



SR&ED Newsletter
Edition 2012–4
International R&D tax credit strategies

Recent developments to Scientific Research & Experimental Development (SR&ED) project management & tax credit claims.

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International tax credits for R&D

Often companies perform eligible research in several countries.

A detailed review of the government funding methods in most countries illustrates that almost all countries use a similar definition of the R&D project and thus the eligible activities.

History of the international definition

The Frascati Manual is a document setting forth the methodology for collecting statistics about research and development. The Manual was prepared and published by the Organisation for Economic Co-operation and Development (OECD).

In June 1963, OECD experts met with the NESTI group (National Experts on Science and Technology Indicators) at the Villa Falconieri in Frascati, Italy. Since then it has been revised several times. In 2002 the 6th edition was published.

The manual sets forth fundamental definitions for: basic research, applied research, Research and development. It also organizes Fields of science into main and sub-categories.

Over the past 40 years, the NESTI group has developed a series of documents, known as "Frascati Family", that includes manuals on;

- R&D (Frascati Manual),
- innovation (Oslo Manual),
- human resources (Canberra Manual),
- technology balance of payments and patents as science and technology indicators.

Originally an OECD standard, it has become an acknowledged standard in R&D studies all over the world and is widely used by various organisations associated with the United Nations and European Union.

Three forms of research

The Frascati Manual outlines three forms of research. These are basic research, applied research and experimental development:[1]

1. **Basic research** is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view.
2. **Applied research** is also original investigation undertaken in order to **acquire new knowledge** ... directed towards a specific practical aim or objective.
3. **Experimental development is systematic work**, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing **new materials, products or devices**, to installing new processes, systems and services, or to improving substantially those already produced or installed.

Definition of qualified activities via eligible projects (scientific method)

“For a ... project to be classified as R&D, its completion must be dependent on a scientific &/or **technological advance**, the aim of the project must be **the systematic resolution** of a scientific and/or **technological uncertainty**.”¹

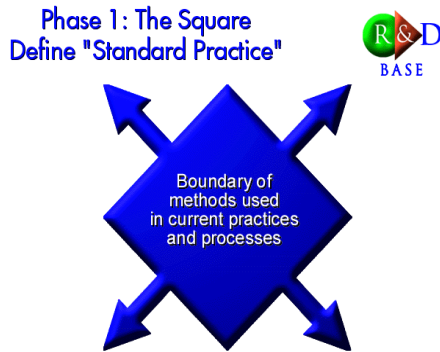
¹ Frascati Manual 2002 paragraph 135

Phase 0 – defining eligible fields of science or technology

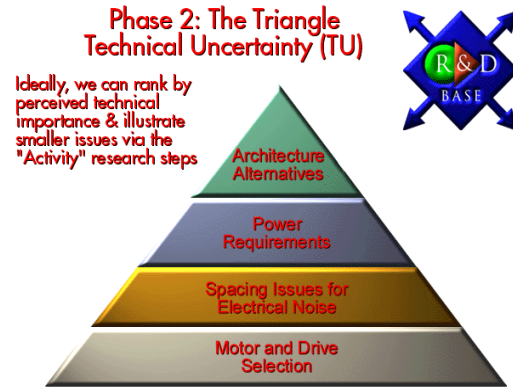
Fields of science - OECD classifications 2007

1. Natural Sciences	1.1 Mathematics 1.2 Computer and information sciences 1.3 Physical sciences 1.4 Chemical sciences 1.5 Earth and related environmental sciences 1.6 Biological sciences 1.7 Other natural sciences	ELIGIBLE for R&D tax credits
2. Engineering & Technology	2.1 Civil engineering 2.2 Electrical engineering, electronic engineering, information engineering 2.3 Mechanical engineering 2.4 Chemical engineering 2.5 Materials engineering 2.6 Medical engineering 2.7 Environmental engineering 2.8 Environmental biotechnology 2.9 Industrial Biotechnology 2.10 Nano-technology 2.11 Other engineering and technologies	
3. Medical & Health Sciences	3.1 Basic medicine 3.2 Clinical medicine 3.3 Health sciences 3.4 Health biotechnology 3.5 Other medical sciences	
4. Agricultural Sciences	4.1 Agriculture, forestry, and fisheries 4.2 Animal and dairy science 4.3 Veterinary science 4.4 Agricultural biotechnology 4.5 Other agricultural sciences	
5. Social Sciences	5.1 Psychology 5.2 Economics and business 5.3 Educational sciences 5.3 Sociology 5.5 Law 5.6 Political Science 5.7 Social and economic geography 5.8 Media and communications 5.7 Other social sciences	NOT ELIGIBLE for R&D tax credits
6. Humanities	6.1 History and archaeology 6.2 Languages and literature 6.3 Philosophy, ethics and religion 6.4 Art (arts, history of arts, performing arts, music) 6.5 Other humanities	

Phase 1: Objectives beyond “standard practice”



Phase 2: Variables of Technological Uncertainty



A) Define industry “standard practice”

“The basic criterion for distinguishing R&D from related activities is the presence in R&D of an appreciable element of novelty and the resolution of scientific and/or technological uncertainty,

i.e. when the solution to a problem is **not readily apparent to someone familiar with the basic stock of common knowledge** and techniques for the area concerned.”²

B) Technological objective beyond standard practice

“... If the primary objective is to make **further technical improvement** on the product or process then the work comes within the definition of R&D if the primary objective is to develop markets, to do preproduction’s planning or control system working smoothly, then the work is no longer R&D.”³

“The basic criterion for distinguishing R&D from related activities is the presence in R&D of an appreciable element of novelty and the resolution of **scientific and/or technological uncertainty**,

i.e. when the solution to a problem is not readily apparent to someone familiar with the basic stock of common knowledge and techniques for the area concerned.”⁴

The paper includes some supplementary criteria for distinguishing R&D.

- What is new or innovative about this project?
- Is it seeking previously undiscovered phenomena, structures or relationships?
- Does it apply knowledge or techniques in a new way?
- Is there a significant chance that it will result in new (extended or deeper) understanding of phenomena,
- relationships or manipulative principles of interest to more than one organization
- Are the results expected to be patentable?

² Frascati Manual 2002 paragraph 84

³ Frascati Manual (2002) proposed standard practice for survey on research and experimental development Paragraph 111

⁴ Frascati Manual 2002 paragraph 84

Phase 3 - Process of “Systematic” Experimentation



“Research and experimental development is **creative work undertaken systematically** to increase the stock of knowledge, including knowledge of humanity, culture and society, and the use of this stock of knowledge to devise new applications.”⁵

Research has been defined in a number of different ways.

"In the broadest sense of the word, the definition of research includes **any gathering of data, information and facts for the advancement of knowledge.**"⁶

Generally, research is understood to follow a certain structural process including⁷:

- Observations and Formation of the Objective
- Hypothesis: A testable prediction which designates the relationship between two or more variables.
- Gathering, Analysis & Interpretation of data
- Test, revising of hypothesis
- Conclusion, reiteration if necessary

⁵ (OECD (2002) Frascati Manual: proposed standard practice for surveys on research and experimental development, 6th edition

⁶ Wikipedia definition of “Research”

⁷ Wikipedia definition of “Scientific Method”

Implications to R&D tax credit claimants – 1 page project template (next page)

The Frascati directives and requirements indicate the following project documentation methodology (next page).

- If researcher teams can compile this information
- they should be able to claim related tax credits
- in ANY related country
- Examples of completed R&D projects by country are available at www.rdbase.net

Notable quote:

“They always say time changes things, but you actually have to change them yourself.”

- Andy Warhol

Putting it all together – the Project template

RDBASE.NET template for claiming tax credits internationally



I  PROJECT OBJECTIVE BEYOND STANDARD PRACTICE:

GOAL is to prove to Government (CRA, IRS, etc.) :

i) State of Existing technology: Benchmarking methods & sources

Technology limits of "readily available" information to someone "skilled in the art."

		<u>Number (#) of</u>	
i	Internet / Google Searches	_____	internet sites
ii	Articles	_____	articles
iii	Patent searches	_____	patents
iv	Competitive methods	_____	products / processes
v	In-house technologies	_____	products / processes
vi	Potential components	_____	products
vii	Queries to experts	_____	responses
viii	Other	_____	

ii) Objective(s)

Performance benchmarks (top 5)*

Quantifiable Objectives beyond known limits

		<u>Benchmark 1</u>	<u>Benchmark 2</u>
i	Existing benchmark	_____	_____
ii	Units of measure	_____	_____
iii	Performance objective	_____	_____
iv	Result (III below)*	_____	_____

II  TECHNOLOGICAL UNCERTAINTIES

Using "science" to formulate hypotheses & experiments

Variables for experimentation (top 5)**

	<u>Variable 1</u>	<u>Variable 2</u>
Name of variable	_____	_____

III  EXPERIMENTAL ACTIVITY

*Defined by tax year**

i) Experimentation method

Number of

Justify sample sizes via "variables"

i	Analysis / simulation	_____	alternatives	<i>Quickest</i>
ii	Process trials	_____	runs / samples	<i>Longer</i>
iii	Prototypes	_____	samples	<i>Longest</i>
	prototype revisions	_____	revisions	

ii) Analysis

i	Results	_____	* vs. Objectives I	<i>Identify the unexpected</i>
ii	Conclusions	_____	** on Variables II	<i>Attempt understand "why?"</i>
iii	Documentation	_____	Experiments/Analysis	<i>Proof experiments & costs</i>

iii) Direct Costs

i	Wages	_____	Hours / Employee	<i>* PROJECTS span multiple years but ACTIVITIES match tax years.</i>
ii	Contractors	_____	Labour \$ / Contractor	
iii	Materials	_____	Consumed/transformed	

Comparing R&D funding by country⁸

If we want to make a rough comparison of Canada's funding vs. other industrialized countries we can use a ration named the "Beta Index" (B-Index).

It is calculated as:

the After Tax Cost of \$1 of R&D / (1- the tax rate)

Simply stated the:

B-Index = before-tax income needed to break even on one dollar of R&D outlay.

The lower the B-Index the more favorable it is for a company to perform R&D in a particular country.

As we can see from this comparative Canada does in fact have one of the lowest B-Indices however, **many countries provide other "direct" funding** instead of "tax incentives."

The OECD report provides a further comparison of the total % of "business expenditures on research & development" (BERD) which are financed by the government (next page).

Notable quote:

"He who asks a question is a fool for 5 minutes.

He who does not ask a question remains a fool forever."

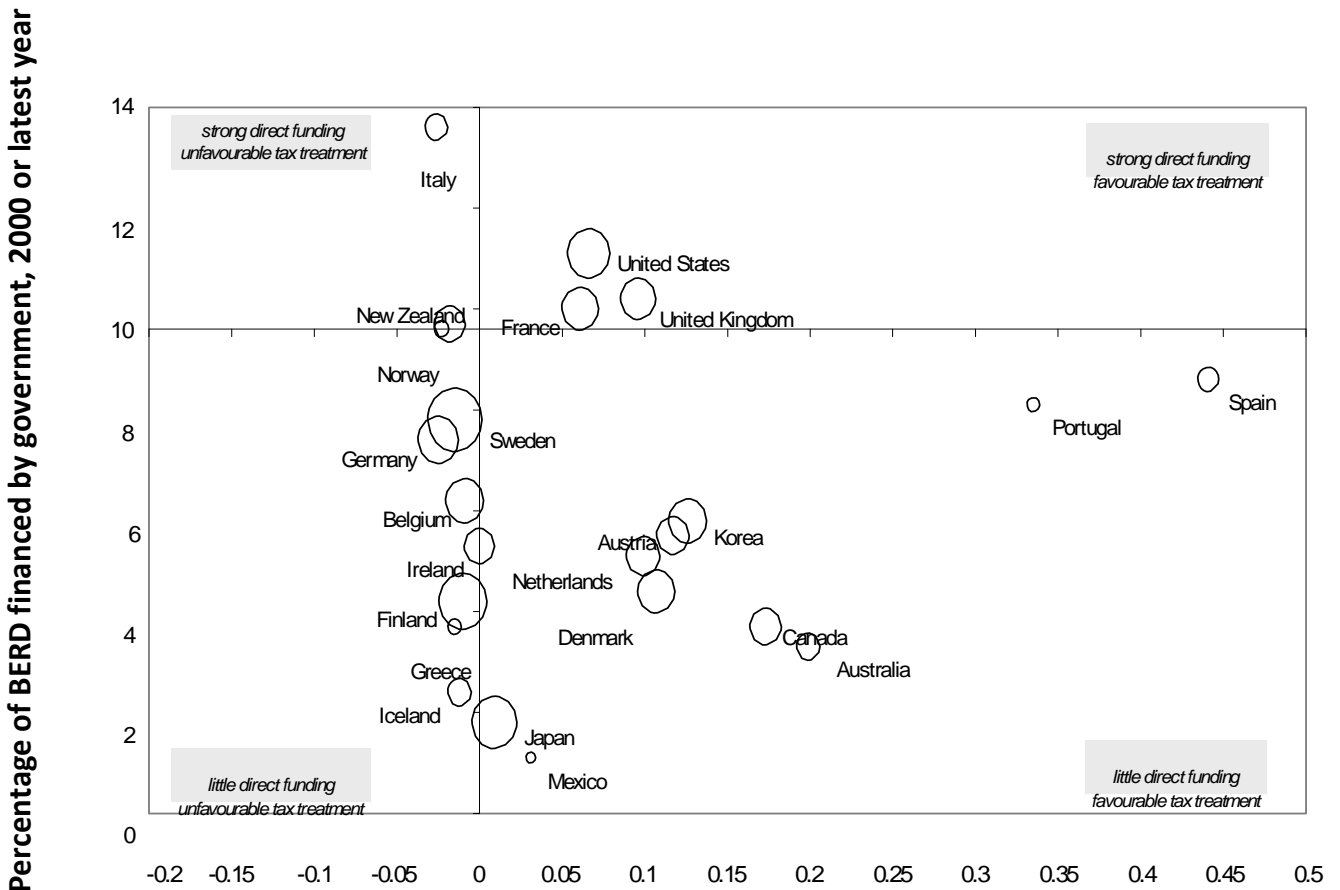
- Chinese proverb

Comparing the value of B-indexes 2002		
(manufacturing companies, by country)		
Country	Large company	Small company
Australia	0.801	0.801
Austria	0.875	0.875
Belgium	1.009	1.006
Canada	0.827	0.678
Denmark	0.893	0.893
Finland	1.01	1.01
France	0.939	0.939
Germany	1.025	1.025
Greece	1.015	1.015
Iceland	1.012	1.012
Ireland	1	1
Italy	1.026	0.557
Japan	0.991	0.879
Korea	0.874	0.821
Mexico	0.969	0.969
Netherlands	0.901	0.647
New Zealand	1.023	1.023
Norway	1.018	0.768
Portugal	0.665	0.665
Spain	0.559	0.559
Sweden	1.015	1.015
Switzerland	1.01	1.01
United Kingdom	0.904	0.894
United States	0.934	0.934

⁸ TAX INCENTIVES FOR RESEARCH AND DEVELOPMENT: TRENDS AND ISSUES, OECD, 2002

Government funding of business (OECD)
Direct (Grants) vs. Indirect (Tax Credits)

on one dollar of R&D outlay;



Authors Analysis & commentary:

This table indicates that the Canadian government finances approximately 4% of total business research whereas most other countries are significantly higher (e.g France, US & UK are all >10%).

As a result it appears that the Canadian government is not nearly as generous as other countries in funding SR&ED.

Despite this fact the SR&ED credit appears to have created a scenario where a smaller amount of funding is in fact creating a significant amount of SR&ED.

The next page provides a comparison of the funding provided directly (grants & contracts) vs. indirectly (tax credits). NOTE: These balances **do NOT** include “military & defence” related R&D spending.

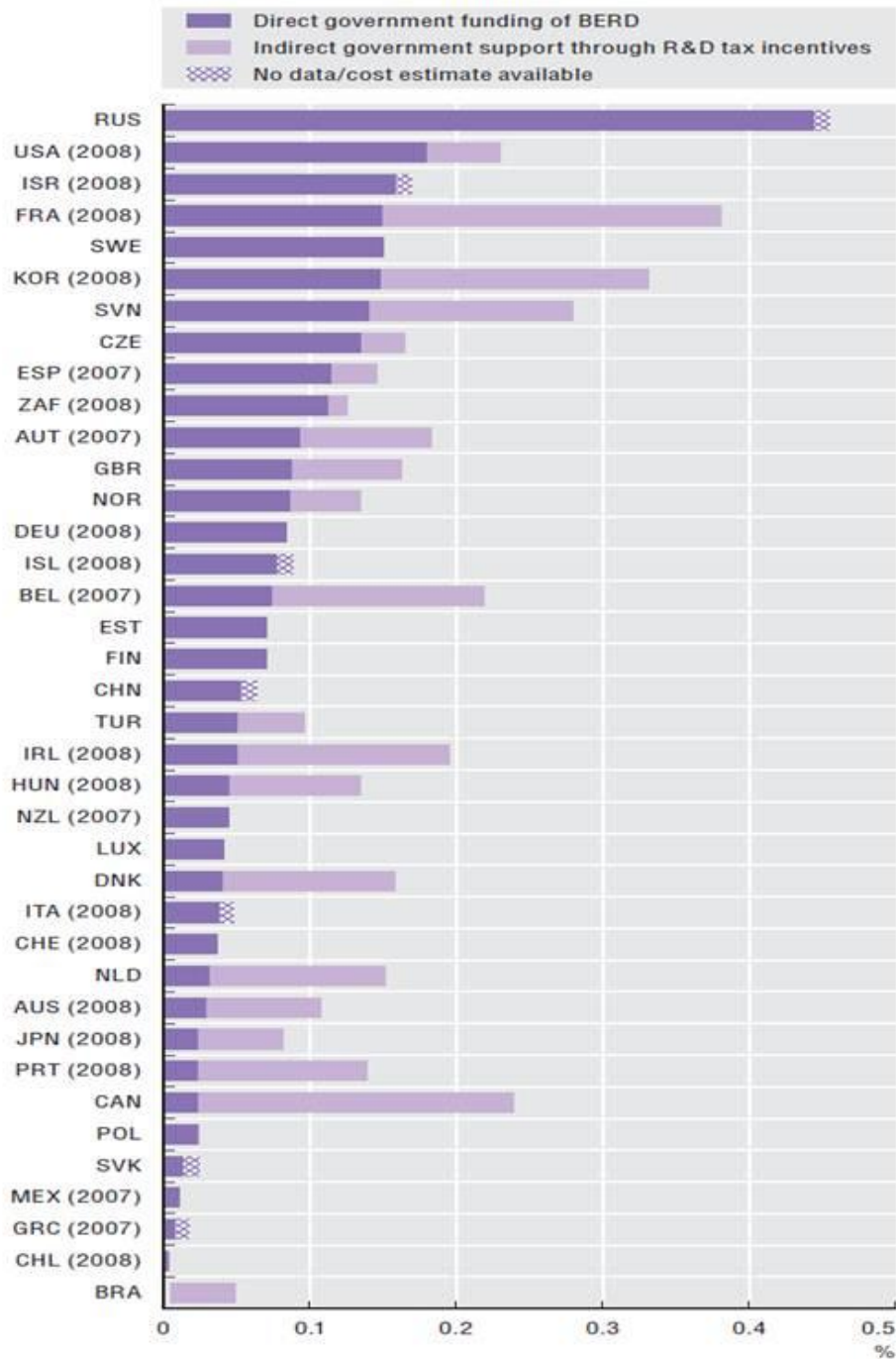
B-Index = before-tax income needed to break even

Notable quote:

“The best way to have a good idea is to have a lot of ideas.”

- Dr. Linus Pauling

Government funding of business R&D - Direct vs. Tax Credits⁹



Source: OECD, based on OECD R&D tax incentives questionnaires, January 2010 and June 2011; and OECD, Main Science and Technology Indicators Database, June 2011. See chapter notes.

⁹ OECD SCIENCE, TECHNOLOGY AND INDUSTRY SCOREBOARD 2011 © OECD 2011

Charging of Contingent fees by R&D tax consultants

Canada contemplating regulation of fees for consultant support

Changes are expected to limit consultants' share of the SR&ED credit as Ottawa expresses concern that too much federal science cash is flowing outside the "intended" sector.

On August 3, 2012 Finance Minister Flaherty announced,

"We continue to strive to make improvements to the administration of the SR&ED program and look forward to hearing from taxpayers and tax preparers on any initiatives that could allow us to make further progress.

The consultations seek input from stakeholders to better understand:

- why firms hire third-party tax preparers on a contingency-fee basis;
- why these tax preparers charge contingency fees;
- the prevalence of this practice;
- the amounts charged; and
- the impacts of this practice on the effectiveness of the SR&ED tax incentive program.

The [attached document](#) * provides guidance for the consultation. * Related Document¹⁰: Consultation Regarding the Impact of Contingency Fees on the Effectiveness of the Scientific Research and Experimental Development Tax Incentive Program

Stakeholders are invited to provide comments by October 1, 2012 to SRED-Consultations to RSDE@fin.gc.ca or:

SR&ED Consultations
Department of Finance
140 O'Connor Street
Ottawa, Ontario
K1A 0G5

¹⁰ <http://www.fin.gc.ca/activty/consult/sred-rsde-eng.asp>

Authors personal experience, examples & opinions

Facts & Issues

1) **Client choice** - I have practiced in the SR&ED field since 1993. From 1993 to 2000 I worked on some of the largest SR&ED files in Canada on an hourly or flat fee basis.

On almost all hourly agreements "sophisticated" clients required a budget and authorization before incurring any fee overruns. In reality these resulted in "flat fees."

When I left partnership and started MEUK Corporation I decided to offer clients all 3 billing options:

- hourly,
- flat fee or
- % of recovery

I have **clients who prefer each of these options** for various reasons.

2) **Needless complexity** - As the co-author of the SR&ED course for the Canadian Institute of CA's and seminar leader for the past 15 years I can say that I spend over 30 minutes explaining the just the rules on "specified employees."

He course itself runs a full 8 hours and only provide an overview of many "complex" issues.

Most CA's walk out of the course claiming it is:

- needlessly complicated &
- one of the most confusing areas of income tax they have ever explored.

The result is that they tend to charge a minimum \$5,000 for compilation of the SR&ED related tax forms, assuming the client prepares the technical (project) descriptions.

3) **Related liability** - Worse yet I have seen lawsuits for millions of dollars against CA's for failure to adequately:

- plan or complete the SR&ED forms
- within required deadlines.

Analysis

My experiences on billing methods is at each has its own pros & cons however, it is ultimately the claimant who should be empowered with choice..

The majority (approximately 80%) of first time claimants, under \$100,000 of ITC's prefer to use the % recovery in the first year.

The % fees for this work range from 2-20% of recovery dependent on the nature of the work and range of services provided.

I have some flat fee clients who's fees (including costs to plan & complete the project descriptions & income tax forms) are <2% of total credits.

Fees at the higher end of this fee range tend to be paid by clients with weaknesses in the SR&ED documentation systems.

Most clients will not pay aggressive fees for services which they believe they can perform on their own.

If the free market willing to pay high fees for product or service it is because they perceive high value.

Related Recommendations

The **free market** is likely the best mechanism to determine the fair price of any service commodity.

It should be the client's choice which method of billing & payment best meets their business needs.

As a result the government should not attempt to regulate the fee or service providers other than as to quality of work.

The Jenkins and other current SR&ED reports recommend, "streamlining the SR&ED claim system."

If the government policy makers & CRA wish to reduce the fees consultants charge all they need do is simplify the "perceived" current complexity of the program.

US perspective - Ryan LLC challenge to IRS legality of contingent fees¹¹

Since 2007 the IRS has prohibited the use of contingent fees for R&D tax credit consultants. These restrictions are outlined in IRS Circular 230.

This has resulted in a backlash by many US practitioners.

The related issues appear to be universal and have been outlined clearly in a recent complaint filed by one such practitioner.

On April 11, 2012 Ryan LLC filed suit in the U.S. District Court seeking judgment that the IRS has;

- exceeded the scope of authority to regulate the practice of CPAs before the IRS &
- requesting a permanent injunction against the IRS enforcing such provisions of Circular 230 to regulate the practice of CPA's.

Ryan, a US CPA firm which provides global tax services firm, alleges that the contingent fee restrictions imposed on practitioners in 2007 amendments to Circular 230 are unconstitutional because they

- unconstitutionally restrict the ability of taxpayers to pursue Ordinary Refund Claims with the IRS in violation of the petition Clause of the First Amendment of the United States Constitution.
- exceed the scope of regulation authorized in the statute.

Author's commentary

Given that the USA is regarded as a leader in the concept of "free market" forces vs. government control and regulation it appears ironic that they would favor the "regulation" method to decide such policies.

As this issue gains momentum in Canada we expect to see harmonization of the results in the US and internationally.

¹¹ Full complaint as filed by Ryan LLC (69 pages) - <http://www.ryan.com/Assets/Downloads/Complaint.pdf>

Recent SR&ED tax cases & related issue(s)

Copies of the judgments are available from the Tax Court of Canada's website.¹²

Bagtech (PWC Trustee) – CCPC status with > 50% foreign shareholders¹³

Facts:

Despite the fact that the "person" holds more than 50% of Class A shares of Bagtech, under the USA (Unanimous Shareholders Agreement), it could elect a majority of directors. According to the USA, these are residents of Canada who elect a majority of directors,

- 4 of 7 directors during 2004 and
- 4 of 8 directors during 2005

Issue(s):

Can the terms of a USA for the election of directors of a corporation be taken into account in determining de jure & or defacto "control" of a company ?

Relevant legislation and analysis:

It appears from paragraph 146 (1) of the CBCA four conditions in order that an agreement could be described as unanimous shareholder agreement.

- First, the agreement must, of course, be lawful and consistent with the general requirements of the contracts.
- Then, the agreement must be written, and it is important to clarify that this requirement is indeed a condition of validity, not only a question of evidence.
- It must also be signed by all shareholders of a corporation, either among themselves or with third parties &

- finally, it must restrict in whole or in part the powers of directors to manage the business and affairs of society, or supervise the management.

Ruling & rationale: win USA breaks control

Based on the facts and legislation in question the judge concluded that the foreign "person" could not,

"control Bagtech within the meaning of the ITA¹⁴ ...

[with the result] the company is entitled to a "refundable investment tax credit."

Implications and author's commentary

In Canada this issue tends to recur every 5-10 years (see Perfect Fry 2004).

The issue is also prevalent internationally due to the enhanced research tax incentives for domestic SME's (Small & Medium Sized Enterprises).

The rulings tend to vary so this will likely be an issue of contention for many years to come.

Notable quote:

"In every work of genius, we recognize our once rejected thoughts"

- Ralph Waldo Emerson

¹² Tax Court of Canada website [www.tcc-cci.gc.ca]

¹³ PWC Trustee for BIOARTIFICIAL GEL TECHNOLOGIES (BAGTECH) INC v. The Queen - Tax Court of Canada, 2012 CCI 120, Date : 20120412, Dossier : 2009-3734(IT)G

¹⁴ paragraph b) of the definition of a CCPC in subsection 125 (7)

Questions or feedback

We welcome your questions or feedback on any issues raised in this letter.

We also encourage interested parties to examine:

- past SR&ED newsletters
- SR&ED tax guide [the Guide to RDBASE.NET],
- “RDBASE.NET” online SR&ED tracking software &
- additional tutorials re. eligible SR&ED activities at

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Although we endeavor to ensure accurate & timely information throughout this letter, it is not intended to be a definitive analysis of the legislation, nor a substitute for professional advice.

Before implementing decisions based on this information, readers are encouraged to seek professional advice, in order to clarify how any issues discussed herein, may relate to their specific situations.

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