

Inquiry Into Use and Importance of R&D Tax Incentives in British Columbia

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Summary

This is a report about the experiences of a sampling of BC companies with Federal R&D tax incentives. It is based on responses to a survey conducted during a workshop sponsored by the Science Council of British Columbia through its SPARK program on the topic of *Venture Funding Alternatives: Financial Options for Funding Technology-Based Companies*. Participants were asked questions about their awareness of, use and experience with Revenue Canada's Scientific Research & Experimental Development (SR&ED) incentive program. The survey, while not representative of the total R&D community in BC, nevertheless yielded some interesting results. For instance, although the audience could be expected to be much more knowledgeable about funding options for technology than the general population, fully 12 percent (9 of 77) of the potentially eligible companies responding to the survey were unaware of the existence of the SR&ED program. Moreover, 21 percent (16 of 77) of these firms, aware of the program or not, have never used it despite the likelihood of receiving cash rebates and/or tax credits. Responses from companies using the program highlighted its importance in their operations. If the program were eliminated most indicated they

would significantly scale down their investment in R&D or take more serious action such as move out of the country. Analyses of these and other findings are interspersed throughout the report.

Background

More than one thousand industrial firms in BC receive financial support for product and service innovations via Revenue Canada's Scientific Research and Experimental Development (SR&ED) tax incentive program. Some are large, well known, high-tech companies. Others are just small, start-up companies that few people know about. What they all have in common is that they have been spending significant amounts of money to improve or develop new technological products, processes and services, and they receive major amounts of it back in the form of cash rebates and/or tax credits from Revenue Canada. Yet there are few benchmarks to show the influence of the SR&ED program on the conduct of research and development (R&D) in BC. Moreover, it is probable that there are thousands of other firms in BC – no one yet has a good approximation of the number – who are also devoting financial resources to product and service development. From a policy development point of view it is important to measure their number, size, and employment in order to understand the impact of this community on the economic vitality of BC. In addition, many of these firms may be missing out on major amounts of money because they do not know about the SR&ED program or do not fully understand how to gain access to it.

The Centre for Policy Research on Science and Technology has therefore launched a research program to investigate such topics as:

- industrial awareness of, and experience with, the SR&ED program,
- the value to those already using the program,
- ways of improving awareness and use of the program for BC companies, and
- the merits of having a related Provincial program.

This report, and the pilot survey on which it is based, are part of this investigation. The purpose of the survey was to develop a questionnaire, test it with experienced and knowledgeable respondents, and use the results to design the next phases of the investigation.

The setting

The British Columbia Science Council afforded us the opportunity to conduct the survey during a workshop sponsored by the Science Council's SPARK initiative on Venture Funding Alternatives. The workshop was held in downtown Vancouver on 29 June 1993. It offered sessions on the availability of venture funding alternatives to help finance BC technology companies, featured presentations by some of BC's well-known technology CEO's, and was attended by approximately 170 participants. The organizers generously agreed to incorporate our pilot survey into the program, with the understanding that it be accomplished with minimum disruption to the scheduled program and that participation be voluntary.

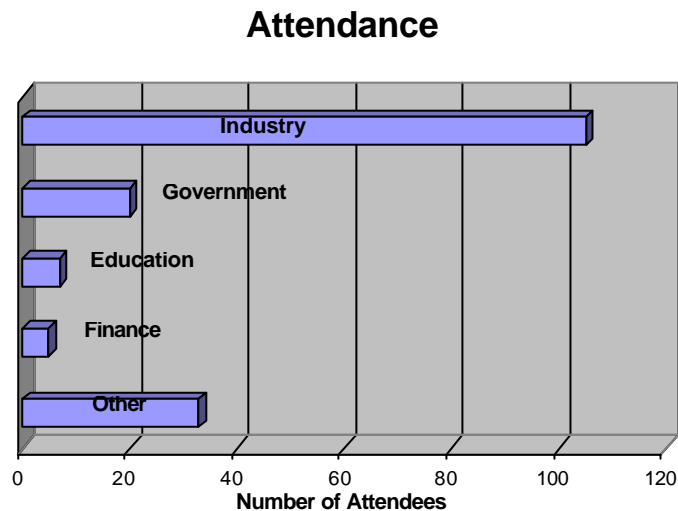
The questionnaire shown in Appendix A of this report was distributed to the participants immediately after the lunch break. It was sprung on the participants (with the friendly

co-operation of the conference organizers and was handled as speedily as possible to minimize disruption to the program. Some of the major keynote addresses were delivered in the morning session. We do not know how many people returned for the afternoon session. As we learned from our analysis, the questionnaire was somewhat daunting for the five- to ten minute window in which we endeavoured to obtain responses. Nevertheless eighty completed or partially completed questionnaires were collected. As discussed below, this represents a high response from the part of the audience of most interest to us, the technology industry sector

It should be emphasized that the respondents are not representative of the general population. They were there to learn about non-traditional approaches to venture funding. Thus the majority could be expected to be relatively well informed about traditional financing mechanisms such as those involving federal and provincial government programs.

Attendance

The workshop was attended by a total of 170 participants of whom 105 represented 92 distinct business enterprises, 20 represented federal and provincial government departments, 7 were from universities, and 5 were from the financial sector. There were also 33 participants who comprised a miscellaneous group made up of consultants, legal advisors, job seekers and other interested parties. This composition is illustrated graphically as follows:



Respondents

Eighty participants from 79 organizations returned completed or partially completed questionnaires. Two respondents were from the same company, and all but two of the organizations represented by the respondents were business enterprises engaged in technological products, processes or services. Overall, these responses were from **77** of the **92** business enterprises represented. This corresponds to a response rate of **84%** from these organizations

Sixty-eight respondents were open to further contact. Twenty-one respondents were contacted by telephone to obtain missing data. They provided the missing information in a helpful and co-operative manner. Eight respondents did not identify their organization but provided sufficient information for their responses to be included. Eleven respondents declined to identify themselves and therefore could not be contacted to discuss their responses.

Responses

The organizations

The following observations are derived from the 77 responses attributable to technology industries. Their products and services included computer software development, subsea technology, electronics, information technology, and many other technical specialties.

Sixty-four of the firms (83%) are Canadian Controlled Private Corporations (CCPC's). The mean length of time in business is approximately 10 years, with a range of 1 to 40 years. (65 companies responded to this question.)

Technical activities

Seventy-five firms are involved in developing or improving technological products and/or services. Sixty-three firms are involved in combining different, stand-alone technologies in new ways. Fifty firms develop or contract out requirements for non-standard software. Sixty-seven firms are involved in new applications of science and technology. Thirty-seven firms do technical development work for foreign enterprises. Seventy-six firms are involved in at least one of these activities and are potentially qualified to receive investment tax credits or refunds under the SR&ED program.

Commentary:

The questions about technical activities were intended to elicit a clear indication of involvement in SR&ED. A more direct question such as "Does your firm fund or engage in R&D?" presupposes respondents who understand the technical language of eligible research and development. The experience of Revenue Canada has shown that Firms who are involved in product or service innovation are not necessarily aware that such work is bona fide R&D and meets the formal definitions of SR&ED. This was a crucial part of the pilot survey.

Awareness and use of the SR & ED Program

Fifty-three firms have used the SR&ED program; 16 firms (21 percent) have not. Two respondents did not know if their firms have ever used the program, and 6 gave no response to this question. Thirty-five respondents were very familiar with the program, 32 were somewhat familiar, and 9 (12 percent) were not at all familiar with the program.

Commentary:

These results show a surprising lack of awareness of the existence of the SR&ED program from what could be expected to be a knowledgeable and sophisticated audience. The twelve percent of unaware companies compares with the more usual 60– 80 % of participants attracted to Revenue Canada seminars via newspaper ads. Even more surprising is that 21 percent (16 of 77) of these firms, aware of the program or not, have never used it although significant amounts of money would likely be forthcoming.

Two firms used the SR&ED program most recently in 1989; 4 in 1990; 6 in 1991; 38 in 1992 and 5 in 1993. No indication was given for the most recent use made by 25 firms. Fifty-five firms indicated that they would likely make a claim for 1993. When asked “why,” the majority of respondents knew for sure that they were eligible or were speculating that they would be eligible. Six firms stated that they would possibly make a claim and 4 firms indicated that it would be unlikely that they would make a claim.

Thirty-five Firms indicated that the SR&ED program entered into their business planning at or before project inception; 13 firms indicated that the program entered into their business planning during the project and 14 firms stated that it entered after the project was completed.

Commentary:

These results seem to indicate that the majority of these firms know about the SR&ED program and can count on it in their business planning, a smaller learned about it in the course of doing R&D, and the others only recently found out about it. An important question to address in the future is what kind of an inducement does it become over time when it is familiar enough to figure in the business strategies of the company.

Experience with the program

Thirty-seven firms indicated that their most recent experience with the program was easy while 20 firms indicated their most recent experience was difficult. When asked to describe what made it so, most of the firms whose experience was easy had prior experience or knowledge of the program. Others cited their own good record keeping, straightforward application instructions, helpful staff at Revenue Canada and claims that were accepted without dispute expeditiously. Of those who found the experience difficult, several cited their unfamiliarity with the process. Others indicated that the requirements were too complex, the rules were interpreted too subjectively and the process was too bureaucratic. A change to the rules and an inappropriate delay in receiving the credit were also cited as causing difficulties.

No estimate was provided for 31 firms for the percentage allowed of the tax credit they had claimed. Follow-up phone calls indicated that this question was not relevant to the firms' experience with the program, the firms were not able to estimate the percentage allowed of the tax credit claimed, or some did not fully understand the question. The average percentage allowed of all the tax credits claimed for the remaining 49 who did answer this question was 73%.

Commentary:

We wanted to obtain a glimpse of what these respondents had to say about the match or discrepancy between what was requested from Revenue Canada and what was obtained. This question can be eliminated in the future because Revenue Canada has agreed to support this research program by providing the actual aggregate pre- and post-assessment figures for BC

Thirty-eight firms did not estimate their overhead costs of claiming SR&ED benefits as a percentage of the amount obtained. As with the previous question, the same reasons apply for the incomplete answers. Of the remaining 42 who did estimate their overhead costs, the average was 20%.

Commentary:

This turned out to be a difficult question for the respondents to answer. The responses are apt to reflect a prevailing attitude rather than an actual measurement.

Forty firms stated that they would use the most recent tax credit claimed to do more R&D. Twenty-three firms stated that they would use the tax credit to cover operating expenses. Two responded that they would use the tax credit to repay investors.

Forty-eight firms indicated that the eligibility requirements are reasonable while eight firms felt that the requirements are too stringent. No one felt that the requirements are too lenient.

Twenty-nine firms offered suggestions of changes that they would like to see made to the SR&ED program. Ten of these firms stated that they would like to see an elimination of the \$200,000. taxable income limit. Other suggestions included the following: offer more guidance and information to new applicants, make it easier to claim, simplify the backup material required, simplify the language, allow full overhead, relax the definition of SR&ED, provide quicker payment and make claims 100% refundable to CCPC's.

Speculating about what would happen if the SR&ED program were to disappear in 1994, 12 firms would continue doing R&D as usual, 11 would reduce their R&D by 25% or less, 24 by 26-50%, and 8 by 51-75%. Four firms would stop doing R&D altogether, 1 would go out of business and 9 would move their businesses out of the country.

Commentary:

These responses, while far from conclusive, are nevertheless strong indicators of the fragility of the climate for investing in technological innovation in BC. Further studies are required before anything can be concluded from these figures.

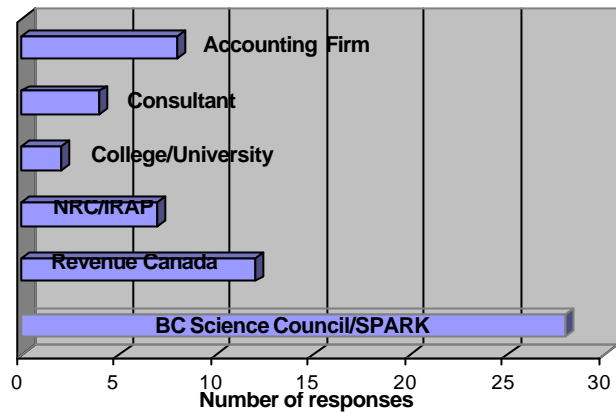
Use of government assistance programs

Thirty Firms are current or past beneficiaries of NRC/NSERC programs, 44 firms in the case Western Diversification, 36 firms in the case of BC Science Council and 16 firms in the case of ISTC. Four firms indicated that they have used or are using some other form of government assistance. They were not asked to make a specific designation.

Further information

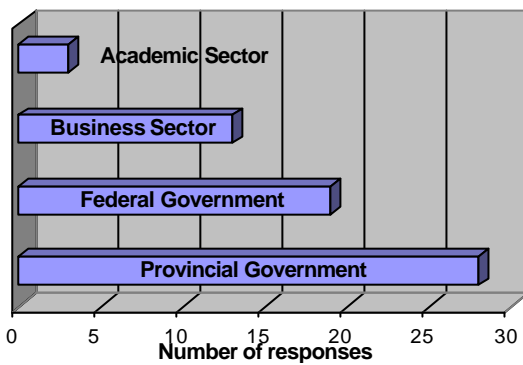
Sixty-two percent (48 out of 77) of the firms would be interested in learning more about the SR&ED program. Twelve of the 48 favour dealing with Revenue Canada; 28 with the BC Science Council; 2 with a university or college; 7 with the NRC; 4 with a consulting firm; 8 with an accounting firm, and 6 indicated no preferences. Multiple selections were permitted by the question. These results are depicted in the following chart:

Information Source Preferences



When the same figures are re-aggregated for provincial agencies, federal agencies, higher education sector, and private sector, the picture is as follows:

Preferred Information Channels



Commentary:

Even among this knowledgeable group of participants, 62% of the companies expressed an interest in learning more about the SR&ED program. Federal and provincial agencies are the preferred channels for additional information. SPARK/BC Science Council received the highest marks from this group. This is a clear indication of their appreciation for the particular workshop they were attending that day.

This result indicates that public awareness is both the issue and the opportunity. A well-developed public awareness campaign can make existing programs much more widely available, and in the process serve to build productive relationships among all of the members of the R&D community.

General Comments

As expected, this pilot study indicates that the majority of respondents were already either very familiar or somewhat familiar with the SR&ED tax incentive program. It also indicates that the majority of people attending the workshop had already used the program and were somewhat informed of what it offers. At the same time, many of the respondents (12%) were unaware of the program, and an even larger number of potentially eligible firms (21%) had never used it.

It is interesting to speculate about why this is so. The experience of Revenue Canada can shed some light on this question. Over the past five years Revenue Canada has been advertising, organizing and conducting public seminars to raise the awareness of companies about the SR&ED program. This is an unfamiliar role for the tax department, but the experience showed the effectiveness of the approach over reliance on the accounting profession to communicate the existence and parameters of the program. Month after month, Revenue Canada placed ads in local newspapers, attracted groups of from 50 to 100 routinely, and gradually expanded the number of companies who know about the SR&ED program. Five years later there is no end in sight, and many companies remain unaware of the program. This also means that many companies exist in the shadow of those who are "in the know" as well as known to be part of the R&D community. This pilot study is part of an attempt to bring many more of these companies into the light.

Perhaps today's most important job in science and technology policy is to identify and communicate with the previously hidden S&T community and involve it fully in the dialogue about industrial innovation and competitiveness. It is not enough for governments to create assistance programs and expect every potential beneficiary to become immediately aware of its existence. Businesses that comprise the visible infrastructure of the industry sector learn about developments by virtue of being part of the infrastructure. Smaller companies and those in outlying areas do not have this advantage. The real task therefore is to communicate the availability of the SR&ED program to everyone comprising the intended target. Relying on groups such as the accounting profession to do this on behalf of the government is clearly a naive expectation. Instead, it is essential to launch a comprehensive public awareness campaign to get the job done properly.

Conclusions

The major conclusion is that a well conceived public awareness program could serve to reach many more eligible companies.

The respondents indicated a preference for educational programs by the BC Science Council. This is not a surprising result and has been used to advantage in the past by Revenue Canada, who promoted and educated the public about the SR&ED program through participation in BC Science Council/SPARK seminars. Thus there appears to be an expanded role for liaison between the Province of BC and the Federal Government in educating the public about the benefits and use of the SR&ED program.

Regarding this pilot study itself, the responses showed that the questionnaire asked too many questions and was too wordy, given the amount of time allowed for responses. Some of the questions proved to be confusing, and others were worded awkwardly. Fortunately many people agreed to be contacted for further information and were very

helpful in follow up telephone calls.

A second major conclusion from the pilot survey is that it is possible to ask questions that pinpoint the symptoms of SR&ED without requiring that the respondents know the technical language of research and development. In other words we now have ways of designing a survey instrument to identify the existence of SR&ED whether or not the respondent is aware that his or her organization is involved in R&D. Thus we are able to conduct an industry survey that will result in a much more accurate measure of the number of BC companies engaged in technological innovation than available in any other way. This will help in the design of an "industry census" which, if kept current, will become a new time series of economic indicators to track the consequence of government science and technology policies affecting industry.

Acknowledgements

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Appendix A:
Questionnaire used
for the pilot study

**R&D tax incentives:
an inquiry**

29 June 1993, Vancouver, BC

A request

There are tens of thousands of industrial firms in BC. Many of them are innovative companies that spend significant amounts of money to improve or develop new technological products, processes and services.

More than one thousand of these firms have found financial support for their work via Revenue Canada's Scientific Research and Experimental Development (SR&ED) tax incentive program. Some are large, well-known, high-tech companies; others just small and startup companies that few people know about. No one knows how many other BC firms, large or small, in low-tech or high, would also be eligible for tax incentives but either don't know about the program or who don't care to use it. Moreover, there are few benchmarks for the experience of companies who use the program and its importance in the community.

Those of you who are here today represent an interested and concerned segment of this same community. Please participate in a research project at SFU's Centre for Policy Research on Science and Technology by responding to the questions on the next two pages. Your replies will help us determine

- industrial awareness of and experience with the SR&ED program
- the value to those of you already using the program
- ways of improving awareness and use of the program for BC companies, and
- the merits of having a related Provincial program.

Your replies will be used exclusively for research aimed at improving the climate for

technological innovation in BC. Be as candid as possible. Individual questionnaires will be treated as confidential to the research team. We ask for the name of your organization to ensure that information is not duplicated.

If you are unable to provide an immediate answer to any question, please leave it blank or put in a question mark. This whole inquiry should take no more than 5 minutes.

If you have any questions, concerns or comments about the project, please keep the enclosed business card and contact Morley Lipsett at SFU. The research team wishes to thank SPARK for making this opportunity available, and we thank you for your co-operation.

A. Your organization

Name of firm (optional) _____ yrs. In business? _____

Products/services _____

Type of firm: Canadian Controlled Private Corporation Other

B. Technical activities of your firm in BC

- 1. Does your firm develop or improve technological products and/or services? yes no
- 2. Is your firm involved in combining different, stand-alone technologies in new ways? yes no
- 3. Does your firm develop or contract out requirements for non-standard software? yes no
- 4. Is your firm involved in new applications of science or technology? yes no
- 5. Does your firm do technical development work for foreign enterprises? yes no

Please note that if the answer is **yes** to any of the above, your firm may be entitled to SR&ED benefits.

C. May we contact you about R&D and related matters?

If **yes** please give your name, business address and phone number below:

Name	Business address	Phone numbers
		fax

What is your role in the firm? _____

D. Awareness & use of the SR&ED program

- 1. How familiar are you with Revenue Canada's Scientific Research and Experimental Development (SR&ED) Incentive Program?
 - very familiar
 - somewhat familiar
 - not very familiar
 - not at all familiar (skip ahead to **F**)
- 2. Has your firm ever used the SR&ED program? yes no don't know

For **no** or **don't know** please skip ahead to **F**

3. What was the most recent year? _____

4a. Are you likely to make a claim for 1993?

- very likely somewhat likely somewhat unlikely very unlikely

4b. Why? _____

5. When does the SR&ED program now enter into your business planning?

- at or before project inception during the project after

E. Your experience

1a. Would you say your firm's most recent experience with the SR&ED program was:

- very likely somewhat likely somewhat unlikely very unlikely

1b. What made it so? _____

2. Please estimate the percentage allowed of the tax credit claimed. _____%

3. Please estimate the overhead costs of claiming SR&ED benefits as a percentage of the amount obtained. _____%

4. How did you/will you use the most recent R&D tax credit claimed?

- to do more R&D to cover operating expenses to repay investors
 other (please specify): _____

5. Overall, would you say the eligibility requirements for your firm's R&D are:

- too stringent reasonable too lenient

6. What changes, if any, would you like to see made to the SR&ED program?

7. If the SR&ED program were to disappear in 1994 what would your firm do?

- Continue R&D as usual stop doing R&D reduce R&D by: 25% or less
 Go out of business move business out of the country 26-50%
 51-75%
 76-99%

F. Use of government assistance programs

Which of the following technological development programs have you used or are using?

- NRC/NSERC Western Diversification BC Science Council ISTC other

G. Further information

1. Would you like to learn more about the SR&ED program? yes no

2. If **yes**, which of the following organizations would you prefer to deal with?

- Revenue Canada BC Science Council/SPARK University/College NRC
- Consulting firm accounting firm other (please specify) _____

Last but not least

Thanks for contributing to this study. We hope you found this to be a refreshing and useful exercise. The research team is looking forward to learning from your responses.

I. Influenc

Please place your form in the envelope provided, seal it, and allow it to be collected now.

Please indicate for each item listed in the following table how the item influences your firm's investment in R&D and technological innovation in BC.

	greatly hinders	neutral influence	greatly helps
individual initiative			
management			
co-workers			
others in industry			
newspapers, radio, television & other media			
newspapers, radio, television & other media			
federal science policies & incentives			
academic community			
legal & accounting profession			
concern about the environment			
involvement of owners			
provincial science policies & incentives			
suppliers			
financial institutions			
industry associations			
clients & customers			
competitors			
other factors (please specify)			

J. Today's climate for R&D and industrial innovation in BC

1. Please comment on conditions that enhance the business climate for industrial innovation in BC.

2. Similarly, please comment on conditions that detract from the climate for industrial innovation.