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RESEARCH NOTE

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Research and Development (R&D) Tax Incentives in Canada: A History and Review of Changes

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Innovation plays a vital role in the growth of an economy[1]. Spending on research and development (R&D) is an important determinant of the innovation process[2]. Due to the risks and high costs of R&D activity, many firms will not undertake R&D for an unknown, or potentially no, return[3]. To address the perceived under-investment in R&D, governments use financial mechanisms as incentives. Financial mechanisms are intended to encourage firms to engage in R&D and/or increase their investment in R&D, by either reducing the cost of R&D or by providing direct funding to R&D activities[4].

History of R&D tax incentives

The Canadian government has conducted a number of initiatives in order to spur R&D activities. Specifically, the Government of Canada has used the *Income Tax Act* (ITA) (and previous *Income War Tax Act*[5]) as one method to encourage R&D activities[6]. Motivation to assist in R&D activities seems to have arisen as early as 1944. Starting in 1944, the Government of Canada employed a mechanism that permitted firms to deduct 100 percent of their current expenditures and one third of their capital expenditures incurred while performing scientific research against their taxable income. The *Income War Tax Act* defined scientific research as "any activity in the field of natural or applied

[1] Bound, Cummins, Griliches, and Jaffe (1984)
[2] ibid
[3] Cuervo-Cazurra and Un (2010)
[4] Lester (2012)
[5] Burns (1917)
[6] Murray (1995); Warda (2002)

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science for the extension of knowledge". The deductions introduced in 1944 against taxable income persisted with some minor changes and incentives for increased spending until 1967.

In 1967, the Canadian government changed course and added an additional measure other than tax deductions. The intent of the program was to provide funding to firms that did not benefit from a reduction of taxable income[7]. From 1967 until 1975, the Industrial Research and Development Incentives Act (IRDIA) provide a grant equal to 25 percent of current and capital expenditures for incremental spending over a five-year average base level of expenditure. In 1975, the program was repealed due to government spending restraints[8].

Following the IRDIA program, the tax deductions for current and capital expenditures for scientific research remained in force. In 1977, the government introduced the scientific research investment tax credit (ITC) that provided a range of tax credit rates on current and capital expenditures, depending on geographic region. From 1978 to 1983, a research allowance was also accessible to firms to obtain an additional tax credit on scientific research for incremental spending over a base level.

A revamp of the R&D tax incentive program was rolled out in the 1983 Government of Canada Budget. The research allowance was replaced with an increase to the scientific research ITC basic rate, along with an increase to ITC rates for the Atlantic Provinces, the Gaspé region, and small Canadian-Controlled Private Corporations (CCPCs)[9]. Modifications were also made to the carryover and refundability provisions. The carryforward period was extended to seven years, and a three-year carryback provision was introduced. In addition, limited refunds were available for unused ITCs. Therefore, if a firm's taxable income was lower than the ITC, the firm could receive a portion of the ITC as direct funds. The provisions allowed refundability of unused ITCs for small CCPCs up to 40%; whereas larger firms were limited to 20% refundability. Finally, in order to encourage additional investment in R&D[10], the Scientific Research Tax Credit (SRTC) was also introduced in 1983 through which firms could transfer their R&D tax incentives to external investors in exchange for a 50% tax credit.

Effective 1985, due to concerns about the "quick flip" of SRTC investments, the SRTC program was repealed[11]. In addition, in 1985, based on the feedback from the R&D community[12], expansion of the refundability provisions and changes to the definitions of eligible R&D expenditures were announced. The refundability provisions were extended for small CCPCs in which CCPCs could take advantage of 100% refundability on unused ITCs on the first $2,000,000 of eligible current expenditures and 40% on capital

[7] Murray (1995)
[8] Ibid
[9] Government of Canada, Department of Finance (1983); Iqbal (1995)
[10] Government of Canada, Department of Finance (1983)
[11] Government of Canada, Department of Finance (1985)
[12] Ibid

expenditures. The scope of R&D expenditures was also expanded such that "all or substantially all" and "directly attributable" activities associated with R&D replaced the requirement that expenditures must be incremental (i.e. wholly attributed to R&D activities).[13] For example, if management personnel spent 95 percent of their time on R&D activities, management salaries could be included as a qualified expenditure. In 1986, the term "experimental development" was added to the Scientific Research investment tax credit. The Canada Revenue Agency (CRA) refers to experimental development "as work undertaken for the purpose of achieving technological advancement for the purpose of creating new or improving existing materials, devices, products or processes, including incremental improvements thereto"[14]. Consequently, the tax incentive program was renamed to the Scientific Research and Experimental Development (SR&ED) program. Since 1986, the SR&ED tax incentives remain the main mechanism to encourage R&D activities within Canada.

From 1987 to 1992, minor changes to the program were made, including the extension of the carryforward period and a fast-track mechanism to reduce the turnaround time to process SR&ED[15]. In 1992, the federal budget outlined changes to the calculation of eligible overhead expenses and the eligibility of capital expenditures. In order to determine overhead expenses, an alternate method, the proxy method, was introduced. The prescribed proxy rate was 65% based on the salaries attributed to SR&ED activities. Previously, the only method available was the direct method in which taxpayers were required to delineate the incremental overhead expenditures (i.e. directly attributable to SR&ED activities). In addition, the eligibility of eligible capital expenditures for machinery and equipment was expanded by allowing the capital asset to be dedicated to SR&ED activities for a minimum of 50% of the time, rather than the more restrictive requirement of at least 90%.

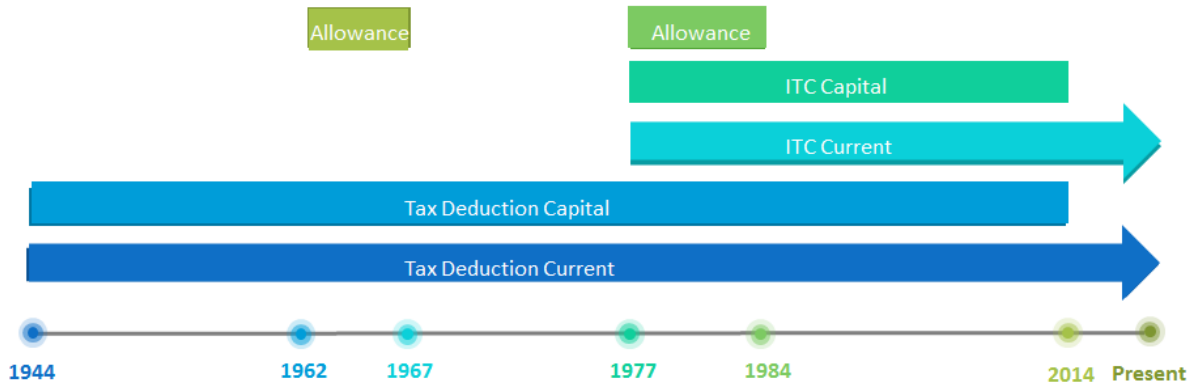
From 1994 to 2012, no major changes were introduced to the SR&ED program. In this time period, the ITC rate differential for regions was removed, however, the small CCPC limits on taxable income and taxable capital employed in Canada were increased. In addition, the expenditure limit for CCPCs was increased to $3,000,000, and the carryforward was extended to 20 years. Other changes included allowing recognition of third-party contract expenditures for SR&ED activity and expenditures incurred by Canadian resident employees carrying out SR&ED activities outside of Canada. Significant changes were introduced in 2012 that became effective in 2014. Firstly, capital expenditures and lease costs were no longer considered qualified SR&ED expenditures. Further, the prescribed proxy rate was reduced to 55% and the basic ITC rate (non-CCPC) was reduced to 15%. Additional restrictions to third party contact payments were also introduced.

[13] Ibid.
[14] *Income Tax Act*, sec. 248 (1)
[15] Iqbal, 1995

Post 2012, a penalty was introduced for filing missing, incomplete, or inaccurate information[16]. An external SR&ED preparer that assisted in the incomplete/inaccurate claim would also be liable for the penalty[17]. More recently, in 2019, the taxable income limit of $500,000 that is used to determine the enhanced CCPC ITC rate has been removed. Only the requirement of taxable capital employed in Canada remains as a restriction to obtain the enhanced rate.

Figure 1 provides a pictorial representation of the changes to the main R&D tax incentives.

Figure 1 - Changes in Canadian government interventions for R&D



Patterns in the changes of tax incentives

From the evolution of the tax incentives and grants from 1944 to present, a number of patterns appear:

- Changes to definitions and eligible expenses
- Differing rates for smaller CCPCs and regions
- Changes to refundability provisions

From 1944 to the present, the changes to definitions and eligible expenses may indicate that the scope of R&D and the character of R&D expenditures has evolved. Initially, the R&D expenses that were eligible were categorized as “scientific research”. In 1986, the term “experimental and development” was added to amend the definition of eligible R&D activities; thus, extending the scope of recognized R&D activities.

[16] *Income Tax Act*, section 162 (5.1)
[17] *Income Tax Act*, section 162 (5.1) & (5.3)

Over the span of the program, the definition of eligible expenses has changed. These changes may be in response to industry concerns or may be a response to specific challenges in the R&D community. For example, the Canadian Government Budget in 1985 outlined that allowing "all or substantially all" activities to be attributed to R&D activities would be of benefit to smaller firms whose management may engage in R&D activities[18]. Similarly, the inclusion of the proxy method was meant to reduce "the compliance burden on taxpayers, particularly for smaller firms which may lack detailed accounting systems"[19]. However, some of the changes may have been due to cost of the program or compliance. The elimination of the SRTC was attributed to concerns over abuse of the program[20]. Comparably, the rationale provided in Budget 2012 for the removal of capital expenditures as both a deduction and as a basis for an ITC was simplification of the program, as the requirements to comply with the capital expenditures provisions were deemed too complex[21].

The evolution of ITC rates may also be an indication of the government's desire to support specific regions and small CCPCs. For example, in 1978, the tax credit was 10% for large firms and 20% for firms located in the Atlantic provinces and Gaspé region. In addition, smaller firms received a 20% credit for eligible expenditures. By 1994, the location provisions had been removed, although the tax credit rate differential between CCPCs and larger firms remained.

Similar to the retention of enhanced rates for CCPCs, the refundability provisions may also indicate the government's intent to assist small CCPCs. Prior to 1983, the unused credits could be used as a carryforward for five years. With the expansion of the carryforwards and the refundability of unused ITCs, it appears that the government was responding to the specific conditions of smaller firms that may not have extensive taxable income and may face resource constraints. The 1985 Budget Papers reflects this assumption as it states "unused credits will be of most use to small start-up R&D firms who may not otherwise be able to use tax incentives immediately and the measure will provide additional financing at this stage of their development"[22].

Conclusion

The varying criteria, rates, and policies of the SR&ED program suggest that the nature of R&D projects and practices have evolved. Alternatively, the changes may reflect the shifts in the way firms use the program. The modifications may also reveal the changing nature of the government's commitment to intervene in R&D. In particular, at the outset, the intent of the tax incentives seems to have been to encourage all firms to engage in R&D; however, the evolving provisions of SR&ED program seem to be increasingly focused to encourage R&D activities in small CCPCs.

[18] Government of Canada, Department of Finance (1985)
[19] Government of Canada, Department of Finance (1992, p.156)
[20] Government of Canada, Department of Finance (1985)
[21] Government of Canada, Department of Finance (2012)
[22] Government of Canada, Department of Finance (1985, p.15)

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