

Developments*

Information and updates on scientific research and experimental development

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Scientific Research and Experimental Development (SR&ED): Enhancing Global Competitiveness

Tax incentives have become one of the main instruments of innovation policy for industrialized nations. In contrast to grants or subsidies, these incentives encourage domestic R&D spending by businesses without sectoral or technological targeting.

To remain competitive in a global market, many G20 countries are offering greater R&D tax incentives to businesses. Government objectives for doing so include:

- fostering innovation;
- retaining and attracting multinationals to invest in R&D;
- boosting economic activity;
- providing access to financing for R&D;
- increasing competitiveness;
- increasing the country's overall attractiveness for investment;
- stimulating/maintaining employment levels; and
- raising the standard of living.

R&D and innovation are considered key to productivity and enhancing Canadian competitiveness. Canada's Scientific Research and Experimental Development (SR&ED) program continues to be one of the most generous and stable tax credit programs among the industrialized nations. In 1986 the federal government introduced a refundable investment tax credit (ITC) program for Canadian-Controlled Private Corporations (CCPCs). The Canadian program is attractive because it provides a generous 35% refundable ITC to small and medium-sized CCPCs, while other corporations earn a non-refundable ITC of 20%. Furthermore, the Canadian SR&ED program allows all directly related current expenditures to qualify for ITCs, including labour, contractors, overhead, certain lease costs and materials (consumed and transformed). In addition, the capital cost of machinery and equipment used all or substantially all in SR&ED in Canada also qualifies for ITCs and can be written off in full in the year of acquisition.

Trends and Issues

Role of R&D incentives

R&D incentives aim to achieve certain tax policy objectives and can be provided in a variety of structures, each with their own advantages and disadvantages. Subsidies permit the government to retain control over the amount, types and areas in which R&D is performed. Direct funding from the government of R&D programs, such as grants, also permits the government to control the amount of R&D conducted, but can be viewed as being biased towards specific industries, and the lack of continuous, predictable support can hamper longer term R&D efforts. Although these types of funding programs can promote R&D in smaller companies, they typically only provide a short-term stimulus and do not encourage long-term investment.

In contrast, research and development tax credits support short and long-term research projects and spending, in all industry sectors and for all sizes of corporations, subject to government set limitations. As a result, programs in countries that offer R&D tax credits are typically viewed as being more effective.

Design of tax incentive policy

The key factor underlying the effectiveness of R&D tax incentive policy is the ability of the tax measure to achieve policy objectives. To attract and stimulate R&D, many countries are enhancing their R&D tax incentives to make them more attractive and effective.

Fiscal incentive design is influenced by several considerations, including:

- simplicity;
- administrative process;
- cost of compliance;
- reliability;
- predictability;
- long-term sustainability;
- volume bases;
- visibility and transparency;
- formal evaluation processes;
- clear definition of R&D; and
- effective coordination between government and business.

Studies evaluating the attractiveness of R&D tax credits have consistently found Canada's program to be one of the most generous in the world, no doubt due in part to the fact that the program has addressed many of the considerations noted above.

G20 countries have adopted both direct and indirect methods of providing tax incentives for research. Additional allowances (deductions), subsidies, credits, loans, research contracts, among others are used to promote research and encourage private/public sector research collaboration. However, the value of any tax incentive depends on the business tax rates applied in the country, and not only the amount of the tax incentive itself.

The flexibility to accommodate businesses of all sizes, and at varying stages of development, is an essential element of an effective incentive. Canada's SR&ED program demonstrates multiple facets of flexibility.

Specifically, the SR&ED program:

- provides generous ITCs and deductions to both small and large businesses;
- benefits small and medium-sized CCPCs that are in a loss position, through refundable ITCs;
- allows unused deductions to be carried forward indefinitely;
- permits the use of ITCs to offset taxes owing in the year and allows any unused ITCs to be carried back three years and forward twenty; and
- supports the development of both new and existing products, processes and materials, including incremental improvements and developments.

The breadth of activities and related expenditures that qualify for R&D under a program reflects the policy objectives by governments to provide tax relief to R&D performers. Several countries have chosen to adopt the OECD's Frascati Manual definition of R&D to specify the types of activities that qualify for incentives, adding their own variations to reflect particular policy objectives. Canada's broad definition of SR&ED applies equally to all industry sectors.

Effectiveness of R&D Tax Incentives

Rapidly changing economic conditions in the various countries have made direct measurement of the effectiveness of R&D tax incentives somewhat difficult. However, the calculation base, administration and effective use of the incentives should be part of any evaluation of policy.

Calculation base

R&D incentives may be volume-based, incremental or a combination of the two.

With volume-based incentives, the corporation earns the allowance, credit or other benefit on each dollar it spends on qualifying R&D investment. Volume-based incentives tend to be:

- more transparent and predictable;
- relatively insensitive to business cycles; and
- less prone to financing R&D that would have occurred even with no incentive.

In addition to Canada, many countries, such as France, Australia, the United Kingdom and the Netherlands have introduced volume-based incentives.

In contrast, some countries' R&D programs provide businesses an incremental incentive only on investments above an established threshold, generally based on past expenditures. This design can promote uneven research patterns, because corporations aiming to maximize entitlement for a particular year can reduce their thresholds by reducing R&D spending in previous years. In particular, the U.S. research program is sometimes criticized for its incremental design, and is often viewed as not being particularly effective in promoting R&D in the United States.

Nevertheless, incremental incentive approaches are not without their benefits. They offer an effective method of controlling the cost of programs and may stimulate R&D that otherwise might not have been performed.

Canada's volume-based SR&ED program includes an incremental rate structure, which could be a factor in the program's success. The program provides an enhanced

ITC to CCPCs of 35% on expenditures up to \$3 million.¹ For expenditures above that limit and for expenditures incurred by non-CCPCs, the ITC is 20%.

Administration

To be effective, a tax incentive program must have a low cost of compliance. Participation must not become time-consuming for the business, at the application stage or subsequently, or the program will fail to meet its policy objectives. Overall, our experience has been that Canada's SR&ED program generally runs reasonably efficiently. The Canada Revenue Agency is continuing in its ongoing effort to reduce the administrative burden for businesses of the SR&ED program in Canada.

Effective use of incentives

To be effective, businesses must be able to monetize or benefit from the tax credits earned under the incentive program. The most effective use of tax credits earned occurs when the program provides for a cash refund of tax credits to a business. Many countries, including Canada, use refundable credits, mainly to encourage R&D in small to medium-sized businesses. Refundable

R&D credits can stimulate further development activities and provide reliable and predictable cash flow for business.

Credits that are non-refundable can be used only to offset income taxes. These provide a weaker incentive because businesses in a loss position or that have no income tax payable cannot monetize the credits. These non-refundable credits provide no short-term cash flow to businesses to help sustain R&D.

The use of tax credits can also be accomplished when a program permits unused tax credits to be carried back, carried forward or transferred to a related corporation. Permitting credits to offset non-income based taxes of a business can also improve the effectiveness of such credits.

Canada's R&D Incentive Competitiveness Internationally

The table below provides a brief overview of selected global R&D incentive programs, and highlights the differences among Canada's program and other countries:

Canada	Volume-based	<ul style="list-style-type: none"> ▪ 35% refundable tax credit for qualifying Canadian-controlled small and medium-sized enterprises (SMEs) for up to \$3 million¹ in expenditures and 20% on the excess. ▪ All other corporations get a 20% non-refundable tax credit. ▪ Tax credits offset income taxes otherwise owing. ▪ Labour costs, materials, contract payments, certain lease costs, machinery and equipment intended to be used more than 90% in SR&ED and payments to third parties qualify for the tax credit.
United States	Incremental	<ul style="list-style-type: none"> ▪ Tax credit rate is 20% on R&D expenditures in excess of base amount. Alternative calculation approaches are available. ▪ Labour costs, 65% of contract payments and 75% of payments to research consortiums qualify. ▪ Overhead costs and lease costs do not qualify. ▪ No accelerated write-off for machinery and equipment.
France	Volume-based	<ul style="list-style-type: none"> ▪ Tax credit rate is 30% (but could be 50% and 40% for the first and second years respectively for companies applying for the research tax credit for the first time). ▪ Credit limited to 5% for expenditures above 200 million Euros. ▪ Contract research limited to 10 million Euros. Tax credit limited to manufacturing, trading and agricultural companies. ▪ Only 75% of eligible staff costs qualify. ▪ High-growth SMEs and innovative young companies qualify for refundable tax credits.
Mexico	Volume-based	<ul style="list-style-type: none"> ▪ 30% tax credit rate applies to all performing eligible R&D work. ▪ The eligible expenditures are much broader than in many countries that have R&D incentives. ▪ Expenditures include patents, copyrights, intellectual property, training/courses and benchmarking.
United Kingdom	Volume-based	<ul style="list-style-type: none"> ▪ 175% deduction of R&D expenses for SMEs. ▪ SMEs in loss position can surrender up to 28% R&D expenditures and obtain a cash refund. ▪ Staff costs, materials consumed and transformed, power, water, fuel and computer software qualify. ▪ Large corporations get a 130% deduction of R&D expenditures. ▪ R&D spending must exceed £10,000.
Australia	Volume-based	<ul style="list-style-type: none"> ▪ 125% deduction on Australian-owned R&D; 30% tax offset for small corporations that are unable to benefit from the deduction. ▪ 175% incremental premium for corporations that have increased R&D expenditures over the last three-year average. ▪ 175% deduction for foreign-grouped companies that raised their R&D over the last three-year average. ▪ 100% deduction for a foreign-grouped or multinational company for R&D done in Australia.

1. Generally, a CCPC's \$3 million expenditure limit in respect of the 35% credit is phased out if, in the previous taxation year, taxable income is between \$400,000 and \$700,000 (\$500,000 and \$800,000 if the previous taxation year ends after 2008) and taxable capital is between \$10 million and \$50 million.

Conclusion

Many industrialized countries are enhancing their R&D programs and moving to catch up with the Canadian SR&ED program. Canada's program already has been enhanced by the changes introduced in the 2008 federal budget that increase the expenditure limit to \$3 million for the enhanced 35% ITC and allow taxpayers to claim a portion of salaries incurred by a Canadian taxpayer in respect of Canadian-resident employees working outside Canada solely in support of SR&ED carried on in Canada. However, to remain at the forefront of the global market and maintain its competitive edge, Canada must continue to improve the SR&ED program and adapt to changing economic conditions.

For More Information

For assistance in evaluating Canada's SR&ED program and the effect it can have for you or your company, please contact your PricewaterhouseCoopers LLP adviser or any of the following individuals:

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