR&ED tax incentives

Finance Canada and Revenue Canada have estimated that compliance costs represent 7.9 per cent of the total value of the SR&ED tax credit claimed (ranging from a high of 15 per cent for small claims and a low 5.5 per cent for large claims). Administration costs average 1.7 per cent of the value of the credit. Combined, compliance and administration costs total roughly 10 cents per dollar of tax subsidy.¹⁷

More and more Canadian Chamber-member companies—large and small—representing many sectors of the economy are reporting that the SR&ED program has become overly complicated



and is no longer delivering incentives in a predictable, timely and cost-effective manner. They also find that the scope of eligible SR&ED expenditures traditionally qualifying for the SR&ED tax credit has significantly narrowed.

The Canada Revenue Agency's (CRA's) focus seems to be more on compliance—application of interpretive positions and operational practices—rather than delivering incentives. The SR&ED tax incentive program has become less suited to supporting experimental development and technologically-based innovation that leads to commercially viable products and processes or improves existing ones. This narrow focus is not what Parliament historically intended when it created these incentives.

¹⁶ Atkinson, Robert D. (2007). "Expanding the R&D Tax Credit to Drive Innovation, Competitiveness and Prosperity." Washington: The Information Technology and Innovation Foundation. April 2.

¹⁷ Parsons, Mark and Nicholas Phillips. (2007). "An Evaluation of the Federal Tax Credit for Scientific Research and Experimental Development." *Department of Finance Working Paper 2007-08*. Ottawa: Department of Finance Canada. September.

Additionally, some companies that have used and relied on the SR&ED program for years are reporting that major portions of their claims are being turned down—claims that were accepted previously. Receipt of tax credits is unpredictable.

For many small- and medium-sized business owners, overly narrow eligibility criteria and complex application procedures discourage them from applying. As a result, the enormous potential for innovation among Canada's small- and medium-size enterprises (SMEs) is underexploited and SMEs are not maximizing productivity and growth.

Businesses need certainty and predictability to plan their affairs. The SR&ED tax incentive program must be managed and delivered in a clear, consistent and predictable manner. Otherwise, Canada will lose R&D activities to other jurisdictions.

The Canadian Chamber calls on the federal government to immediately take action to ensure that the SR&ED program delivers incentives efficiently and cost-effectively in accordance with the original intent of the program. Canadian companies should be able to apply and obtain, with confidence, the SR&ED tax credits they are entitled to as provided in CRA's historical policy and practices.

SR&ED tax incentives are part of a larger picture

It is important to acknowledge that there is more to innovation than R&D spending. Many Canadian companies are successful and bring value to market by using knowledge that does not necessarily come from R&D—they learn by doing and from their relationships with suppliers, customers and competitors. Businesses also adopt technology and processes developed by others. Canadian firms also import a significant share of R&D from foreign countries.

Companies are increasingly open to external innovation through licensing, patents, collaboration or patent pools with other companies. For example, Procter & Gamble Co. (P&G), a Fortune 500 American multinational corporation headquartered in Cincinnati, accesses intellectual property developed externally for use within P&G and shares its own know-how with other companies. About half of the company's product initiatives entail significant collaboration with outside innovators.¹⁸ Other companies are sticking with the traditional proprietary approach to R&D spending.

¹⁸ Bogoslaw, David. (2010). "Tough Times Spur Shifts in Corporate R&D Spending." *Bloomberg BusinessWeek*. August 9.

Conclusion

Many Canadian Chamber-member companies are frustrated that the SR&ED program is not effectively delivering the broad-based incentives for which it was designed. For others, the SR&ED ITC is only marginally effective because the credit can only be used to offset Canadian federal taxes payable.

The Canadian Chamber believes Canada has much to gain by making improvements to the SR&ED tax incentive program to improve its effectiveness and maximize its impact. Businesses must be able to look at the SR&ED ITC as a reliable and predictable incentive that does not entail significant compliance and administrative costs. The ITC must be useful for all R&D performing businesses.

We call on the federal government to take immediate action to overhaul the administrative management of the SR&ED program and make SR&ED ITCs universally available to all businesses to revitalize and support business innovation.

R&D in Canada can be further stimulated by adopting the world's strongest intellectual property regime; fostering collaboration among university, college, technical institute, government and industry researchers; cultivating a network of relationships and partnerships with businesses and researchers worldwide; developing robust innovation clusters; and investing in the education and skills of our people.

“Shaking off complacency to achieve a more innovative Canadian economy will not only need a dedicated commitment of resources: it will require providing the right stimulus and incentives for innovation; fostering a business culture that sees innovation as a key driver of value; and enhancing the capacity of all elements of our innovation system to work together to create value for all Canadians.”¹⁹

Time is short and the challenges are large, but by acting now with a sense of clear purpose, together we can lay the foundations for a more innovative, productive economy.

¹⁹ The Science, Technology and Innovation Council. (2009). “Canada’s Science, Technology and Innovation System: State of the Nation 2008.” Ottawa: Government of Canada. May 5.

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