

A Comparative Study of the Canadian and  
European Taxation of Intellectual Property Income:  
Has the Time Come for a Canadian Patent Box?

Travail dirigé  
Maîtrise en droit, option fiscalité

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par

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(LL. M. (fiscalité))

Août 2012

## SOMMAIRE

Le Canada est reconnu mondialement pour son généreux régime de recherche et développement (« R & D ») qui vise notamment à stimuler les retombées fiscales liées à la création de la propriété intellectuelle (« PI »). Toutefois, la politique fiscale sous-jacente à ce régime n'est que partiellement atteinte. En effet, on assiste actuellement à un exode de la PI développée au Canada, en particulier les brevets et les droits d'auteur liés aux logiciels informatiques, vers des juridictions où les revenus en découlant sont imposés à de plus faibles taux. Par conséquent, ce sont ces autres juridictions qui jouissent des revenus liés à l'imposition de la PI conçue au Canada et souvent largement subventionnée par son régime de R & D. Essentiellement, le Canada subventionne la main d'œuvre spécialisée œuvrant dans le domaine de la R & D sans récolter les bénéfices à long terme découlant de la valeur ajoutée générée par cette main d'œuvre.

Afin de contrer ce phénomène, certains pays ont introduit des régimes favorables à la détention de la PI, lesquels sont généralement désignés par le vocable *patent box*. Ceux-ci complémentent habituellement un régime de R & D afin de stimuler l'innovation.

Le présent texte analyse les structures utilisées par les entreprises multinationales afin d'exporter et d'exploiter la PI sans être assujetties à long terme à l'impôt canadien ainsi que les aspects techniques et la politique fiscale sous-jacente à certains *patent boxes* étrangers, et ce, dans le but de considérer l'opportunité pour le Canada d'adopter un régime semblable.

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## INTRODUCTION

Due to the globalization of markets, the mobility of knowledge and capital, and the improvement of other countries' research and development ("R & D") programs and innovation tax incentives, Canada faces an increased international tax competition in terms of attracting and retaining foreign direct investment ("FDI"). Once an innovation cluster, Canada now essentially funds specialized R & D workers without obtaining, in the long term, the benefits associated with this value-added workforce. Indeed, although its R & D regime, together with the quality of Canadian research centers, provides an incentive to multinational enterprises ("MNES") to carry on R & D activities in the country, Canada generally fails to provide them with an incentive to hold and exploit their intellectual property ("IP") in the country.

According to the authors of a study on competition in taxes, international tax competition was the principal driver of the decline in corporate tax rates of Organisation for Economic Co-operation and Development ("OECD") countries from nearly 50% in the early 1980s to less than 35% in 2001.<sup>1</sup> Indeed, MNES have become more focused on building and deriving value from IP, and a large part of their value is now based on their ability to exploit IP.<sup>2</sup> In addition, MNES

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<sup>1</sup> Michael Devereux, Ben Lockwood, and Michela Redoano, "Horizontal and Vertical Indirect Tax Competition: Theory and Some Evidence from the USA" (2007) 91:3 *Journal of Public Economics* 451-479. See also Robert D. Atkinson, *Effective Corporate Tax Reform in the Global Innovation Economy*, The Information Technology & Innovation Foundation (Washington DC: ITIF, July 19, 2009) ([http://www.itif.org/files/090723\\_CorpTax.pdf](http://www.itif.org/files/090723_CorpTax.pdf)). A similar trend is observed in Canada where the general corporate income tax rate has been reduced in recent years. In a study on FDI in several countries, author Rosanna Altshuler found that the elasticity of FDI to corporate tax rates has increased from 1.5 in 1984, to 3 in 1992, to 3.7 in the early 2000s, indicating that a 1% reduction in the host country's corporate tax rate raises FDI by 3.7%: Rosanna Altshuler, Harry Grubert, and T. Scott Newlon, "Has U.S. Government Investment Abroad Become More Sensitive to Tax Rates?," in James R. Hines Jr., ed., *International Taxation and Multinational Activity* (Chicago: University of Chicago Press, 2000), 9-38; and Ruud de Mooij and Sjef Ederveen, "Taxation and Foreign Direct Investment: A Synthesis of Empirical Research" (2003) 10:6 *International Tax and Public Finance* 673-93.

<sup>2</sup> United Kingdom, HM Revenue & Customs, *Corporate Tax Reform: Delivering a more competitive system* (London: HM Revenue & Customs, November 2010), at 47. For example, "June 2011 auction bid for Nortel's patent portfolio that skyrocketed from a first bid value of around \$900 million (already considered high) to an unexpected \$4.5 billion final price shows the strategic, more than the intrinsic, value that [IP] has in today's technological world": Alina Macovei and Guy van der Heyden, "Luxembourg, an attractive location for intellectual property," *International Tax Review*, January 3, 2012, at 1 (<http://www.internationaltaxreview.com/>

seek more than ever to optimize their intangible asset portfolios and reduce their overall tax burden in order to maximize shareholders' return on investment. In the current knowledge-based economy, MNEs are considering R & D<sup>3</sup> and IP ownership on a global basis, and the centralization of IP rights has become paramount.<sup>4</sup>

In this period of remarkable change, four persistent trends have emerged. Firstly, several jurisdictions have been reducing their corporate income tax rates while broadening their tax base, for example by increasing indirect taxes and duties.<sup>5</sup> Secondly, many jurisdictions have tightened their anti-abuse regimes.<sup>6</sup> Thirdly, numerous jurisdictions have bestowed preferential tax treatment upon special sources of income.<sup>7</sup> Finally, in considering the impact of taxation on the location of IP, several jurisdictions have introduced or improved their R & D tax regimes<sup>8</sup> and adopted IP tax incentives in order to focus on the entire innovation value chain, having determined that a narrow focus on upfront subsidies such as R & D tax credits was not sufficient.<sup>9</sup>

The OECD Frascati Manual provides a broadly accepted definition of R & D: “[It] comprise[s] creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to

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IssueArticle/2955354/Supplements/Luxembourg-Luxembourg-an-attractive-location-for-intellectual-property.html?supplementListId=84404).

<sup>3</sup> In this paper, the term R & D refers to both “research and development” and “scientific research and experimental development.”

<sup>4</sup> As noted by one author, central R & D management and IP ownership may indeed provide many commercial benefits, including better identification of IP, management of R & D expenditures, monitoring of return on investment, and control over MNEs' resources: Wim Eynatten, “European R & D and IP Tax Regimes: A Comparative Study” (2008) 36:11 *Intertax* 502-518.

<sup>5</sup> Wolfgang Kessler and Rolf Eicke, “The Emergence of R & D Tax Regimes in Europe” (2008) 50:10 *Tax Notes International*, 845-847, at 845. Consider the province of Quebec's mining duties which have increased from 12% to 16% between 2010 and 2012.

<sup>6</sup> *Ibid.* Examples include “measures such as anti-avoidance rules, anti-treaty-shopping, limitation on benefits and change of ownership rules.”

<sup>7</sup> *Ibid.* Examples include the Netherlands' comprehensive participation exemption regime for holding companies, Switzerland's holding privilege and Germany's special regime for private capital income (*Abgeltungsteuer*).

<sup>8</sup> More than 20 OECD countries offer targeted R & D tax incentives, up from 12 in 1995. Some introduced temporary tax measures in response to global recession (for example, Japan). Others have broadened their R & D tax incentives (for example, France and Australia).

<sup>9</sup> PricewaterhouseCoopers, “R & D Tax Trends: Creating a Climate for Innovation,” *Global R & D Tax News*, July 2011, at 4 (<http://www.publications.pwc.com/DisplayFile.aspx?Attachmentid=4802&Mailinstanceid=21491>).

devise new applications.”<sup>10</sup> R & D is not limited to people in white lab coats, and often covers a much wider range of innovation in a variety of fields.<sup>11</sup> IP, which is defined in the Oxford dictionary as any intangible property that is the result of creativity,<sup>12</sup> is highly mobile and “can be easily separated from [...] where it was developed and migrated to low-tax jurisdictions.”<sup>13</sup>

R & D is contributing and benefiting to “productivity, growth, economic performance and the achievement of social objectives, [and] it is generally agreed that governments have a role in encouraging appropriate R & D levels and expenditures.”<sup>14</sup> In Canada, the policy principles underlying the current R & D regime were first set out in the 1983 federal budget and continue to remain in effect. Those policy principles can be summarized as follows:

Any firm’s [R & D] projects have to make business sense; the results need to be marketable, and the project should be profitable. Thus, the incentive structure for [R & D] should continue to contain general measures, such as broad-based tax incentives, that leave day-to-day decisions on [R & D] projects in the hands of the private sector. While there will also continue to be a role for grant programs targeted to research and development in industry, the tax system is best suited to delivering general incentives. The goal [R & D] policy is not to create [R & D] solely for its own sake. To be effective, the results of [R & D] have to be used – to create jobs, to improve productivity and competitiveness, to develop new products that Canadians can sell to other Canadians and to the world.<sup>15</sup>

The Canadian tax regime provides numerous incentives at the development stage of the IP lifecycle and its R & D program encourages MNEs to develop IP in Canada, promoting job creation

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<sup>10</sup> The Frascati Manual provides that R & D covers: (i) basic research, (ii) applied research and (iii) experimental development: Organisation for Economic Co-operation and Development, *Frascati Manual 2002: Proposed Standard Practice for Surveys on Research and Experimental Development* (Paris: OECD, 2002), at 30.

<sup>11</sup> Including chemical and pharmaceutical industries, biotech, media, information and communication technology, oil and gas, mining, utilities, food, automotive, building and construction, engineering consultancy, and financial services: Eynatten, *supra* note 4.

<sup>12</sup> *Oxford Dictionaries Online*, <http://oxforddictionaries.com/>.

<sup>13</sup> Jim Shanahan, “Is it time for your country to consider the ‘patent box’?,” *PwC’s Global R & D Tax Symposium on Designing a Blueprint for Reducing the After-Tax Cost of Global R & D*, May 23, 2011, at 3 ([http://download.pwc.com/ie/pubs/2011\\_is\\_it\\_time\\_for\\_your\\_country\\_to\\_consider\\_the\\_patent\\_box.pdf](http://download.pwc.com/ie/pubs/2011_is_it_time_for_your_country_to_consider_the_patent_box.pdf)).

“[I]nnovation is increasingly mobile as the talent and infrastructure to conduct innovation-based activities are available in many nations around the world”: Robert D. Atkinson and Scott Andes, *Patent Boxes: Innovation in Tax Policy and Tax Policy for Innovation*, The Information Technology & Innovation Foundation (Washington DC: ITIF, October 4, 2011), at 3 (<http://www.itif.org/files/2011-patent-box-final.pdf>).

<sup>14</sup> Organisation for Economic Co-operation and Development, *Tax Incentives for Research and Development: Trends and Issues* (Paris: OECD, 2003), at 4.

<sup>15</sup> Canada, Department of Finance, *Research and Development Tax Policies: A Paper for Consultation* (Ottawa: Department of Finance, April 19, 1983).

and scientific and technological advancement with economic benefits. This contributes to spurring innovation and knowledge in Canadian research centers, universities and colleges. However, after the R & D phase, Canada's tax regime effectively discourages the retention of IP by failing to provide additional incentives to exploit that IP at the commercialization stage, resulting in the loss of the economic benefits of the R & D outputs. Canada subjects the IP to combined federal and provincial corporate tax rates that are higher than those in countries that have recently become jurisdictions of choice for exploiting IP, thus creating a competitive disadvantage for Canadian MNEs that retain their IP in Canada. Indeed, Canadian MNEs need to exploit their IP globally in order to effectively compete with foreign MNEs "that are often larger, better capitalized, and face lower overall tax burdens."<sup>16</sup> Obviously, taxation is not the only factor in selecting a jurisdiction to perform R & D activities or hold IP rights, but studies show that tax rates do have a substantial impact.<sup>17</sup> Furthermore, because "commercialization is the link between R & D and economic growth, but commercial activity [in the country] does not necessarily follow from successful R & D [developed in that country]," R & D alone, while necessary, is not sufficient to render Canada globally competitive.<sup>18</sup>

The absence of a favourable IP income tax regime and corporate tax rates higher than jurisdictions of choice for exploiting IP are arguably the driving forces behind the exodus of intangible assets from Canada to countries with a more favourable tax regime.<sup>19</sup> The Canadian

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<sup>16</sup> Derrick A. Novis, "Intellectual Property Planning in Challenging Economic Times," *CCH International Tax News*, April 2009 ([http://www.kpmg.com/Ca/en/IssuesAndInsights/ArticlesPublications/Business-Adviser/Documents/200910/1707\\_IntellectualProp\\_ArticleReprint\\_v3.pdf](http://www.kpmg.com/Ca/en/IssuesAndInsights/ArticlesPublications/Business-Adviser/Documents/200910/1707_IntellectualProp_ArticleReprint_v3.pdf)).

<sup>17</sup> Eynatten, *supra* note 4. A study of European multinational corporations between 1995 and 2005 revealed that the intangible assets portfolio of a subsidiary located in a low-tax jurisdiction increased, on average, by 1.4 for each 1% increase in the tax differential with all other group affiliates: Matthias Dischinger and Nadine Riedel, "Corporate Taxes and the Location of Tangible Assets within Multinational Firms" (2011) 95:7 *Journal of Public Economics* 691-707.

<sup>18</sup> Atkinson and Andes, *supra* note 13, at 7.

<sup>19</sup> During the fiscal year 2010-11, 10.01% of the Canadian patents were granted to resident of foreign countries: Canada, Canadian Intellectual Property Office, *CIPPO Annual Report 2010-2011: Adapting to Changing Realities* (Ottawa: Industry Canada, 2011), at supplementary table 10.

International Council qualifies Canada as “a nation bleeding ingenuity,” since “Canada’s IP harvest is too frequently packaged for export”:

Canada is bleeding IP. Research conducted on behalf of the Canadian International Council shows that 58% of the venture-backed Canadian start-ups that changed hands between 2006 and 2010 were sold to foreign buyers. And every company that left took with it, on average, two to three patents for an estimated total of 66% of the [IP] possessed by all those companies that were up for sale — IP that was often developed with public financing or incentives and is now generating income for foreign owners. [...] [L]osing too much IP can have a negative impact on Canadian companies or institutions, particularly if they are forced to go abroad to replace it. Recent research by the World Bank shows that Canada had a net loss of \$4.5 billion in 2009 — significantly more than many OECD nations — when it comes to the purchasing and licensing of technology.

This cross-border shopping has saddled Canada with an enormous IP deficit compared with its OECD counterparts. In contrast, the United States has a massive annual IP surplus — \$64.6 billion in 2009 — followed at a distance by Japan (\$4.9 billion), France (\$4.1 billion), Sweden (\$2.9 billion), Britain (\$3.4 billion) and the Netherlands (\$1.4 billion). The editor of *Intellectual Asset Management*, the esteemed British-based IP journal, wrote recently that Canada has “no excuse” for its technology deficit. “It looks like something structural may be going wrong,” according to Joff Wild.<sup>20</sup>

The IP deficit illustrates that foreign MNEs acquiring Canadian IP have no incentive to keep it in the country. Furthermore, to remain competitive internationally, Canadian MNEs may be required to transfer their IP assets and businesses offshore (along with the resulting revenue stream), often to tax havens or countries that provide a favourable tax regime for IP income.<sup>21</sup> Some countries also have observed this situation, including the United Kingdom (“UK”), which has been proactive by adopting a tax regime known as a “patent box”:<sup>22</sup>

Successful exploitation in the global market requires significant further high value activity. There are currently no specific incentives for companies to retain IP in the UK during commercialisation. In contrast, several other jurisdictions provide incentives for companies to own and exploit IP, particularly patents, in addition to R & D incentives. [...] As a result, the UK tax regime can be uncompetitive for companies to hold and exploit patents. This provides incentives for businesses to transfer patents offshore prior to the full realisation of their value, in order to benefit from more advantageous regimes elsewhere. [...]

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<sup>20</sup> Canadian International Council, “Rights and Rents: Why Canada must harness its intellectual property resources,” 2011, at 37 (<http://www.opencanada.org/wp-content/uploads/2011/10/CIC-IP-Report-2011.pdf>). See Figure 1 in appendix B.

<sup>21</sup> Pure tax havens will not be discussed in this paper. They are infrequently used as a location to hold IP, because they generally do not have an extensive network of tax treaties under which the payer’s country is prevented from levying withholding taxes on royalties. Nevertheless, some countries offer both low tax rates and treaty benefits, such as Barbados, which has a tax treaty with Canada, or Bermuda, which has a tax treaty with the Netherlands.

<sup>22</sup> Patent box tax regimes are so-called because the taxpayer usually has to tick a box on the tax form. They are also known as “innovation box” (for example, Netherlands) or “patent income deduction” (for example, Belgium). In this paper, the term “patent box” is used to apply to the universality of tax incentive programs designed specifically for IP income.

The Patent Box will aim to reward successful technical innovation. The Government believes that it is right to introduce this reform now in order to prevent movement of IP offshore and encourage the development of new patents by UK businesses, protecting and enhancing the status of the UK as a world leader in this field.<sup>23</sup>

Through the manufacturing of products resulting from the exploitation of IP and a generous after-tax receipt of income related thereto, a patent box generally aims to encourage investments in technology and IP generated from R & D activities.<sup>24</sup> In 1973, Ireland became the first nation to develop a regime favourable to IP income, but Ireland's tax exemption on patent royalties was abolished as of November 24, 2010.<sup>25</sup> In 2007, the Netherlands was the first country to officially introduce a patent box, and several other European countries have followed suit, including Belgium, France, Hungary, Luxembourg, the Netherlands, Spain and Switzerland. China also has a patent box regime, and the proposed UK patent box will be introduced in 2013. As introducing patent boxes makes jurisdictions more attractive for holding and exploiting IP, governments of countries without such a regime may wish to consider tax policies conducive to attracting and retaining IP. As suggested by the Advisory Panel on Canada's System of International Taxation, Canada may need "to improve the tax treatment of IP income, with the goal of improving Canada's record at commercializing the results of R & D performed in Canada, as well as encouraging the acquisition of IP from outside Canada for further development and licensing."<sup>26</sup>

This paper examines how Canada could spur the holding and exploitation of IP in the country by domestic and foreign MNEs through the adoption of a patent box or similar tax regime. In conjunction with its current R & D program, such a regime would enable MNEs to "operate on a global basis from Canada in a way that corresponds to how [MNEs are] actually organized and

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<sup>23</sup> HM Revenue & Customs, *supra* note 2, at 49-51.

<sup>24</sup> Dirk Van Stappen, "Patent income deduction stimulates innovation business" (2007) 18:1 *International Tax Review*, 43-45.

<sup>25</sup> Ireland, Department of Finance, *The National Recovery Plan 2011 – 2014* (Dublin: Department of Finance, November 24, 2010), at 96; and Section 26 of the Finance Act 2011 (Irl).

<sup>26</sup> Mark Parsons, *Rewarding Innovation: Improving Federal Tax Support for Business R & D in Canada*, C.D. Howe Institute Commentary no. 334 (Toronto: C.D. Howe Institute, September 2011), at 16 ([http://www.cdhowe.org/pdf/Commentary\\_334.pdf](http://www.cdhowe.org/pdf/Commentary_334.pdf)).

conducted on functional lines, but with many of the same tax consequences of operating offshore.”<sup>27</sup> The first part of the paper outlines the Canadian tax regime applicable to IP, with certain comparisons made to other countries, as well as certain structures used by MNEs to maximize worldwide IP profits while minimizing their global tax burden. The IP lifecycle is also revisited in order to illustrate that governments are able to design tax incentives to spur the development and retention of IP. In order to understand how MNEs are able to move their IP offshore through structures such as the Licensing Model, while not being subject to Canadian Foreign Accrual Property Income (“FAPI”) rules or other Controlled Foreign Company (“CFC”) regimes, the first part provides an overview of the IP taxation. The second part examines the patent box regimes adopted by certain European countries and China in order to outline the technical features that would be relevant to a Canadian patent box, including qualifying IP as well as qualifying IP income and its tax treatment. A cost-benefit analysis of the current Canadian R & D regime and of a Canadian patent box is also performed. Finally, the opportunity for Canada to adopt a patent box regime in the context of uncertain economic times, as currently being experienced, is examined in light of the underlying tax policy, which, in the end, should reflect the social contract that dictates the tax burden to be assumed by individuals and businesses.

## **1. TAX REGIME APPLICABLE TO INTELLECTUAL PROPERTY**

### **1.1. TAX ENVIRONMENT SURROUNDING THE DEVELOPMENT OF INTELLECTUAL PROPERTY**

Governments consider IP a highly coveted asset. As Kessler and Eicke wrote, “Patents and other forms of IP are in some ways like diamonds – exclusive, unique, and often brilliant. Even though patents are not, like diamonds, forever, they are as valuable.”<sup>28</sup> In deciding where to

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<sup>27</sup> Brian Mustard, Nick Pantaleo, and Scott Wilkie, “Why not Kenora? Reflections on what Canada’s approach to taxing foreign business income is and could be,” *Report of Proceedings of Sixty-First Tax Conference*, 2009 Tax Conference (Toronto: Canadian Tax Foundation, 2010), 6:1-42, at 32.

<sup>28</sup> Kessler and Eicke, *supra* note 5, at 1.

develop and hold IP, MNEs will consider a variety of factors, including the availability of qualified research institutions, the education level of the available workforce and the country's laws regarding ownership and protection of IP.<sup>29</sup> Tax considerations are invariably highly relevant and will have a significant influence on an MNE's choice of jurisdiction. Therefore, governments must decide upon the type and scope of fiscal aid they will offer throughout the IP lifecycle.

### **1.1.1. Intellectual Property Lifecycle**

The IP lifecycle outlines the process of turning an idea into a revenue-producing property. IP statutory or common law protection generally provides an inventor with a time-limited monopoly to exploit his innovation, excluding others from using the protected property.<sup>30</sup> However, turning an idea into a marketable product is a lengthy and costly process, and success is not guaranteed. In order to understand an MNE's decision with respect to choice of jurisdiction for registering IP, locating R & D activities, and holding and exploiting IP, one needs to consider that IP passes through a set of four stages during its economic life: the introduction stage, growth stage, maturity stage, and decline stage.

While the evolution of products during their lifecycle is traditionally analyzed from a management and marketing perspective,<sup>31</sup> the tax-driven decisions of an MNE with respect to the location of IP through the different stages of the IP lifecycle, in particular during the introduction, growth, and maturity stages, can be explained by analyzing the following four business phases: the creation phase, development phase, registration phase, and commercialization phase.<sup>32</sup> The evolution of the IP's fair market value during these four stages and four phases is illustrated in Figure 2 in appendix B.

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<sup>29</sup> Noel Cunningham, "Review of Global R & D Tax Incentives" (Mazars, July 2010), at 3 ([www.mazars.ie](http://www.mazars.ie)).

<sup>30</sup> Stephen J. Perry and T. Andrew Currier, *Canadian Patent Law* (Markham: LexisNexis Canada, 2012), at 58.

<sup>31</sup> Product lifecycle is often analyzed having regard to the 4P's of marketing: Product, Price, Place, and Promotion.

<sup>32</sup> For simplicity, such phases will be described below with reference only to patents as examples. Note that section 1.2.1 provides the legal definitions of certain types of IP and their characterization for tax purposes.

The first phase reflects the pure intellectual conceptualization of an invention. It involves creating a novel and distinct concept, and generally requires intensive R & D. In an effort to reap the benefits of useful, and sometimes lucrative, innovations, MNEs are willing to invest a significant amount of money with uncertain future reward.<sup>33</sup> At the creation stage, IP has only potential value and capturing and securing the invention is important to ensure any future value.

In the development phase, the inventor attempts to reduce the invention to a practical form. Since a patent must meet a utility requirement from a business perspective, it is necessary that its creation be capable of an actual, real-world implementation.<sup>34</sup> As such, developing an initial concept into a marketable product or service involves further R & D either on the IP itself or the processes required to manufacture or deliver the product or service.

The registration phase is critical, as a successful patent registration provides the inventor with exclusive rights over the invention, preventing others from drawing from the same revenue stream. These monopoly rights, which are limited in time and geographic scope, are intended to provide compensation to individuals and businesses for the substantial risk and investment involved in creating and developing a novel product.<sup>35</sup> During the growth stage, the IP value will increase as the IP evolves in the registration process or, from an international perspective, as successful registration is obtained in different jurisdictions. Considering that the costs of drafting and filing a patent application are substantial, selecting the registration jurisdictions must be done strategically.<sup>36</sup> The timeliness of patent registration is also important as more than one inventor may seek registration for the same invention, in particular under “first to file” regimes.<sup>37</sup>

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<sup>33</sup> HM Revenue & Customs, *supra* note 2.

<sup>34</sup> Perry and Currier, *supra* note 30, at 59.

<sup>35</sup> Maria Isabel Manley and Edward Nodder, “Why Life-Cycle management is a necessity,” *Managing Intellectual Property* (2009) (<http://www.managingip.com/Article/2324845/Why-life-cycle-management-is-a-necessity.html>).

<sup>36</sup> Perry and Currier, *supra* note 30, at 69.

<sup>37</sup> In *Mycogen Plant Science, Inc. v. Bayer Biosciences N.V.*, 2010 FC 124, the court discusses the disappearance of conflicting patent applications under the post-1989 Patent Act, RSC 1985, c. P-4, which introduced a “first to

Once registration is obtained, the IP shifts from the growth stage to the monetization, or maturity, stage that comprises the IP commercialization phase. The patent holder is granted, for the term of the patent, the exclusive right of using the invention or selling it to others. The patent rights may be assigned, in whole or in part, generally, or subject to certain territorial limitations, and either for the whole term or for any part thereof.<sup>38</sup> The patent may also be licensed to third parties. In such circumstances, the patent holder may grant the right to make and use the invention, either exclusively or non-exclusively.

Finally, the IP ages and enters the decline stage. It begins to lose value as the statutory protection elapses, or as the underlying technology comes to maturity or becomes obsolete.<sup>39</sup>

In the course of the IP lifecycle, MNEs must first decide the location of their R & D activities, and then decide in which jurisdictions they would like to obtain patent protection. They must also define their organizational structure, including the legal form and location of the entity that will hold the patents.<sup>40</sup> MNEs are free to hold, and do hold, IP in a location different both from where the invention was generated and where the patent protection is sought.<sup>41</sup>

In light of this legal environment and practical reality, governments must decide in what manner and to what extent they would like to capture the benefits of IP, as the business decisions described above may be significantly affected and driven by statutory tax incentives.

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file” regime, contrasting with the previous “first to invent” rule. The new regime has significantly reduced the number of conflicting patent applications, and provides applicants with strong incentives to expedite their filings.

<sup>38</sup> Perry and Currier, *supra* note 30, at 67.

<sup>39</sup> Pfizer's Canadian patent for Lipitor expired in July 2010. Until this time, Pfizer enjoyed a monopoly over sales of the drug. However, when the patent expired in mid-2010, companies such as Apotex, Teva, and Cobalt readily entered the market, offering a generic version of the drug at a lower cost. Pfizer's patent in the United States (“US”) expired the following year. In the first quarter of 2012, Pfizer reported a 19% drop in net income, which it largely attributed to the loss of its Lipitor exclusivity: “Pfizer Reports First-Quarter 2012 Results,” *Press Release* (May 1, 2012) ([http://www.pfizer.com/news/press\\_releases/pfizer\\_press\\_release.jsp?guid=20120501006028en&source=RSS\\_2011&page=1](http://www.pfizer.com/news/press_releases/pfizer_press_release.jsp?guid=20120501006028en&source=RSS_2011&page=1)).

<sup>40</sup> Rachel Griffith, Helen Miller, and Martin O’Connell, “Corporate taxes and the location of intellectual property” (Katholieke Universiteit Leuven, March 2011) (<http://www.econ.kuleuven.be/eng/ew/seminars/Paper%20Griffith%2028-04-11.pdf>), at 3.

<sup>41</sup> *Ibid.* For instance, the portion of European Patent Office applications that UK multinationals hold in offshore subsidiaries increased from 8% in 1985 to 30% by 2005.

Governments have for some time now subsidized investments in research and innovation to attract R & D activity within their territories, and are continually looking for more effective ways to allow R & D programs to play a greater role in fostering a more competitive and prosperous economy. Governments also understand that, at the introduction stage, MNEs' R & D activities are less mobile since the principal factor driving the choice of a jurisdiction to carry out such activities is the presence of experts and research centers. Once the MNEs have determined the jurisdiction(s) that best suit their needs in terms of expertise, they will structure their affairs in order to minimize the tax burden resulting from that necessity. Even though tax incentives are not a substitute for expertise, they nevertheless promote the development of that expertise.<sup>42</sup>

As the IP evolves in the lifecycle, it becomes more mobile since it can easily be separated from the expertise required to develop products and services from it. Certain jurisdictions have responded to this inherent mobility by introducing policies and patent box regimes to subsidize IP income. Such regimes target intangible assets in the commercialization phase of the IP lifecycle in an effort to encourage businesses to hold and exploit IP within their jurisdiction.

### **1.1.2. Design of R & D Incentives**

Canada has employed a variety of tax incentives, such as tax credits, deductions, and grants, that target the creation and development phases of the IP lifecycle, in order to establish itself as a world leader in technology and innovation. However, after these initial phases, Canada generally fails to provide any additional tax benefits, such as a patent box, to ensure that the IP is retained and exploited in Canada.<sup>43</sup> As a result, profit-minded businesses, with the means to do so, generally decide to hold the IP generated in Canada through an offshore entity.

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<sup>42</sup> Consider the success of the province of Quebec's multimedia tax credits under which eligible taxpayers may benefit of tax credits amounting to 37.5% of labour costs: section 1029.8.36.0.3.8 and following of the Taxation Act, RSQ, c. I-3, as amended ("TA"). See also the discussion in section 2.3.1.

<sup>43</sup> Novis, supra note 16.

R & D is acknowledged as an important contributor to productivity, growth, and economic performance, and the prevalent view is that greater investment in R & D will result in significant social benefit: “Spending on [R & D] is widely acknowledged as providing benefits not only to the firm undertaking the activity but also to the economy at large in the form of lower prices, improved products and access to new production technologies.”<sup>44</sup> Therefore, it is generally agreed that governments have both an incentive and a role in encouraging R & D activity.<sup>45</sup> Given that countries around the world are offering increasingly generous R & D regimes, governments must ensure that their R & D programs are both attractive and competitive from a tax perspective. As such, countries employ a wide range of incentives to stimulate R & D activity, including: (i) tax credits; (ii) super deductions; (iii) accelerated capital depreciation; (iv) grants, loans and direct equity investments; (v) tax holidays; and (vi) favourable sales tax, value-added tax or other tax treatment. These incentives, which are discussed below, consist of variables that may be adapted in order to customize governments’ R & D programs more precisely.

R & D incentives can essentially be divided into two groups: selective incentive programs and entitlement programs.<sup>46</sup> Selective incentive programs, such as grants, equity investments, and tax holidays, generally allow governments to dictate the amount and use of funds and to retain control over the nature of the R & D conducted, while ensuring that the industry helps in addressing specific public objectives, such as health care, defence, and environmental sustainability. Entitlement-based programs, such as tax credits, super deductions, and accelerated depreciation or amortization, allow the market, rather than governments, to direct the R & D activity, as anyone who meets the program requirements is entitled to receive the incentive.

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<sup>44</sup> John Lester, André Patry, and Donald Adéa, *An International Comparison of Marginal effective Tax Rates on Investment in R & D by Large Firms*, Department of Finance Working Paper 2007-07 (Ottawa: Department of Finance, 2007). See also Ernst & Young, “Research Incentives in the New Tax Landscape” (July 31, 2010), at 4.

<sup>45</sup> Shanahan, *supra* note 13, at 4.

<sup>46</sup> Ernst & Young, *supra* note 44, at 11.

While entitlement-based programs do not target specific social objectives, they are equally crucial in stimulating R & D activity, thus increasing productivity and economic growth.<sup>47</sup>

The mix of selective incentive and entitlement programs varies considerably across countries, with greater discrepancies existing between developed and emerging economies: “As the size of the economy increases, incenting R & D generally moves from relying on grants, to a blend of policy tools that involve grants and super deductions and eventually tax credits that become part of the permanent tax policy of the country.”<sup>48</sup> Eligibility requirements established by countries with respect to their R & D tax regimes usually include: (i) IP ownership; (ii) financial risk of the R & D; (iii) location of R & D activities; and (iv) range of qualifying expenses.<sup>49</sup> Table 1 in appendix C illustrates the main R & D tax incentives for selected countries.

Tax credits are either refundable or non-refundable. Refundable credits generally benefit all eligible taxpayers, while non-refundable credits only benefit to eligible taxpayers carrying on a profitable business in a given taxation year. Variables to consider in designing tax credits include: (i) the scope of the expenditure base; (ii) the credit rate; (iii) the inclusion of a cap; (iv) the incremental or volume-based design; and (v) the carry forward or back period.<sup>50</sup> In Canada, a 20% federal tax credit is available for all qualifying R & D costs for eligible activities carried on in Canada. The rate is increased to 35% for small Canadian-Controlled Private Corporations (“CCPC”), and the credit is fully refundable for non-capital expenditures and 40% refundable for capital expenditures, but only on the first \$3M of expenditures.<sup>51</sup> By contrast,

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<sup>47</sup> Shanahan, *supra* note 13, at 9.

<sup>48</sup> Ernst & Young, *supra* note 44, at 7.

<sup>49</sup> Eynatten, *supra* note 4, at 503. The range of qualifying expenses generally includes capital and/or revenue expenditure, salary costs, cost of supplies, overhead, depreciation, cost of agency workers, cost of R & D outsourced and cost of acquiring IP.

<sup>50</sup> Ernst & Young, *supra* note 44, at 8.

<sup>51</sup> In general, see sections 37 and 127 of the Income Tax Act, RSC 1985, c. 1 (5th Supp.), as amended (“ITA”). The group of associated corporations must have less than \$800K of taxable income and less than \$50M in taxable capital in the preceding taxation year. Eligible R & D expenses include wages, materials, 100% of subcontracted

Ireland offers a 25% incremental credit for expenditures exceeding the “base amount,” as well as a 25% credit for expenditures incurred for buildings used in qualified R & D activities.<sup>52</sup>

Super deductions allow an R & D performer to deduct in computing its taxable income an amount greater than the actual R & D expenses, and often vary according to their rate, scope of eligible expenditures or inclusion of a cap.<sup>53</sup> In the UK, for example, large companies are offered a 130% super deduction without any cap, while small and medium enterprises are offered a 200% super deduction with a cap that restricts the amount of tax benefit to €7.5M per R & D project.<sup>54</sup>

Many OECD countries allow accelerated depreciation of R & D equipment expenditures, varying with respect to the types of property eligible and rates of depreciation. Canada permits an immediate 100% deduction.<sup>55</sup> As well, some countries, such as the UK, allow a full deduction of the buildings and structures used in R & D activities in the year of the expenditure.<sup>56</sup>

Grants and forgivable loans allow the allocation of public funds on specific projects that governments consider to have a high social and political value. As well, countries can direct their

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R & D, overhead, certain capital expenditures and lease and certain other payments. The federal Budget 2012 has proposed to exclude expenditures of a capital nature, including certain payments in respect of the use or the right to use capital property, from eligibility for R & D deductions and investment tax credits: Canada, Department of Finance, 2012 Budget, Supplementary Information, March 29, 2012. This measure will apply to property acquired on or after January 1, 2014. The province of Quebec also offers a fully refundable basic tax credit corresponding to 17.5% of R & D salaries paid in the province. The refundable tax credit is increased to 37.5% on the first \$3M of R & D salaries per year for certain CCPCs: see section 1029.6.1 and following of the TA. Canada also provides special federal and provincial tax credits for selected industries, including: “IT, media, video games, and film as well as development of new technologies that address issues of climate change, clean air, and water and soil quality,” and enhanced tax credits for R & D conducted by universities, research centers and research consortia: Deloitte, “2012 Global Survey of R & D Tax Incentives” (February 2012), at 6 (<http://www.deloitte.com/assets/Dcom-Belgium/Local%20Content/Articles/EN/Services/Tax/Global%20RD%20Survey%20February%202012%20update.pdf>).

<sup>52</sup> Ibid. (Deloitte), at 14. Countries offering a tax credits with respect to qualifying R & D expenditures also include (generally and up to): Australia – 45%; Austria – 10%; France – 40%; Ireland – 25%; Italy – 90%; Japan – 12%; Portugal – 50%; and the US – 20%.

<sup>53</sup> A super deduction allows an R & D performer to deduct from its taxable income an amount greater than the actual R & D expenses.

<sup>54</sup> Deloitte, *supra* note 51, at 34. Countries offering a tax deduction with respect to qualifying R & D expenditures also include (generally and up to): Belgium – 120.5%; China – 150%; Czech Republic – 200%; Hungary – 200%; India – 200%; Netherlands – 140%; Russia – 150%; South Africa – 150%; and Turkey – 200%.

<sup>55</sup> See section 37 of the ITA.

<sup>56</sup> Shanahan, *supra* note 13, at 13.

funding according to their needs or objectives: “Governments will often target specific technologies, sectors or sub-sectors, types of companies or geographic regions.”<sup>57</sup> Similarly, direct equity investments allow governments to direct their funds and obtain equity in either the company or the project.<sup>58</sup> While the extent of such direct funding may vary across countries, most governments do employ at least some form of it. Spain and the US rely more on direct support, while Canada tends to use indirect support to promote R & D activity.<sup>59</sup>

Countries also offer tax holidays, which generally are customized according to their length of time and percentage of exempt taxable income, as well as the “specific sectors or sub-sectors, types of companies or geographic regions targeted.”<sup>60</sup> The province of Quebec, for example, offers a tax holiday to foreign researchers working for a Canadian company that carries out R & D in the province.<sup>61</sup> This tax measure is intended to facilitate recruiting foreign researchers.

R & D performers may benefit from other favourable tax treatment targeting sales tax, value added tax, excise tax, customs duty and payroll taxes.<sup>62</sup> For example, India offers a customs duty exemption on select capital equipment and accessories imported for R & D activities, as well as an excise duty waiver on indigenous items purchased by approved institutions for R & D.<sup>63</sup>

The tax incentives employed by governments to attract R & D activity illustrate their appeal to nations across the globe, and R & D’s direct and spin-off benefits are considered worthwhile

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<sup>57</sup> Ernst & Young, *supra* note 44, at 9.

<sup>58</sup> *Ibid.*, at 10.

<sup>59</sup> Organisation for Economic Co-operation and Development, *R & D Tax Incentives: rationale, design, evaluation* (Paris: OECD, November 2010), at 2. Countries offering cash grants include: Czech Republic; France; Germany; Ireland; Israel; and Mexico: Deloitte, *supra* note 51.

<sup>60</sup> Ernst & Young, *supra* note 44, at 10.

<sup>61</sup> It is a five-year declining tax holiday computed as follows: 100% of employment income the first two years; 75% the third year; 50% the fourth year; and 25% the fifth year. See section 737.19 and following of the TA.

<sup>62</sup> Belgium offers a 75% withholding exemption for wages paid to qualifying researchers working on R & D projects, resulting in a 15% to 20% decrease of the salary cost for the business. Eligible researchers must hold a master’s degree or higher in the scientific area. Temporary “innovation premiums” may also be granted to eliminate tax and social security withholding requirements: Deloitte, *supra* note 51, at 3.

<sup>63</sup> Sunil Mani, “Financing of industrial innovations in India, How effective are tax incentives for R & D?” (2010) 3:2 *International Journal of Technological Learning, Innovation and Development* 109-131.

results for investment in such programs.<sup>64</sup> Governments are able to assess their respective objectives and needs, and design their R & D program by mixing the fiscal mechanisms outlined above. This type of flexibility is crucial considering the wide-ranging budgets of different countries. However, R & D is but one part of the IP lifecycle. If Canada wishes to establish itself as a leader in IP exploitation by adopting a patent box or similar regime, a variety of further decisions will have to be made in designing its scope, including choosing the types of IP to target.

## **1.2. DEFINITION AND TAXATION OF INTELLECTUAL PROPERTY**

As IP successfully emerges from the introduction stage of the lifecycle and enters the growth stage, it is important to characterize its nature for both legal and tax purposes. From a legal point of view, the protections and remedies offered by statutes and common law will often vary depending on the type of IP. Preferential tax treatment is also offered to certain types of IP. Furthermore, certain countries have restricted the benefits of their patent box regime to patents only, or to specific categories of IP, thereby highlighting the importance of the legal and tax characterizations of IP throughout its lifecycle.

### **1.2.1. Description and Characterization of Intellectual Property**

The subject matter of IP law “is concerned with fostering human creativity without unduly restricting dissemination of its fruits.”<sup>65</sup> An underlying principle in Canadian IP law is that there should be property rights in creations and ideas. However, the property interest in intellectual creations must be carefully distinguished from tangible property “that either make[s] the creation possible or that the creation makes possible.”<sup>66</sup> Because of the unique nature of IP, a patchwork of tax regimes may be applicable with the result that transactions with similar economic effect may

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<sup>64</sup> Such R & D benefits will be further discussed in Section 2.3.1.

<sup>65</sup> Donald Chisum and Michael A. Jacobs, *Understanding Intellectual Property Law* (New York: Matthew Bender, 1992), at 1-2.

<sup>66</sup> *Ibid.*

be treated differently.<sup>67</sup> As each kind of IP may be subject to unique tax rules, legal characterization is of utmost importance. Under Canadian law, the principal legal categories of IP include patents, copyrights, trademarks, and know-how.<sup>68</sup> For tax purposes, “property” is defined as “property of any kind whatever whether real or personal or corporeal or incorporeal,” including “a right of any kind whatever.”<sup>69</sup> Under the ITA, IP is generally considered to be property, although the provision of know-how may represent a provision of services.<sup>70</sup> Opportunities may arise from the different tax treatments between the disposition or licensing of property and the provision of services. Characterization of IP rights as “capital property,” “depreciable property,” and “eligible capital property” is also relevant in determining their tax treatment. Below is an overview of the principal legal categories of IP and a review of the tax treatment of their acquisition and development.

A patent is a statutory creation of the Patent Act<sup>71</sup> that grants exclusive rights to an “invention” for a period of 20 years from the date on which the patent application was filed. The patent formally comes into existence once the letters patent are granted and issued on the face of the patent. Section 2 of the Patent Act defines an invention as “Any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter.”

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<sup>67</sup> Alan Rautenberg, “An Introduction to the Taxation of Intellectual Property,” in *2003 Prairie Provinces Tax Conference* (Toronto: Canadian Tax Foundation, 2003), 10:1-45, at 1.

<sup>68</sup> Other legal categories of IP governed by statutory regimes, which are beyond the scope of this paper, include: integrated circuit topographies; commercial plant species; industrial designs; plant breeders’ rights; certain types of confidential information; false advertising remedies; and misappropriation and publicity rights.

<sup>69</sup> See subsection 248(1) of the ITA.

<sup>70</sup> Neal H. Armstrong, “Exploiting the Unique Features of Intellectual Property,” in *R & D: Credits Today, Innovation Tomorrow*, 1999 Corporate Management Tax Conference (Toronto: Canadian Tax Foundation, 1999) 9:1-51.

<sup>71</sup> Patent Act, *supra* note 37.

An invention is considered to be a subject matter that “would not have been obvious on the claim date to a person skilled in the art or science to which it pertains.”<sup>72</sup> Thus, where an invention is created, Canadian law encourages the public disclosure of such an invention in exchange for its exclusive rights throughout substantially all of the IP lifecycle.

For tax purposes, a patent is generally a depreciable property for which Capital Cost Allowance (“CCA”) may be claimed under class 14 or 44. However, CCA is only available once letters patent have been granted and to the extent that the patent is not inventory to the taxpayer,<sup>73</sup> is acquired for the purpose of gaining or producing income,<sup>74</sup> and the costs related to the patent are not or have not been deducted either as R & D expenditures under section 37 of the ITA<sup>75</sup> or as ordinary operating expenses<sup>76</sup> in computing the taxpayer’s income. A patent automatically falls within class 44, unless the taxpayer elects to be subject to class 14 treatment.<sup>77</sup>

Class 44 provides an alternative regime for patent acquisitions and reflects the fact that the value of a patent may decline over time. Under this class, patents or rights to use patented information for limited or unlimited periods are depreciable on a 25% declining balance basis.<sup>78</sup> This treatment is generally advantageous for patents in their early term, whereas class 14 treatment is advantageous for patents late in their term or short-term licences.<sup>79</sup>

Class 14 property includes a “patent, franchise, concession or licence for a limited period” and is depreciable on a straight-line basis over the life of the property.<sup>80</sup> Patents granted by a

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<sup>72</sup> Ibid., section 28.3.

<sup>73</sup> Regulation 1102(1)(b).

<sup>74</sup> Ibid.

<sup>75</sup> Ibid.

<sup>76</sup> Ibid.

<sup>77</sup> The election is made under regulation 1103(2h).

<sup>78</sup> Regulation 1100(1)(a)(xxx).

<sup>79</sup> Alan Rautenberg, “Income Tax Aspects of Intellectual Property Transactions,” in *Report of Proceedings of Fifty-fifth Tax conference*, 2003 Conference Report (Toronto: Canadian Tax Foundation, 2004), 35:1-27. See Canada, Department of Finance, 1993 Budget, Supplementary Information, April 26, 1993.

<sup>80</sup> Pursuant to regulation 1100(1)(c), the maximum CCA available to a taxpayer in any year in respect to class 14 property is the lesser of (a) the aggregate of the amounts obtained by apportioning the capital cost of each

foreign government may qualify as depreciable property in the same manner as other foreign property.<sup>81</sup> Alternatively, the portion of the patent's cost, which is determined by reference to the use of the patent, may be written off in the year.<sup>82</sup> Costs relating to the acquisition of the patent such as purchase price, if any, legal and registration fees, and representation expenses are generally included in class 14.<sup>83</sup> Patent application and representation costs referred to in paragraph 20(1)(cc) of the ITA are also fully deductible in computing the taxpayer's income for the taxation year.<sup>84</sup> In order to avoid double deduction under both paragraphs 20(1)(a) and (cc) of the ITA and to permit recapture of the expenditure, the amount deducted under either paragraph 20(1)(cc) or subsection 20(9) of the ITA, as the case may be, is deemed to have been allowed as CCA. CCA with respect to class 14 is not subject to short taxation year proration.<sup>85</sup>

On the other hand, pre-acquisition costs and expenses to exploit the patent after its acquisition are generally not included in class 14. Nevertheless, development costs that are not included in the patent's capital cost and exploitation costs may be deductible as ordinary expenses, provided they are not on account of capital.<sup>86</sup> Such development costs may also qualify as R & D expenses, as discussed in section 1.1.2. Where a taxpayer purchases a business or assets, "for which [it] does not obtain an existing patent, franchise, concession or licence but only the right to stand in

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property over the life of the property remaining at the time the cost was incurred, or (b) the undepreciated capital cost to the taxpayer as of the end of the taxation year of property of that class. Canada Revenue Agency's ("CRA") view is that the apportionment of the capital cost of a class 14 property should generally be made over the remaining period during which the property may be used for the purposes of earning income, unless the legal agreement and other relevant factors justify another basis: *Interpretation Bulletin* IT-477, "Capital Cost Allowance – Patents, Franchises, Concessions and Licences," November 27, 2001, at paragraph 4.

<sup>81</sup> Ibid. (*Interpretation Bulletin* IT-477), at paragraph 10. See also: *Interpretation Bulletin* IT-205, "Capital Cost Allowance – Capital Cost of Property in a Foreign Country," March 3, 1975, replaced by *Interpretation Bulletin* IT-285R2 "Capital Cost Allowance – General Comments," March 31, 1994.

<sup>82</sup> Regulation 1100(9).

<sup>83</sup> *Interpretation Bulletin* IT-477, supra note 80, at paragraphs 19 and 22; and *Interpretation Bulletin* IT-99R5, "Legal and Accounting Fees," December 11, 1998, at paragraph 11.

<sup>84</sup> The taxpayer may alternatively elect under subsection 20(9) of the ITA to make a deduction of 1/10 of the amount permitted by paragraph 20(1)(cc) of the ITA in computing the taxpayer's income for the taxation year and a like deduction for each of the 9 immediately following taxation years.

<sup>85</sup> Regulation 1100(3).

<sup>86</sup> Paragraphs 18(1)(a) and (b) of the ITA.

place of that person in applying for such a property or for a renewal thereof,” such an amount may qualify as an eligible capital expenditure.<sup>87</sup> Purchased intangibles without a fixed lifespan may also qualify for this treatment.<sup>88</sup> Generally speaking, 75% of the cost of an eligible capital property is included in the taxpayer’s cumulative eligible capital. A maximum of 7% of the declining balance of cumulative eligible capital may be claimed as a deduction each year.<sup>89</sup>

Similar to patents, copyrights are a statutory creation. Pursuant to the Copyright Act,<sup>90</sup> a copyright offers protection for works, a performer’s performance, sound recording, and communication signal.<sup>91</sup> Copyright protection prevents an unauthorized person from copying, publishing, translating, or publicly displaying an entire work or a substantial portion of it. Unlike patents however, registration is not required to benefit from exclusive rights because a copyright automatically arises with the creation of an original work. It is not the idea itself that is protected, but rather the expression of the idea by way of physical manifestation.<sup>92</sup> The Copyright Act provides that protection is offered for the duration of the author’s life, and 50 years thereafter.<sup>93</sup>

Copyright application costs are also deductible under paragraph 20(1)(cc) of the ITA. A copyright may qualify for class 14 treatment, but only if it is for a “limited period,”<sup>94</sup> and a copyright in computer software may also qualify for class 12. The development costs of

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<sup>87</sup> *Interpretation Bulletin* IT-477, supra note 80, at paragraph 13.

<sup>88</sup> David Sherman, *Practitioner’s Income Tax Act*, 41st ed. (Toronto: Carswell, 2012), at paragraph 20(1)(b).

<sup>89</sup> Paragraph 20(1)(b) of the ITA.

<sup>90</sup> Copyright Act, RSC 1985, c. C-42.

<sup>91</sup> *Ibid.*, definition of “copyright” in section 2.

<sup>92</sup> Rautenberg, supra note 79, at 4.

<sup>93</sup> Copyright Act, supra note 90, section 6.

<sup>94</sup> As the period during which the author may live is not ascertainable during the author’s lifetime, the copyright term is neither ascertainable since the copyright, as previously mentioned, generally subsists for the life of the author and 50 years thereafter. Consequently, only the acquisition of a copyright for a limited term of up to 50 years granted before the author’s death or copyright acquired after the author’s death may be included in class 14. Other copyright acquired during the author’s lifetime generally will be eligible capital property: *Interpretation Bulletin* IT-477, supra 80, at paragraph 14.

copyrights and other IP may be deducted as current expenses where the IP is held as inventory and, arguably, where the taxpayer's business requires continuous technological advancement.<sup>95</sup>

A trademark is a mark used by a person to distinguish his wares or services from those of others.<sup>96</sup> As a result, trademarks are defined by the products or services with which they are associated, allowing for a broad range of subject matter to qualify for this treatment. Protection is offered both under the Trade-marks Act<sup>97</sup> or common law.<sup>98</sup> Where a trademark is registered under the Trade-marks Act, it benefits from further advantages and protection, including national protection, greater security in its licensing, and stronger remedy provisions.

Similar to copyrights and patents, trademark application costs are deductible under paragraph 20(1)(cc) of the ITA. As trademarks are generally eligible capital properties, only trademark licences for a limited term may qualify under class 14.<sup>99</sup> Renewal or extensions of the original term of a licence are relevant in determining whether or not the property is "for a limited period" as required to qualify as class 14 property.<sup>100</sup>

Essentially a residual category of IP comprising subject matter that cannot be afforded protection under other categories, know-how generally includes trade secrets, secret formulas or processes, and industrial, commercial or scientific knowledge. The CRA regards know-how as including payments for special knowledge, skills or techniques that are considered beneficial in

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<sup>95</sup> See *Bowater Power Co. Ltd. v. Minister of National Revenue*, 71 DTC 5469 (FCTD); *Johns-Manville Canada Inc. v. The Queen*, 85 DTC 5373 (SCC); and *Rautenberg*, supra note 79, at 13.

<sup>96</sup> *Armstrong*, supra note 70, at 5.

<sup>97</sup> Trade-marks Act, RCS 1985, c. T-13.

<sup>98</sup> The latter protection is more limited since it is generally confined to a specific geographical area.

<sup>99</sup> *Interpretation Bulletin* IT-477, supra note 80, at paragraph 12; and *Interpretation Bulletin* IT-143R3, "Meaning of Eligible Capital Expenditure," August 29, 2002.

<sup>100</sup> Where such renewals or extensions are automatic or do not require further negotiation with or the concurrence or consent of the grantor, such periods are considered in determining the life of the property. On the other hand, where the grantor's concurrence is required, or where the number of such renewals or extensions is indefinite or they are not included in the agreement or are otherwise beyond taxpayer's control, the life of the property does not include any renewal or extension period. The number of renewals or extensions may be limited either by the underlying agreement or by law. For example, Canadian patent licences are necessarily limited to a maximum of 20 years. See *Interpretation Bulletin* IT-477, supra note 80, at paragraphs 15-16.

the conduct of a business.<sup>101</sup> Know-how may also include an invention for which the inventor does not wish to obtain a patent because, for example, the inventor considers that the value of keeping the specifics of the invention secret exceeds the value of the 20-year protection offered under the Patent Act.<sup>102</sup> Because know-how is only subject to a relative degree of protection under common law, it does not benefit from a breadth of protection options equivalent to statutory provisions applicable to other categories of IP.<sup>103</sup>

Contrary to other categories of IP, know-how is generally considered a provision of services rather than property, although there is debate in the tax community as to whether it may, in certain circumstances, constitute eligible capital property.<sup>104</sup> As a result of this controversy, the costs related to the development and acquisition of know-how may either result in current expenses or eligible capital property to the taxpayer, and the disposition of know-how will either result in a consideration on account of income or in a reduction of the cumulative eligible capital pool balance on a  $\frac{3}{4}$  basis or in a recognition of the entire economic capital gain if the taxpayer so

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<sup>101</sup> *Interpretation Bulletin* IT-303, “Know-How and Similar Payments to Non-Residents,” April 8, 1976, at paragraph 3. The OECD also provides the following useful definition, which was quoted with approval in *Hasbro Canada Inc. v. The Queen*, 98 DTC 2129 (TCC), at paragraph 28: “Various specialist bodies and authors have formulated definitions of know-how which do not differ intrinsically. One such definition, given by the ‘*Association des Bureaux pour la protection de la Propriété Industrielle*’ (ANPI) states that ‘know-how’ is all the undivulged technical information, whether capable of being patented or not, that is necessary for the industrial reproduction of a product or process, directly and under the same conditions: inasmuch as it is derived from the experience, know-how represents what a manufacturer cannot know from mere examination of the product and mere knowledge of the progress of technique.” See Organization for Economic Co-operation and Development, *Model Tax Convention on Income and on Capital* (Paris: OECD) (looseleaf), paragraph 11 of the commentary on article 12; and Armstrong, *supra* note 70, at 10-11.

<sup>102</sup> For instance, consider the well-known case of the Coca-Cola formula which has been kept secret since its invention in 1886 by Dr. John S. Pemberton: “Coca-Cola Moves its Secret Formula to The World of Coca-Cola,” *Press Kits*, ([http://www.thecoca-colacompany.com/dynamic/press\\_center/2011/12/coca-cola-secret-formula-moves-to-the-world-of-coca-cola.html](http://www.thecoca-colacompany.com/dynamic/press_center/2011/12/coca-cola-secret-formula-moves-to-the-world-of-coca-cola.html)).

<sup>103</sup> Consequently, common law protection is often supplemented in the contractual agreement between the person attempting to protect the confidential information and the person to whom the know-how is being made available, providing for extensive remedies: Rautenberg, *supra* note 67, at 5; and Rautenberg, *supra* note 79, at 5.

<sup>104</sup> Rautenberg, *supra* note 67, at 29-30; and *Interpretation Bulletin* IT-386R, “Eligible Capital Amounts,” October 30, 1992.

elects.<sup>105</sup> Where the know-how is licensed rather than sold or acquired outright, the tax treatment will be similar to trade-mark licences as described above.

The tax treatment of Canadian IP income will depend upon whether its owner is a resident or non-resident of Canada for tax purposes. The next section presents an overview of the inbound and outbound tax treatment of IP income.

### **1.2.2. Inbound and Outbound Tax Treatment of Intellectual Property Income**

As illustrated above, different tax treatments may apply to different IP categories. However, the jurisdiction in which the IP is being exploited and by whom are also critical in addressing the IP taxation framework. In this section, the Canadian taxation of non-residents earning income from sources within Canada (inbound tax treatment) as well as the Canadian worldwide taxation regime applicable to residents of Canada (outbound tax treatment) are examined.

Income from IP typically comes from either its disposition or its licensing. Licensing is generally on income account, whereas an outright disposition of IP is generally on capital account, unless the taxpayer is engaged in a business consisting of developing or buying and selling IP or is otherwise engaged in an adventure or concern in the nature of trade.<sup>106</sup> For instance, where a software is sold, fees paid by the users are licensing income to the software publisher. However, if the software publisher sells all the software technology and its rights

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<sup>105</sup> Subsection 14(1) and following of the ITA.

<sup>106</sup> A disposition of IP from a Canadian corporation to an offshore entity with which it does not deal at arm's length will be deemed to have occurred for proceeds equal to fair market value under section 69 of the ITA. An outright sale of IP may result in a capital gain to the extent that the fair market value of the IP exceeds its adjusted cost base, and where the proceeds of disposition are not payable until after the end of the year, the taxpayer may claim a reserve under subsection 40(1) of the ITA over a maximum period of five years. Where the disposition of IP is on the income account or is characterized as the provision of services (for example, a transfer of know-how), a deduction may be available under paragraph 20(1)(m) of the ITA with respect to goods to be delivered or services to be rendered in a subsequent year.

thereto, the sale may be a capital transaction, provided that it is not merely an alternative way for exploiting the software (that is, provided the software is not inventory to the company).<sup>107</sup>

When transferring IP, particularly offshore, a Canadian taxpayer may wish to retain a portion of its rights by entering into a licensing agreement with the licensee. The licensed rights may be on an exclusive or non-exclusive basis. Where IP is developed to be held as inventory, “then revenue from exploiting that property will be income regardless of whether the taxpayer sells the IP outright, assigns rights to different markets on an exclusive or non-exclusive basis, or licenses the IP for royalty.”<sup>108</sup> Some authors have nevertheless suggested that licences that are exclusive with respect to a territory, time period or market segment, may in fact be on capital account.<sup>109</sup>

However, in *Canadian General Electric Co. v. R.*, the Federal Court of Appeal stated that:

The sale of know-how will not normally be regarded as the sale of a capital asset, particularly when the sale is by a non-exclusive licence, and that any exception to this rule must be strictly established as a total loss of know-how which is a direct and necessary result of the licence agreement.<sup>110</sup>

Therefore, the capital or income nature of the IP income depends upon the nature of the licence and whether all rights in respect of the property are transferred. Case law also gives consideration to the nature of the payments receivable for the IP in determining whether proceeds are an income or capital receipt.<sup>111</sup> A lump-sum payment upon an outright sale of all IP rights is typically a capital receipt, whereas a royalty that is based on use is an income receipt. However, there is a fine line between a payment that constitutes a royalty versus a lump-sum payment made

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<sup>107</sup> In *CAE Inc. v. The Queen*, 2011 DTC 1362 (TCC), the Tax Court of Canada held that CAE’s flight simulators were on the income account when sold, but were depreciable properties when rented.

<sup>108</sup> Rautenberg, supra note 79, at 8-9.

<sup>109</sup> *Ibid.*, at note 96.

<sup>110</sup> *Canadian General Electric Co. v. R.*, 87 DTC 5070 (FCA); *Canadian Industries Limited v. The Queen*, [1980] 2 FC 463; *Ibid.*, note 97; and *Interpretation Bulletin IT-386R*, supra note 104, at paragraph 2(d).

<sup>111</sup> *Ibid.* (Rautenberg), at note 20.

by instalments.<sup>112</sup> A royalty or similar payment based on production or use is generally included as income under paragraph 12(1)(g) of the ITA, which reads as follows:

There shall be included in computing the income of a taxpayer for at taxation year as income from a business or property [...] any amount received by the taxpayer in the year that was dependent on the use of or production from property whether or not that amount was an instalment of the sale price of the property, except that an instalment of the sale price of agricultural land is not included by virtue of this paragraph.<sup>113</sup>

If IP held as capital property is sold on an earn-out basis, the proceeds of disposition inevitably fall within paragraph 12(1)(g) of the ITA. Where the sale agreement provides for both a fixed price and a percentage of revenues, CRA's assessing practice is to apply paragraph 12(1)(g) of the ITA only to the variable portion.<sup>114</sup> Application of paragraph 12(1)(g) of the ITA may, arguably, be avoided by using a reverse earn-out mechanism under which the price is initially set at a fixed maximum, and then reduced if there is a shortfall in anticipated revenues. In such circumstances, the vendor's capital gain is calculated using the initial fixed amount as proceeds of disposition, and any subsequent reduction gives rise to a capital loss for the taxation year in which the reduction occurs.<sup>115</sup> Where CCA has been claimed with respect to IP and the proceeds of disposition exceed the undepreciated capital cost of the class as of the end of the preceding taxation year, a recapture of CCA may occur. The recapture must be included in computing the taxpayer's income for the year pursuant to subsection 13(1) of the ITA.<sup>116</sup>

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<sup>112</sup> *British Dyestuffs Corporation (Blackeley), Ltd. v. The Commissioners of Inland Revenue* (1924), 12 TC 586 (CA); *Rustproof Metal Window Co. v. The Commissioners of Inland Revenue* (1947), 29 TC 243 (CA); and Rautenberg, supra note 79, at 10-11.

<sup>113</sup> CRA's policy with respect to taxation of payment based on production or use is provided in *Interpretation Bulletin* IT-462, "Payments Based on Production or Use," October 27, 1980. Note that paragraph 12(1)(g) of the ITA was enacted in 1934 in response to the Privy Council's decision in *Spooner v. Minister of National Revenue*, 33 DTC 258 (PC), which held that a royalty reserved of the oil and gas produced from a certain land was on the capital account. It enlarges the common law rule that payments based on use are ordinary income.

<sup>114</sup> *Ibid.* (*Interpretation Bulletin* IT-462), at paragraph 5; and Nathalie Brouard and Marc D. Milgrom, "Exploiting Intellectual Property Rights: A Myriad of Opportunities and Tax Issues," in *R & D Credits Today, Innovation Tomorrow*, 1999 Corporate Management Tax Conference (Toronto: Canadian Tax Foundation, 1999) 14:1-52.

<sup>115</sup> *Ibid.* (*Interpretation Bulletin* IT-462), at paragraph 9; *Ibid.* (Brouard and Milgrom); and *Interpretation Bulletin* IT-426R, "Shares Sold Subject to an Earnout Agreement," September 28, 2004, at paragraph 6.

<sup>116</sup> *Interpretation Bulletin* IT-478R2, "Capital Cost Allowance – Recapture and Terminal Loss," September 17, 1999, at paragraph 5.

Part XIII of the ITA provides for a withholding tax of 25% on certain amounts that a Canadian resident pays or credits to a non-resident, including management fees, dividends, interest, royalties, and other similar payments.<sup>117</sup> Part XIII tax is final, and no deduction can be claimed in computing the non-resident's taxable income.<sup>118</sup> While this tax is levied on non-residents, the withholding obligation lies with each person who pays or credits a taxable amount to the non-residents.<sup>119</sup> Canada's tax treaties generally reduce the Part XIII tax rate. For example, the withholding tax on royalties paid by a Canadian resident to a US resident is limited to a rate of 10% of the gross amount of the royalties, and certain types of royalties, such as payments for the use of computer software, are exempt, provided that the US resident is the beneficial owner of the royalties and is entitled to the benefits of the tax convention.<sup>120</sup>

Subsection 2(1) and paragraph 3(a) of the ITA essentially provide the outbound taxation – that is, Canadian residents are taxed on their worldwide income. As a general rule, royalties earned by a Canadian resident on licensed IP are taxed in the year in which they are earned.

In order to avoid immediate taxation, a Canadian MNE may create a foreign affiliate (“FA”) in a low-tax jurisdiction to hold and exploit their IP. In theory, the FA earns IP income, pays low corporate taxes in the foreign jurisdiction, and then the income is repatriated by way of dividends. However, the FAPI rules prevent such a structure, by requiring the Canadian parent company to recognize income on an accrual basis, whether repatriated or not, and by generally restricting

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<sup>117</sup> The main charging provisions are subsections 212(1) and (2) of the ITA. While royalties or similar payments are subject to Part XIII tax, subparagraph 212(1)(d)(vi) of the ITA provides an exception for such payments on or in respect of a copyright in respect of the production or reproduction of any literary, dramatic, musical or artistic work. See also paragraph 212(9)(b) of the ITA. The terms “production or reproduction” are broadly interpreted by the CRA: CRA document no. 2011-0404511C6, May 3, 2011.

<sup>118</sup> Subsection 214(1) of the ITA.

<sup>119</sup> Section 215 of the ITA.

<sup>120</sup> Article XII(2) of the Convention Between Canada and The United States of America with Respect to Taxes on Income and on Capital, signed at Washington, DC on September 26, 1980, as amended by the protocols signed on June 14, 1983, March 28, 1984, March 17, 1995, July 29, 1997, and September 21, 2007.

deductions to foreign corporate and withholding taxes. As a result, the income is taxed as though it were earned in Canada, thereby essentially eliminating the benefits of exploiting IP offshore.<sup>121</sup>

A Canadian taxpayer earning income in another country may be subject to foreign income tax as well as withholding tax similar to the tax levied under Part XIII of the ITA, while also being taxed in Canada on its worldwide income. The prevention of double taxation is mainly accomplished through the foreign tax credit regime. Section 126 of the ITA provides for a foreign tax credit for foreign “non-business-income tax” and “business-income tax.”<sup>122</sup> To qualify for the foreign tax credit, the foreign tax must be paid to a foreign government in respect of “income or profits tax.”<sup>123</sup> The foreign tax credit is generally limited to the lesser of the amount of foreign tax paid for the year on income from a particular country and the amount of Canadian tax otherwise payable on the foreign income. Canada’s tax treaties may also provide for additional relief through the so-called tax sparing credit.<sup>124</sup>

As the inbound and outbound taxation rules may materially affect an MNE’s overall tax burden, MNEs have adopted tax planning strategies such as the Licensing Model, which tend to erode the Canadian base with respect to IP developed in, and largely financed by, Canada.

### **1.3. EXPLOITING INTELLECTUAL PROPERTY: THE LICENSING MODEL**

Given that IP income is generally ordinary income under Canada’s taxation regime, MNEs are encouraged to develop and maintain a tax-efficient structure under which the IP income is both earned and taxed in a low-tax jurisdiction. Such a structure usually requires that IP rights be owned by an entity residing in the low-tax jurisdiction, and that such entity bears the economic

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<sup>121</sup> FAPI rules are discussed in section 1.3.2.

<sup>122</sup> Jinyan Li, Arthur Cockfield, and J. Scott Wilkie, *International Taxation in Canada: principles and practices* (Markham: LexisNexis Canada, 2006), at 165.

<sup>123</sup> Brouard and Milgrom, *supra* note 114.

<sup>124</sup> Li et al., *supra* note 122, at 182.

risk of the R & D.<sup>125</sup> The actual R & D activities may nevertheless be undertaken in a different location, including Canada, but they will usually be carried out under contract or on a cost-shared basis.<sup>126</sup> Once the R & D activities give rise to IP, the offshore entity licenses it directly or indirectly to unrelated end-users. Alternatively, a Canadian MNE may transfer its existing IP, except for the right to exploit the IP in Canada, to the offshore entity by way of an outright sale or licence. This model is referred to as the Licensing Model.<sup>127</sup> A simplified structure of the Licensing Model is illustrated in Figure 3 in appendix B.

### 1.3.1. Objective and Structure of the Licensing Model

The Licensing Model may be attractive for Canadian MNEs for both global tax minimization and non-tax reasons. The MNE may reduce its overall tax burden, provided that the IP income earned by its FAS does not trigger immediate Canadian tax consequences for, and may be repatriated and distributed at a minimal tax cost to, the Canadian parent company. While the general purpose of the Licensing Model may be relatively straightforward, fundamental tax

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<sup>125</sup> It is generally preferable that the offshore entity be a subsidiary of the parent company rather than the Canadian subsidiary, in order to protect the IP from claims by creditors of the Canadian subsidiary. It is also important that the licensing entity has substance not to be considered a “sham,” which could be subject to challenge by the CRA under the general anti-avoidance rule.

<sup>126</sup> Dale S. Meister, “Exploiting Intellectual Property: Revising the investment Business Concept” (2002) 50:5 *Canadian Tax Journal* 1703-1718. The R & D activities need not be undertaken directly by the licensing entity in order to establish that it is not passive. Indeed, in certain cases, the courts have found that there is no distinction between a business activity carried on by the taxpayer and that carried on through an agent or independent contractor. For example, see: *The Queen v. Rockmore Investments Ltd.*, 76 DTC 6156 (FCA); and *The Queen v. MRT Investments Ltd.*, 76 DTC 6158 (FCA). Under subsection 247(1) of the ITA, a “qualifying cost contribution arrangement” is defined to mean “an arrangement under which reasonable efforts are made by the participants in the arrangement to establish a basis for contributing to, and to contribute on that basis to, the cost of producing, developing or acquiring any property, or acquiring or performing any services, in proportion to the benefits which each participant is reasonably expected to derive from the property or services, as the case may be, as a result of the arrangement.” See also *Income Tax Information Circular 87-2R*, “International Transfer Pricing,” September 27, 1999.

<sup>127</sup> In general, a series of agreements covering all aspects of the business arrangement are entered into between the parent company, the Canadian subsidiary, and the offshore entity, including: (i) a contract research agreement under which the Canadian subsidiary will perform future R & D for the benefit of the offshore entity (except for the right to exploit the IP in Canada); (ii) a contract manufacturing agreement under which the contract manufacturer will manufacture the products for an arm’s length fee; and (iii) an international marketing agreement under which the foreign entity will take the responsibility for marketing the IP in all countries of the world except Canada: Derek A. Kurrant, “High Tech in the Oil Patch: Planning Considerations For Transferring Technology Offshore” (2000) 13:1 *Canadian Petroleum Journals*, available on Taxnet Pro (Toronto: Thomson Reuters) (online database).

objectives must nevertheless be achieved in implementing the structure. In particular, considerations arise during the IP lifecycle in the following steps: acquisition of IP; receipt of royalties; repatriation of earnings; and disposition of IP. The disposition of IP rights may give rise to a capital or income receipt in Canada – the same analysis must be performed with respect to the foreign jurisdiction. The MNE’s global tax rate must be determined in light of the withholding tax on royalty payments as well as on the repatriation of the licensing entity’s earnings.<sup>128</sup> Also, the arbitrage between the tax saved by the payer and the tax payable by the recipient must be properly managed.<sup>129</sup>

The offshore licensing entity should be set up in a jurisdiction offering both favourable tax and non-tax features, such as laws protecting IP rights and low costs of setting up and operating the structure. While a low corporate income tax rate is compulsory, an extensive treaty network offering favourable withholding tax rates is also a key element. Other features include the absence of capital gains tax or exit tax, and low capital and transfer tax.<sup>130</sup> Obviously, it is critical that the licensing entity be resident of the particular jurisdiction, and not of Canada.<sup>131</sup>

In Canada, as well as several industrialized countries, the core problem is that the high federal-provincial combined tax rates provide a strong incentive for MNEs to shift their profits abroad.<sup>132</sup> Once R & D is completed, innovators are opting to drive out their IP from Canada for kinder tax regimes. For example, several US firms have employed what is known as the “Double

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<sup>128</sup> Brouard and Milgrom, supra note 114, at 11.

<sup>129</sup> Eynatten, supra note 4, at 504.

<sup>130</sup> Also, “One must examine the economic and political stability, infrastructure, ease of access, forms of business entity that may be used, investment requirements and restrictions, foreign currency restrictions, accounting and foreign reporting requirements and business law”: Kurrant, supra note 127. See also Eynatten, supra note 4, at 502-503.

<sup>131</sup> Otherwise, the licensing entity would be subject to Canadian tax on its worldwide income. Even if the entity is incorporated in the particular foreign jurisdiction, it may still be considered a Canadian resident for tax purposes if its central management and control is located in Canada. In this context, an applicable tax treaty may also afford assistance.

<sup>132</sup> Chris R. Edwards and Daniel Mitchell, *Global tax revolution: the rise of tax competition and the battle to defend it* (Washington DC: Cato Institute, 2008), at 120.

Irish” and “Dutch Sandwich” schemes to minimize the impact that the applicable domestic regime may have on the income generated from their inventions.

In general, the US MNE develops the IP through a cost-sharing agreement with an offshore subsidiary, in accordance with the US transfer pricing rules, and the latter owns the rights to exploit IP outside the US. The offshore subsidiary is thus able to receive all profits from exploiting the rights outside the US, without paying US tax unless, and until, the profits are repatriated to the US parent corporation. Under the “Double Irish” and “Dutch Sandwich” schemes, the US MNE is able to reduce its overseas tax rate to as low as 2.4 % by shifting most of its foreign income to tax havens through Ireland and the Netherlands.<sup>133</sup> The structure is informally referred to as the “Double Irish” because it calls for the US parent corporation to create two Irish subsidiaries. The first subsidiary is organized under Irish law, but is managed and controlled from a tax haven, such as Bermuda, and owns the valuable non-US IP rights. It licenses the IP rights to a second Irish subsidiary, which is organized, managed and controlled in Ireland. The reduced taxation opportunities arise from the US entity classification rules combined with the US and Irish residency rules. Indeed, while tax residency under Irish law is based on the location of a corporation’s management and control activities,<sup>134</sup> the US rules generally determine whether a corporation is a “US person” based on jurisdiction of incorporation.<sup>135</sup> This tax strategy creates a hybrid structure under which the second Irish subsidiary generally files a US “check-the-box” election, resulting in the two Irish subsidiaries being treated as a simple corporation for US federal

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<sup>133</sup> The idea is to shift income from a higher-tax country to a lower-tax country while benefiting from the tax treaty network of such countries. The method, which has gained favour among organizations such as Apple Inc., Facebook, Google, Microsoft, and Pfizer Inc. to name a few, allows shuttling profits in and out of Irish subsidiaries, while largely escaping home jurisdiction corporate tax. The method relies on the fact that Irish tax law does not include effective transfer pricing rules.

<sup>134</sup> See section 23A of the Taxes Consolidation Act 1997 (Irl), as added by section 82 of the Finance Act 1999 (Irl). Because Irish tax law provides that a company resides where its central management and control is located rather than at the place of its incorporation, it is possible for the first Irish company not to be taxed as a resident of Ireland.

<sup>135</sup> See sections 7701(a)(4), 7701(a)(30) and 954(d)(1) of the Internal Revenue Code of 1986, as amended.

tax purposes. The second Irish subsidiary exploits the IP from Ireland and sells related products in countries outside the US. The royalties paid to the first Irish subsidiary are deductible in computing its taxable income – and are disregarded for US federal tax purposes – and the remaining income is taxed at the standard Irish corporate rate of 12.5%. Where the royalty payments from the second Irish subsidiary to the first Irish subsidiary are for copyrights or licensing of software that is not eligible for patent protection, they are generally not subject to Irish withholding tax.<sup>136</sup>

Where royalties or other sums are paid with respect to patents or are otherwise subject to Irish withholding tax, the addition of a Dutch corporation “sandwiched” between the two Irish subsidiaries may reduce tax liabilities given that the Netherlands has an extensive treaty network, including tax treaties with Ireland and Bermuda that exempt royalties from withholding tax.<sup>137</sup> The “Double Irish” and “Dutch Sandwich” schemes demonstrate that under the Licensing Model, MNEs are generally able to avoid adverse tax consequences of CFC regimes.

### **1.3.2. Controlled Foreign Company Regimes and Transfer Pricing Issues**

From a business perspective, the Licensing Model requires few changes to the MNE’s operations. New corporations may have to be set up and a few employees and functions may need to be shifted abroad,<sup>138</sup> but the core business activities and operational structure remain largely unaffected. The challenge resides in the tax considerations, which must be carefully addressed.

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<sup>136</sup> See section 237 of the Taxes Consolidation Act 1997, *supra* note 134. See also Joseph B. Darby III and Kelsey Lemaster, “Double Irish More than Doubles the Tax Saving: Hybrid Structure Reduces Irish, U.S. and Worldwide Taxation” (2007) 11:9 *Practical US/International Tax Strategies* 2-16.

<sup>137</sup> With the addition of the “Dutch Sandwich,” the money first moves from the second Irish subsidiary to the Netherlands, and from the Netherlands to the first Irish subsidiary in Bermuda. The method works because certain payments, including royalties and dividends, are exempt from withholding tax between residents of certain European Union (“EU”) countries. In a report on companies’ tax practices published in 2009, *The Guardian* highlighted that firms “moved the rights to their [IP] to tax havens [allowing them to] reduce their UK-based profits and hence their British tax bills by paying royalties to the subsidiary in the tax haven”: “Offshore - and out of reach to the Revenue,” *The Guardian*, February 3, 2009 (<http://www.guardian.co.uk/business/2009/feb/03/offshore-tax-avoidance>).

<sup>138</sup> Often to meet certain substance thresholds.

The parent of the group of companies developing or acquiring IP is often a resident of an industrialized country. Most of these countries have adopted CFC regimes that aim to tax the parent company on the passive income earned by its FAS.<sup>139</sup> As numerous papers and articles have been written on Canada's FAPI regime, this section is not intended to provide an exhaustive analysis of the complex FAPI rules. Rather, the purpose is to highlight how an offshore entity may be structured under the Licensing Model in order to avoid that its Canadian parent company be subject to FAPI taxation, thus eroding the Canadian base with respect to the income from IP developed in, and financed to a certain extent through tax credits and grants by, Canada.

An underlying principle of the FA regime is that, "Where a Canadian resident has a sufficiently substantial interest in a foreign corporation, the foreign corporation can and should be treated as an extension of the shareholder."<sup>140</sup> Under the FAPI rules, a Canadian shareholder is required to include, in computing its income, its proportionate share of the FAPI of a "controlled foreign affiliate" ("CFA"), notwithstanding it may have received no distribution from the CFA.<sup>141</sup> This requirement departs from the general principle that foreign-source income earned by a foreign subsidiary of a Canadian corporation is not taxable in Canada until repatriated as a dividend.<sup>142</sup> By taxing FAPI when it is earned by the CFA, the tax deferral benefit is removed.

In order to prevent double taxation, the FA regime ensures that FAPI is not taxed again when distributed to Canadian shareholders or when the CFA shares are sold. An elaborate tax accounting regime tracks the income earned by a FA for the purposes of determining how dividends will be taxed.<sup>143</sup> Dividends received from foreign corporations are generally included in computing the recipient's income, but the recipient is allowed a grossed-up deduction for any

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<sup>139</sup> Including: China, France, Hungary, Spain, UK, and US, but not Belgium, Ireland, Luxembourg, and Switzerland.

<sup>140</sup> Li et al., supra note 122, at 199. This statement is a tax policy consideration only – the tax treatment must nevertheless respect the legal framework in force.

<sup>141</sup> Subsection 91(1) of the ITA.

<sup>142</sup> Brouard and Milgrom, supra note 114, at 12-13.

<sup>143</sup> Li et al., note 122, at 205.

foreign withholding tax paid on the dividend or income tax paid in respect of the underlying income.<sup>144</sup> However, where the recipient is a Canadian corporation, dividends received from a FA are generally fully deductible in computing the recipient's income to the extent that they are paid out of the FA's exempt surplus pool.<sup>145</sup>

Under the FAPI regime, a FA has four specific surplus pools: (i) the pre-acquisition surplus pool; (ii) the taxable surplus pool; (iii) the hybrid surplus pool; and (iv) the exempt surplus pool. The ITA provides a specific order with respect to FA surplus distributions. Dividends are normally considered to be first paid out of exempt surplus (net of any exempt deficit), then out of hybrid surplus (net of any hybrid deficit), then out of the taxable surplus (net any taxable deficit), to the extent of a shareholder's entitlement to such surplus pools.<sup>146</sup> Dividends received in excess of a FA's exempt, hybrid, and taxable surplus are deemed to have been received from its pre-acquisition surplus. Such dividends are also deductible in computing the recipient's income, but they reduce the adjusted cost base of the recipient's shares of the FA.<sup>147</sup>

Exempt surplus is computed through the calculations of exempt earnings, which generally include active business income and deemed active business income earned through a permanent establishment<sup>148</sup> in a jurisdiction with which Canada has concluded a comprehensive tax treaty or tax information exchange agreement,<sup>149</sup> gains from the disposition of business property and the

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<sup>144</sup> Section 90 and paragraphs 113(1)(b) and (c) of the ITA; and Kurrant, *supra* note 127.

<sup>145</sup> Paragraph 113(1)(a) of the ITA.

<sup>146</sup> Regulation 5901(1).

<sup>147</sup> Subsection 92(2) and paragraph 53(2)(6) of the ITA.

<sup>148</sup> Regulation 5906(1).

<sup>149</sup> Referred to as "designated treaty country": Regulation 5907(11). The FA must be resident in the designated treaty country both under the common law and the treaty residency requirements. With respect to this dual requirement, the Supreme Court of Canada stated that in order to be considered resident under a tax treaty, in this case the Canada-US tax treaty, it was necessary that a taxpayer be "subject to as comprehensive a tax liability as is imposed by a state": *The Queen v. Crown Forest Industries Limited et al.*, 95 DTC 5389 (SCC); and Doug Connell and Sandra Goldberg, "Barbados as a Base for Offshore Activities," in *Reporting of Proceedings of Fifty-Fourth Tax Conference*, 2002 Conference Report (Toronto: Canadian Tax Foundation, 2003), 19:1-20, at 3-4. Although some jurisdictions for example, impose very low or no income taxes at all, none have a comprehensive tax treaty with Canada and would, thus, not be suitable for purposes of exploiting IP, given that

non-taxable portion of capital gains. The counterparts of these concepts are the “exempt loss” and “exempt deficit” calculations. Hybrid surplus generally includes capital gains on the sale of partnership interests and shares in other FAs. Taxable surplus generally includes taxable earnings, which comprise passive income including FAPI, dividends received out of other FAs’ taxable surplus, certain capital gains, and business income earned by a FA that is not resident in a designated treaty country, and the equivalent loss computation rules.<sup>150</sup>

Where a Canadian MNE seeks to exploit its IP under the Licensing Model through one or more FAs, it must ensure that each FA be structured such that the FA’s income will be treated as active business income rather than FAPI.<sup>151</sup> The deferral of Canadian tax is often the main reason for using an offshore licensing entity. In the event that the offshore entity’s income is characterized as FAPI, the tax benefits of the Licensing Model would be eliminated.

“Income from an active business,” which is included in the FA’s exempt earnings, is essentially a residual concept defined in subsection 95(1) of the ITA to include the FA’s income (other than “income from property”) that pertains to or is incidental to an “active business,” which generally refers to any business carried on by the FA other than an “investment business.” “Income from property” includes the FA’s income from an “investment business,” which is defined to mean “a business carried on by the [FA] [...] the principal purpose of which is to derive income from property (including interest, dividends, rents, royalties or any similar returns

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income earned by the FA would inevitably be subject to FAPI. On the other hand, Barbados, which has a tax treaty with Canada, represents an ideal jurisdiction for Canadian MNEs to base their international operations, because Barbados International Business Corporations are taxed at a maximum rate of 2.5% and their active business profits can be repatriated in Canada by way of a dividend free of Canadian tax: Kurrant, *supra* note 127. However, some countries typically viewed as tax havens, such as Bahamas (November 17, 2011), Cayman Islands (June 2, 2011), and Jeysey (December 20, 2011), have recently entered into tax information exchange agreements with Canada. For a technical interpretation on the residency requirements of a FA incorporated in Barbados in light of the *Crown Forest* decision, see CRA document no. 2000-0047365, June 15, 2002.

<sup>150</sup> Regulation 5901(1). Under draft regulation 5901(1.1), the payee corporation can elect for taxable surplus to come before hybrid surplus, as the “taxable surplus may in some cases be more valuable to a taxpayer there hybrid surplus.” See technical notes under draft regulation 5901(1.1). The FA may also elect under regulation 5902 to pay out of taxable surplus first, for instance to allow the Canadian resident corporations to use fewer carryovers.

<sup>151</sup> Meister, *supra* note 126.

[...]) [...] or profits from the disposition of investment property [...].”<sup>152</sup> In other words, if the FA’s income is not income from an investment business, it will not be considered as income from property, and thus will be income from an active business included in the FA’s exempt earnings.

The income earned by an offshore entity that is a FA of a Canadian corporation may be excluded from the investment business category if all the following conditions must be met: (i) the business is not conducted principally with persons with whom the affiliate does not deal at arm’s length; (ii) the entity’s business is the leasing or licensing of property; and (iii) the business employs more than five employees full time in the active conduct of that business, or the equivalent of more than five full-time employees, taking into consideration only services provided by employees of the affiliate or services provided outside Canada by employees of certain related persons.<sup>153</sup> If the offshore entity cannot meet all these conditions, it may rely on alternatives to exclude the licensing activity from FAPI treatment. For example, it may argue its income is not income from property under the common law meaning of the term.<sup>154</sup> Alternatively, it may attempt to avail itself of the deeming provisions in subsection 95(2) of the ITA that provide recharacterization of income from property as income from an active business. Such alternatives are discussed below.

It is a question of fact whether the principal purpose of a business is to earn active income, and there is no clear rule under the ITA or guidance under the case law.<sup>155</sup> However, because the

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<sup>152</sup> Ibid. Given the circularity in the definitions of “income from property” and “investment business,” the reference to the terms “income from property” (other than interest, dividends, rents, royalties, or any similar returns specifically described in such definition) in the definition of an “investment business” have presumably their common law meaning.

<sup>153</sup> Subsection 95(1) of the ITA, definition of “investment business.”

<sup>154</sup> The above-mentioned conditions are not meant to frame clear rules establishing when a business’ principal purpose is to earn property income. See Kurrant, *supra* note 127.

<sup>155</sup> Note that in a number of cases, the courts established that there is a rebuttable presumption that any activity carried on by a corporation will generate income from a business. See *Canadian Marconi Co. v. R.*, [1986] 2 SRC 522. The investment business test requires that earning income from property be the principal purpose of the FA’s business. If the offshore entity can establish that it is in the business of developing IP and that the royalty income is the accessory to the principal, it may be argued that the foreign subsidiary is carrying on an active

definition of “investment business” for the purpose of the FAPI rules is largely patterned on the definition of “specified investment business,”<sup>156</sup> one may consider CRA’s views on the characterization of income earned under the specified investment rules, particularly with respect to income earned by licensing entities and entities carrying on an e-business.<sup>157</sup> Indeed, the CRA has concluded that royalties from copyrighted music represent active income if related to an active business carried on by the recipient,<sup>158</sup> and has also made general comments with respect to the treatment of income from licensing arrangements:

As a general rule, income from a licensing agreement would not be income from an active business because it would be income from a source that is property or income from a specified investment business. In a situation where it could be established that the licensing income is related to an active business carried on by the recipient corporation or the recipient corporation is in the business of dealing in or originating the property from which the licensing income is received, such income could be considered to be income from an active business.<sup>159</sup>

Accordingly, in certain circumstances, it may be argued that the principal business of the offshore licensing entity is not to earn property income, but rather to develop IP and earn royalties thereon, in particular if IP is acquired in the early stages of the IP lifecycle and the entity has assumed the costs and risks related to its acquisition.

The recharacterization of income that would otherwise be FAPI into active business income pursuant to subsection 95(2) of the ITA generally applies where the FAs’ activities, when viewed

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business. This argument is strengthened where the FA provides additional services related to the development of IP, such as manufacturing or technical services. Provided that the classification of income is essentially a question of fact, these circumstances would allow income to be considered earned from an active business, irrespective of the number of employees. See Kurrant, *supra* note 127.

<sup>156</sup> Subsection 125(7) of the ITA.

<sup>157</sup> Brouard and Milgrom, *supra* note 114, at 17-18; and Meister, *supra* note 126, at 1709-1710.

<sup>158</sup> In CRA document no. 9722915, September 26, 1997, the CRA mentioned that “[a]lthough royalty income is generally from a source that is property, where it can be established that the royalty income is related to an active business carried on by the recipient corporation in the year, or the recipient corporation is, in the year, in the business of originating property from which the royalties are received, such income will be considered to be income from an active business. Therefore, if a company is in the business of composing music, the income it earns with respect to its copyrighted music would generally be considered active business income. The fact that such income is in the form of royalties is not, in and by itself, sufficient to conclude that it is property income.”

<sup>159</sup> CRA document no. 9507915, July 14, 1995. The CRA also mentioned that “it may be possible that income earned from allowing a person to use an intangible, such as a patent, copyright, trademark, etc., is derived from an ‘active business’” in CRA document no. 9520295, August 18, 1995. See also CRA document no. 9510985, June 30, 1995; and *Interpretation Bulletin* IT-73R6, “The Small Business Deduction,” March 25, 2002.

as a whole, constitute a single active business. More specifically, subparagraphs 95(2)(a)(i) and (ii) of the ITA permit such a recharacterization where there is more than one FA integrated in the international structure.<sup>160</sup> In both cases, the FAs are viewed as a whole and allow for income to be characterized as a reflection of its true nature.

Conversely, certain deeming provisions in subsection 95(2) provide that income is deemed to be FAPI where it otherwise would be considered to be earned from an active business. The first such circumstance is provided for by paragraph 95(2)(a.1) of the ITA, namely where it is reasonable to conclude that a FA is created for purposes of purchasing goods from a third country for resale to the Canadian parent (or a related Canadian business) at an elevated transfer price, thereby minimizing Canadian tax by shifting revenue to a low-tax jurisdiction.<sup>161</sup> Similarly, where the FA leases property or licenses IP to a Canadian resident, paragraph 95(2)(a.3) of the ITA provides for another provision related to FAPI-deemed income, except where more than 90% of the gross revenue of the FA's income is derived from the leasing of the property or licensing of the IP to non-resident persons with whom the FA deals at arm's length.

Inter-company pricing of licensed IP, or an outright sale thereof, is also carefully monitored. As a general rule, non-arm's length parties entering into cross-border transactions must ensure that amounts paid (or payable) are reflective of similar transactions that would have been entered into with arm's length parties. Otherwise, subsection 247(2) of the ITA provides for a

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<sup>160</sup> Subparagraph 95(2)(a)(i) of the ITA provides that income is deemed to be from an active business where it is derived from activities that could reasonably be considered to be directly related to active business activities carried on outside of Canada by a related non-resident corporation. Subparagraph 95(2)(a)(ii) of the ITA provides a similar deeming provision where the income of the FA arises from payments from a related corporation and the payments are deductible in computing that related corporation's earnings from an active business.

<sup>161</sup> The recharacterization, however, does not apply should any of the following conditions be met: (i) more than 90% of the gross revenue of the FA from the sale of property is generally derived from the sale of such property to persons that deal at arm's length with the FA; (ii) the property to be sold was manufactured in the jurisdiction in which the FA is located; or (iii) the property in question was manufactured by the Canadian parent (or a related Canadian business) and was either sold to arm's length non-residents or the FA for purposes of selling the property to other non-residents.

“recharacterization of the transaction to determine the amounts that would have been payable by arm’s length parties with respect to the product or service at issue.”<sup>162</sup> Thus, where a FA pays its Canadian parent an unreasonably low usage fee under a licensing agreement, for example, the proceeds received by the Canadian parent would be recharacterized upward. Inversely, where a Canadian parent pays an unreasonably high price for products sold or services rendered by its FA, the price would be recharacterized downward, and a dividend would be deemed on the excess.<sup>163</sup> Part XIII withholding tax would also generally apply on said dividend.<sup>164</sup>

Given the difficulty in quantifying the value of IP, particularly in the early stages of its lifecycle, intangible assets present a challenge from a transfer-pricing perspective. As such, MNEs usually document any comparable transactions to justify the arrangements made in exporting technology.<sup>165</sup> The CRA has also recognized the inherent difficulties in reconciling the arm’s length principle with IP assets and, thus, has supported the use of the “comparable uncontrolled price” method for the purposes of reasonably determining inter-company pricing of IP.<sup>166</sup> The

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<sup>162</sup> François Champoux and Giovanni Nucciarone, “International Distribution of Intellectual Property,” in *Report of Proceedings of Fiftieth Tax Conference*, 1998 Conference Report (Toronto: Canadian Tax Foundation, 1999) 42: 1-44, at 35-36.

<sup>163</sup> Paragraph 214(3)(a) of the ITA.

<sup>164</sup> Subsection 214(2) of the ITA. Where the adjustment provided for by subsection 247(2) of the ITA exceeds a certain threshold, penalties may be assessed pursuant to subsection 247(3) of the ITA in order to discourage abusive practices. A “reasonable efforts” defense, however, may be advanced under subsection 247(4) of the ITA to shield a taxpayer from such penalties should certain conditions be met. These conditions, however, are not binding on the tax authorities. At its discretion, the CRA may maintain that reasonable efforts were not made in determining arm’s length transfer prices or arm’s length allocations in respect of a transaction, and assess penalties accordingly. See Champoux and Nucciarone, *supra* note 162, at 37-38.

<sup>165</sup> Rautenberg, *supra* note 67, at 34-35.

<sup>166</sup> Essentially, the “comparable uncontrolled price” method may be used to determine an arm’s length price “when the same owner has transferred or licensed comparable [IP] under comparable circumstances to independent parties.” Where the “comparable uncontrolled price” method is not feasible and the operations of the related entities are highly integrated, the CRA also allows for the “profit split” method. Under this method, the profit generated from a specific transaction is allocated to the parties based on a myriad of factors, including the relative value of the parties’ contributions to the non-arm’s length transaction, the functions performed, the assets used, and the risks assumed by each party. A “cost plus” method is also used in assessing international transfer pricing, but is scarcely used or enforced by the CRA in the context of IP transactions considering that the cost of IP does not have a correlation, linear or otherwise, to its value. See *Information Circular 87-2R*, *supra* note 126, at paragraphs 64 and 96; and Brouard and Milgrom, *supra* note 114, at 22.

CRA has also suggested factors to be considered when establishing a royalty rate since the ITA does not provide a definition of “reasonable efforts.”<sup>167</sup>

Transfer pricing concerns also extend to the outright sale of an asset in the absence of an arm’s length relationship and *bona fide* purposes other than to obtain a tax benefit.<sup>168</sup> Such a situation may be said to occur, for example, where one company performs R & D and sells an unlimited entitlement to the IP to a related entity for a lump-sum payment.

Where a cost-sharing arrangement is used, the value of IP transferred must be based on its fair market value, rather than on participant’s contribution to the arrangement.<sup>169</sup> Furthermore, “a participant’s share of the overall contributions to the [arrangement] must be in proportion to the share of the overall benefits it expects to derive from the arrangement” in order to satisfy the arm’s length principle, thereby forcing the parties to develop projections of the benefits.<sup>170</sup>

The Licensing Model is relatively easy to implement – few employees and functions may need to be shifted abroad – and MNEs are generally able to limit FAPI and transfer pricing issues. Although Canada has a strong R & D regime, it generally fails to provide MNEs with an incentive to keep the IP the country. Canada finances to a large extent the R & D activities, but does not capture all the benefits of the IP exploitation when IP is moved offshore. Therefore, Canada has important lessons to learn from foreign countries that have implemented patent box regimes.

## **2. EXAMINATION OF THE PATENT BOX REGIMES: LESSONS FOR CANADA**

To date, nine nations have established patent box regimes (including the UK’s proposed patent box, but excluding the abolished Irish regime). While all patent boxes pursue the same objective

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<sup>167</sup> Such factors include: prevailing rates in the industry; terms of the licence, including geographic limitations and exclusivity rights; singularity of the invention and the period for which it is likely to remain unique; technical assistance, trademarks and know-how provided along with access to the patent; profits anticipated by the licensee; and benefits to the licensor arising from sharing information on the experience of the licensee. See *Information Circular 87-2R*, at paragraph 147.

<sup>168</sup> Subsection 247(2) of the ITA.

<sup>169</sup> Champoux and Nucciarone, *supra* note 162, at 42.

<sup>170</sup> *Ibid.*

of fostering and spurring innovation in the country, they nevertheless differ in several ways. Patent boxes are particularly unique depending on: (i) the kinds of qualifying IP; (ii) the types of qualifying income; and (iii) the tax treatment of the qualifying income inside the patent box.

## **2.1. QUALIFYING INTELLECTUAL PROPERTY**

Patents are the main form of eligible IP, but many patent boxes encompass various forms of IP. The eligibility of IP is generally assessed based on certain ownership and acquisition criteria.

### **2.1.1. Patents and Other Types of Intellectual Property**

The term “patent box” is a misnomer in the sense that patent boxes, in many jurisdictions (notably Hungary, Luxembourg, Spain, and Switzerland), apply to a wide variety of intangibles.<sup>171</sup> For example, Luxembourg’s patent box is very broad and includes in its definition of qualifying IP copyrights on software, trademarks, patents, domain names, designs, and models.<sup>172</sup> Likewise, qualifying IP in Hungary includes “patents and other protected intellectual works, know-how, trade-marks, business names, business secrets, and copy-rights.”<sup>173</sup> Switzerland’s regime is especially far-reaching as it extends to most kinds of IP.<sup>174</sup> Finally, both Spain and China allow certain types of know-how, such as process innovation, to qualify under their patent box regimes.<sup>175</sup>

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<sup>171</sup> The Netherlands, for example, now uses the term “innovation box.” The Netherlands’ patent box was expanded into an innovation box in 2009 in order to allow profits from products or services resulting from R & D activities, but for which a patent or trademark eligible for the patent box have not been obtained. Certain benefits of the innovation box are also available for income linked to pending patents: Atkinson and Andes, *supra* note 13, at 3.

<sup>172</sup> Article 50 *bis* of the Loi du 4 décembre 1967 concernant l’impôt sur le revenu, Mémorial A-79 du 6 décembre 1967. Athletes are expressly permitted to benefit from the regime upon the condition that they register their name and/or image as a trademark and thereafter grant a license to a third party, such as a manufacturer of sports goods, to exploit their trademark. See Ernst & Young, “Luxembourg Intellectual Property Regime” (April 2010).

<sup>173</sup> Merrill, Peter R., James R. Shanahan Jr., José Elías Tomé Gómez, Guillaume Glon, Paul Grocott, Auke Lamers, Diarmuid MacDougall, Alina Macovei, Rémi Montredon, Thierry Vanwelkenhuyzen, Alexandru Cernat, Stephen Merriman, Rachel Moore, Gregg Muresan, Pieter Van Den Berghe, and Andrea Linczer, “Is It Time for the United States to Consider the Patent Box?” (March 26, 2012) *Tax Notes* 1165-1175, at 1668.

<sup>174</sup> See Eynatten, *supra* note 4, at 519.

<sup>175</sup> Atkinson and Andes, *supra* note 13, at 3. An enterprise income tax incentive on technology transfer is available for China tax resident companies, but non-resident companies may nevertheless enjoy a 5% business tax exemption: Circular on EIT Exemption and Reduction to Incomes from Technology Transfer, Guo Shui Han, no. 212 (2009); Circular on EIT Policy on Technology Transfer by Resident Enterprises, Cai Shui, no. 111

Alternatively, countries such as Belgium, France, the Netherlands, and the UK have chosen to restrict the scope of IP qualifying for their patent boxes. Belgian law, for example, explicitly excludes know-how, trademarks, designs, models, secret recipes or processes, and information concerning experience with respect to trade or science from the “patent income deduction.” Patents, supplementary protection certificates and know-how closely associated with patents or supplementary protection certificates are however included in the Belgian patent income deduction.<sup>176</sup> Similar to Spain, the Dutch “innovation box” applies to patents and IP that result from R & D activities conducted by or on behalf of the Dutch taxpayer; trademarks, logos and similar rights are not eligible.<sup>177</sup> Under the French tax code, qualifying IP is limited to patents and patentable inventions (including improvements and resulting manufacturing processes) as well as vegetal invention certificates.<sup>178</sup> Finally, unlike most of its European counterparts, the UK has chosen to restrict the application of its regime (effective in 2013) exclusively to patents.

### **2.1.2. Ownership Requirements and Development Criteria**

A second point of divergence among patent box regimes relates to how acquired IP is treated.<sup>179</sup> As stated by Atkinson and Andes:

Most patent box countries allow acquired IP to qualify. In other words, if a firm licenses [IP] from another organization and then generates income from that IP, it is taxed at the lower patent box rate. However, the Netherlands and Spain limit their patent box incentive to IP developed by the business taking the lower patent box rate.<sup>180</sup>

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(2010); Circular Cai Shui Zi, no. 273 (1999); and Yun Wei, Bernd-Uwe Stucken, and Matthias Mueller, “China: technology transfer tax incentives update,” *BNAI’s Asia Pacific Focus*, (<http://www.bnai.com/China/TechnologyTransfer/default.aspx>).

<sup>176</sup> See sections 86 to 91 of Loi programme du 27 avril 2007 (Monit. belge 8 mai 2007); Shanahan, *supra* note 13; and Merrill et al., *supra* note 173.

<sup>177</sup> The Dutch innovation box has been introduced by the law *Werken aan Winst*, 2006 in staatsblad (loosely translated as “Work on Profit”), which has modified section 12b of the *Wet op de vennootschapsbelasting 1969* (Corporate Income Tax Act 1969). In Spain, qualifying IP includes patents, designs, models, plans, secret formulas or procedures, and know-how, but excludes trademarks and certain copyrights: Ley 16/2007, de 4 de julio, de reforma y adaptación de la legislación mercantil en materia contable para su armonización internacional con base en la normativa de la Unión Europea, BOE-A-2007-13023.

<sup>178</sup> Merrill et al., *supra* note 173, at 1667.

<sup>179</sup> Atkinson and Andes, *supra* note 13, at 3.

<sup>180</sup> *Ibid.*

Some countries require that the qualifying IP be owned by the taxpayer. The relevant criteria for ownership are generally that the party must exclusively bear the risks associated with the knowledge or know-how and must have exclusive entitlement to the benefits derived therefrom.<sup>181</sup> This requirement could be problematic with respect to cooperative endeavours, such as cost contribution agreements and joint ventures, as the involvement of different parties may lead to the loss of entitlement to the patent box. The Dutch and UK governments have, however, extended benefits of their patent boxes to cases of shared ownership, IP developed in partnerships, joint ventures, and cost sharing arrangements, as well as licensed IP:

The [UK] Government wants the Patent Box to be accessible for a wide range of trading companies and does not want it to distort normal commercial arrangements around patent ownership. It therefore proposes that the benefits of the Patent Box will be accessible both through legal ownership and through holding an exclusive license to exploit a patent commercially. The license can be limited by field or territory, provided that it still results in effective market exclusivity.<sup>182</sup>

In order to ensure that taxpayers who will benefit from the patent box are actively involved in R & D and are not merely passive recipients of the income generated from the resulting IP, most countries restrict the benefits of their regimes to those taxpayers that have taken an active role in either the ongoing decision-making connected with the exploitation or the development of the IP itself, or both of these activities.<sup>183</sup> In Ireland, for example, subsection 234(2) of the Taxes Consolidated Act required certain persons to have “carried out, either solely or jointly with another person, the research, planning, processing, experimenting, testing, devising, designing, developing or other similar activity leading to the invention which is the subject of the qualifying patent.”<sup>184</sup> Similarly, the Belgian patent income deduction is available to Belgian companies and permanent establishments (“PE”) who have developed the patent themselves (partly or fully) in an

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<sup>181</sup> Wiecher Munting and Jeroen Van Der Wal, “From the Foreign Desk: Netherlands – The Dutch ‘Innovation Box’: A Sound Alternative to Existing IP Structuring, Offering an ETR of 5% on R & D Activities” (2011) available on Taxnet Pro (Toronto: Thomson Reuters) (online database).

<sup>182</sup> Ibid.; and United Kingdom, HM Revenue & Customs, *Consultation on the Patent Box* (London: HM Revenue & Customs, June 2011), at 10.

<sup>183</sup> Ibid. (HM Revenue & Customs).

<sup>184</sup> Taxes Consolidation Act 1997, *supra* note 134.

R & D center in the country or abroad or, where patents are acquired, provided the Belgian company or PE has further improved the patented products or processes.<sup>185</sup> For IP to qualify under the Dutch innovation box, it must be developed by a Dutch taxpayer. Acquired IP may also qualify if it is further developed for the risk and account of the Dutch taxpayer.<sup>186</sup> In France, if acquired, IP rights must be held for at least two years.<sup>187</sup> IP acquired from directly associated companies does not qualify in Luxembourg.<sup>188</sup> The proposed UK patent box will require both that the company perform significant activity to develop the patented invention and that the company claiming a patent box tax deduction remain actively involved in the ongoing decision-making connected with the patent's exploitation.<sup>189</sup>

Finally, patent boxes also differ in terms of whether IP developed outside the jurisdiction is eligible to benefit from the regime. Most countries allow IP to be created and developed outside their respective jurisdictions. Since the European Commissions' ruling in 2007 that Ireland was in contravention of the freedom of establishment and free movement of services clauses of Article 226 of the Treaty establishing the European Community when it restricted its tax exemption only to patent royalties resulting from R & D activity primarily carried out in the country, "No European nation's patent box has required R & D to be performed domestically as a condition of receiving the tax benefit."<sup>190</sup>

Once the categories of qualifying IP have been established, the next step in designing a patent box is to determine which types of income should receive special tax treatment.

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<sup>185</sup> To benefit from the patent income deduction, an R & D center must qualify as a "branch of activity" or "line of business" (that is an autonomous division of the entity): Shanahan, *supra* note 13, at 5; and Merrill et al., *supra* note 173, at 1666.

<sup>186</sup> Shanahan, *supra* note 13, at 6.

<sup>187</sup> Merrill et al., *supra* note 173, at 1667.

<sup>188</sup> A directly associated company generally includes any 10% direct parent, subsidiary or sister company. *Ibid.*, at 1668.

<sup>189</sup> HM Revenue & Customs, *supra* note 182, at 10.

<sup>190</sup> Atkinson and Andes, *supra* note 13, at 13; and Treaty Establishing the European Community, consolidated version, [2006] OJ C 321/E37.

## 2.2. QUALIFYING INCOME AND ITS TAX TREATMENT

In designing a patent box, a country must decide which categories of IP income will be eligible for special tax treatment. In general, there are three main sources of income associated with IP: (i) licensing income and royalties; (ii) outright sale of IP rights, which usually results in capital gains and/or income inclusion (recapture); and (iii) income embedded in the sale of patented products.<sup>191</sup> The eligible sources of qualifying income vary somewhat among patent boxes, with most regimes offering tax incentives for more than one income source.

### 2.2.1. Qualifying Intellectual Property Income

To the extent that a taxpayer licenses IP, the applicable tax deduction can be easily calculated based on the royalty income received. The eligible amount of royalties paid among related entities is generally limited to the amount otherwise taxable within that jurisdiction and which corresponds to the fee that would have been agreed upon between unrelated parties (that is, the fair market value).<sup>192</sup> Some countries require that additional requirements be met above and beyond a fair market value transfer price, where royalties are paid between entities not dealing at arm's length, in order to prevent any tax-avoidance attempts. Ireland, for example, required that the royalties be payable in respect of an invention used in a manufacturing activity.<sup>193</sup> Countries that offer favourable tax treatment for licensing activities include Belgium, France, Luxembourg, Spain, Switzerland, and the UK.

As elaborated in section 1.2.1, the outright sale of IP, depending on the business nature, may be classified as either a disposition on account of capital or income. This distinction generally relies on whether the IP being sold is inventory or capital property to the taxpayer. A number of

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<sup>191</sup> Deloitte, "Patent Box – Thinking Inside the Box" (June 16, 2011), at 2 (<http://www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/Services/Tax/uk-tax-patent-box-special-bulletin.pdf>).

<sup>192</sup> Stappen, *supra* note 24.

<sup>193</sup> Ireland, Office of the Revenue Commissioners, *Tax Instruction 7.3.6 Patent Royalties and Related Distributions (Section 234 and 141 TCA 1997)* (Dublin: Office of the Revenue Commissioners, April 2011).

regimes offer incentives for capital gains resulting from the sale of patents. Some regimes, such as in the case of Luxembourg, impose a recapture rule to avoid exempting a gain where losses have already been fully deducted due to related expenses and amortization of the IP.<sup>194</sup> The countries that offer a favourable tax treatment for capital gains resulting from the disposition of IP assets include France, Luxembourg, Switzerland, and the UK. Such incentives are generally designed to benefit smaller companies, as stated by advocates of the UK's proposed regime:

Some smaller companies which develop new patents do not have the scale of operations required to fully commercialize a new product in-house. Extending the patent box to include income from the sale of patents will provide an incentive for these innovative small companies to be located in the UK.<sup>195</sup>

Some countries also extend the application of their patent box regime to profits with embedded IP rather than just to income from the exploitation of IP, such as royalties. This type of regime significantly broadens the potential scope of these countries' patent boxes. Embedded income is income from the sale of any products incorporating at least one invention covered by qualifying IP (for example, income from shrink-wrapped software). To guard against businesses that may be tempted to use legislative provisions in an abusive way by adding IP to products, countries have restricted the scope of embedded income to products in which the incorporation of the IP has *bona fide* purposes other than obtaining tax benefits under the patent box.

### **2.2.2. Tax Treatment of Qualifying Income**

It is the essence of the patent box to provide a low tax rate for qualifying income. However, the tax rate varies considerably among patent box regimes, generally ranging from 0% to 15%. France and Spain have the highest tax rate of 15%, whereas China applies a zero rate of tax with a graduated cap.<sup>196</sup> China has set the cap at RMB5M (the income above RMB5M being taxed at half

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<sup>194</sup> Ibid., at 513.

<sup>195</sup> HM Revenue & Customs, *supra* note 182, at 14.

<sup>196</sup> China provides an exemption for income below approximately \$800K and a 50% exemption for the balance, resulting in an effective tax rate of 12.5% considering China's regular corporate tax rate of 25%.

the general corporate tax rate).<sup>197</sup> In Ireland, maximum relief under the patent box was capped at €5M. Finally, in Spain this amount is six times the development costs incurred. The Netherlands' new regime, in place since January 1, 2010, eliminated the cap on qualifying income and reduced the tax rates from 10% to 5%.<sup>198</sup> As it is often the case in Switzerland, the patent box tax rate varies between zero and 12%, depending on the negotiations during the tax ruling process. Belgium and Luxembourg (80%), as well as Spain (50%), allow a deduction for qualifying gross patent income, resulting in effective tax rates of 6.8%, 5.9%, and 15% respectively.<sup>199</sup> A brief overview of the tax treatment of qualifying IP income offered by several patent box regimes is provided in Table 2 in appendix C.

The calculation of patent box profits differs widely from regime to regime. Some patent box regimes, for example, use gross income from the sale of patents or patent-based products as the foundation for applying the preferential patent box tax rate. Other regimes apply the reduced patent box tax rate to net profits attributed to IP. Patent boxes also differ with respect to limiting the amount of profits from IP eligible for the preferential rate. Whereas some regimes choose to place a cap on the profits included in the patent box, either as a multiple of production costs or as a maximum amount, other regimes choose not to cap profits. A final notable point of differentiation is whether a patent box chooses to treat capital gains from IP the same way as it does for revenues. These distinctions are addressed in more details below.

The Netherlands, Luxembourg, and the UK have all established regimes that currently tax IP profits net of related expenses.<sup>200</sup> The net IP profit basis is inherently complex to administer and calculate. This is explained by the fact that “related expenses” – meaning development expenses,

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<sup>197</sup> Atkinson and Andes, *supra* note 13, at 4.

<sup>198</sup> Werken aan Winst, *supra* note 177.

<sup>199</sup> Eynatten, *supra* note 4, at 513; and Atkinson and Andes, *supra* note 13, at 3-5.

<sup>200</sup> Luxembourg's regime applies to “net positive” income, which is gross revenue from the IP less directly connected expenses, depreciation, and write-downs. This regime is closer to regimes taxing gross income, as it does not include R & D activities under related expenses.

post-production, marketing and exploitation expenses relating to patents – must be accounted for and monetized.<sup>201</sup> The UK has adopted a formulaic approach rather than requiring an arm’s length valuation of each patent individually. The UK proposes that net profits will be calculated using a flexible three-step model based on a residual profit split transfer pricing method. Briefly, the first step is to determine the part of the taxpayer’s profit attributable to income qualifying under the patent box. The second step requires taxpayers to calculate a “residual” profit by deducting a fixed percentage return of “routine activities” costs. The third step requires businesses to identify the amount of residual profit that is both due and closely related to the IP.<sup>202</sup> The rationale for employing a net profit method, rather than simply using gross income, is that a tax rate applicable to gross income would result in an effective tax rate well below the headline rate for the patent box, which would be very costly and create opportunities for tax avoidance.<sup>203</sup>

In contrast to the Netherlands, Luxembourg, and the UK, the remaining patent box regimes generally apply the patent box tax rate to gross revenue rather than net income. This method is less complex, but does not protect against erosion of the tax base on unrelated income. Consider the following example provided by Merrill et al.:

A patent is developed at a cost of \$100 and generates a stream of licensing income with a present value of \$200. Under the Belgian patent box, the present value of taxable income will be negative \$60 (20 percent of \$200 license income less \$100 of R & D expense) because only 20 percent of the license income is subject to tax due to the 80 percent patent income deduction. At the Belgian CIT rate of 33.99 percent, the present value of tax liability on patent income in this example is negative \$20.4 (-\$60 times 33.99 percent), corresponding to an ETR of negative 20.4 percent. If more than 100 percent of the R & D expenditures are deductible under Belgium’s tax incentive for in-house R & D, the effective tax rate in this example would be even lower.<sup>204</sup>

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<sup>201</sup> Merrill et al., supra note 173, at 1673.

<sup>202</sup> HM Revenue & Customs, supra note 182, at 17.

<sup>203</sup> HM Revenue & Customs, supra note 2, at 53. Merrill et al., supra note 173, at 1673, gives the following example: “Patent box regimes generally do not require that development costs be deducted from IP box income. As a result, the effective tax rate on qualified IP can be substantially lower than the nominal patent box rate; indeed, it can be negative. Example: a patent is developed at a cost of \$100 and generates a stream of licensing income with a present value of \$200. Under the Belgian patent box, the present value of taxable income will be *negative* \$60 (20 percent of \$200 license income less \$100 of R & D expense) because only 20 percent of the license income is subject to tax due to the 80 percent patent income deduction.”

<sup>204</sup> Merrill et al., supra note 173, at 1673.

Another point of divergence among patent box regimes is the question of whether the regime should impose a cap on the amount of profit benefiting from the patent box. As previously mentioned, only China and Spain currently cap benefits under the patent box.

Treatment of capital gains from the disposition of IP also varies among regimes. Whereas certain regimes, notably Belgium, Spain and the UK, exclude capital gains completely from patent box eligibility, other regimes include these profits in one way or another. In France, patent box benefits extend to net capital gains resulting from the transfer of patents, patentable inventions, and some industrial manufacturing processes.<sup>205</sup> Luxembourg also extends its 80% exemption to capital gains realized on the disposal of qualifying IP.<sup>206</sup> Similarly, the Netherlands extends its patent box rate of 5% to capital gains on qualifying IP.<sup>207</sup>

The qualification requirements and mechanics for the patent boxes adopted worldwide, including the UK's proposed patent box and the abolished Irish regime, are summarized in Table 3 in appendix C. In designing a patent box, a country must cautiously establish the specifics of qualifying IP and the tax treatment of qualifying income. However, the country must first carefully review its tax policy in order to determine the optimal mix of IP incentives.

## **2.3. INTELLECTUAL PROPERTY INCENTIVES: TAX POLICY TO SPUR INNOVATION**

### **2.3.1. Cost-Benefit Analysis of the Current Canadian R & D Regime**

In combination with the tax incentives provided by most Canadian provinces, Canada's federal R & D program, which offers generous investment tax credits and a 100% immediate deduction for qualified expenditures, results in an extremely low after-tax cost of R & D expenditures. These incentives have been essential in encouraging thousands of businesses to engage in R & D activities in the country, with the federal government alone providing nearly

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<sup>205</sup> Eynatten, *supra* note 4, at 510.

<sup>206</sup> *Ibid.*, at 513.

<sup>207</sup> *Ibid.*, at 514.

\$4 billion in tax assistance each year.<sup>208</sup> Despite its costliness, the federal government is willing to subsidize such activities in order to spur innovation and enhance the economy.<sup>209</sup>

The direct and indirect benefits of R & D activity are substantial and extend far beyond the businesses carrying out the research. Fundamental discoveries and general technologies find wide applications and have broad impacts.<sup>210</sup> R & D leads to improved products and services through the discovery of more efficient technological processes. As well, knowledge often “spills over” to third parties who did not originally bear the cost of the investment.<sup>211</sup> Exploring novel ideas, whether resulting in successful innovation or not, guides the R & D activities of other firms and research centers. Therefore, important external benefits arise from both successful and unsuccessful research, as researchers and businesses learn from each other's mistakes.<sup>212</sup> R & D can also address a variety of societal concerns, such as health, defence and the environment.

The spin-off benefits and general advancements in technology also contribute to the Canadian economy as a whole. By supporting R & D activity, the government helps to create and maintain knowledge and skill-intensive jobs. The innovation creates an attractive environment for talented, educated individuals who might not otherwise come to, or remain in, Canada. R & D also leads to the development of infrastructure needed to support the research activities as well as the resulting

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<sup>208</sup> In 2011, Canada provided more than \$3.6 billion in tax assistance in 2011: Canada, Department of Finance, “Harper Government Launches Consultations on Contingency Fees for the SR&ED Tax Incentive Program,” *News Release* 2012-086, August 2, 2012.

<sup>209</sup> Atkinson and Andes note that “Many conventional neoclassical economists look with suspicion on proposals to use the tax code to favour particular kinds of activities, because they believe (though with almost no actual empirical evidence to support the belief) that markets acting alone maximize a nation’s economic welfare. Notwithstanding this predilection for a ‘neutral’ tax code, a not insignificant number of economists are willing to support tax incentives for corporate R & D”: Atkinson and Andes, *supra* note 13, at 4.

<sup>210</sup> *Ibid.*

<sup>211</sup> Bozio, Antoine, Mike Brewer, James Browne, Rowena Crawford, Michael Dicks, Richard Disney, Carl Emmerson, Rachel Griffith, Simon Hayes, Paul Johnson, Andrew Leicester, Peter Levell, Helen Miller, Cormac O’Dea, David Phillips, Ian Preston, and Gemma Tetlow, *The IFS Green Budget*, The Institute for Fiscal Studies (London: The Institute for Fiscal Studies, February 2010), at 239 (<http://www.ifs.org.uk/budgets/gb2011/gb2011.pdf>). Yale economist William Nordhaus estimates “that inventors capture just 4 percent of the total social gains from their innovations; the rest spill over to other companies and to society as a whole”: William Nordhaus, “Schumpeterian Profits and the Alchemist Fallacy” (Yale University, Department of Economics, 2005).

<sup>212</sup> *Ibid.* (Bozio et al.), at 240.

manufacturing and services industries.<sup>213</sup> Income generated from R & D activity is spent by stakeholders back in the Canadian economy. Governmental support of R & D is of particular importance when businesses are facing financial crisis and would potentially otherwise consider cutting their R & D expenses.<sup>214</sup>

While businesses still benefit from the development of IP that, without R & D tax incentives, they likely would not have otherwise engaged in, they nonetheless tend to under-invest in R & D activity because they do not fully appropriate all of the benefits for themselves.<sup>215</sup> This is true despite the fact that IP can often be quite lucrative for such businesses. Studies have shown that private rates of return can be up to five times lower than social rates of return of the R & D as a result of the spill-over effects.<sup>216</sup> Another factor is that R & D presents a large financial risk to businesses since the realization of marketable new products or processes is highly uncertain. Therefore, governmental support of R & D is required to rectify the market's failure.

Canada's program has been particularly effective in increasing R & D activity. A Finance Canada study observed that each dollar of tax revenue foregone through tax incentives generated \$1.11 in additional business research spending, outlining that, "While this may appear to be a modest return, it is roughly equivalent to the government investing funds raised by distortionary taxes, which have an effective return of -30%, in an asset generating a 41% return."<sup>217</sup> Another Finance Canada study showed that the proportionate amount of research conducted by firms as a

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<sup>213</sup> Ernst & Young, *supra* note 44, at 5.

<sup>214</sup> OECD, *supra* note 59, at 1. According to Gregory Tasse, "When technological advances take place in the foreign industry, manufacturing is frequently located in that country to be near the source of the R & D. This phenomenon occurs because much of the knowledge produced in the early phases of a technology's life cycle is tacit in nature and such knowledge transfers most efficiently through personal contact": Gregory Tasse, "Globalization of Technology Based Growth: The Policy Imperative" (2008) 33:6 *The Journal of Technology Transfer* 560-578, at 565.

<sup>215</sup> HM Revenue & Customs, *supra* note 2, at 55.

<sup>216</sup> OECD, *supra* note 14, at 6.

<sup>217</sup> Mark Parsons and Nicholas Phillips, *An Evaluation of the Federal Tax Credit for Scientific Research and Experimental Development*, Department of Finance Working Paper 2007-08 (Ottawa: Department of Finance, 2007), at 35.

result of the federal R & D tax credit is more important than research conducted using governmental grants, an endorsement of Canada's continued use of investment tax credits.<sup>218</sup>

However, extensive R & D regimes, such as Canada's R & D program, are also associated with certain drawbacks and uncertainties. The administrative costs of R & D tax incentives, as well as the intended and unintended tax revenue losses, may represent substantial costs to governments.<sup>219</sup> For instance, in Europe fiscal measures were not considered influential in stimulating firms, who had previously never performed R & D, to begin investing in R & D.<sup>220</sup> Lastly, R & D programs are often complex, which can result in significant increases in the cost of applying for tax credits and can potentially deter firms from using the incentives altogether.<sup>221</sup>

Canada has attempted to reduce the complexity of its system by introducing "new administrative rules to facilitate access to their R & D tax credit program, improve its consistency and predictability, and enhance the quality of the claims process."<sup>222</sup> Moreover, Canada's use of a volume-based tax credit scheme, where all qualified R & D expenditures are included in the eligible base, is simpler for both companies and governments.<sup>223</sup>

Although a jurisdiction's R & D regime is an important factor, MNEs typically carry on their R & D activities where the best talent is located. Also, MNEs across many groups of experts in different locations in order to benefit from a variety of scientific thinking and knowledge.<sup>224</sup>

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<sup>218</sup> Canada, Department of Finance Canada and Revenue Canada, *The Federal System of Income Tax incentives for Scientific Research and Experimental Development: Evaluation Report* (Ottawa: Department of Finance Canada and Revenue Canada, December 1997).

<sup>219</sup> OECD, *supra* note 14, at 23.

<sup>220</sup> European Commission, *Raising EU R & D Intensity: Improving the Effectiveness of Public Support Mechanisms for Private Sector Research and Development – Fiscal Measures* (Brussels: European Commission, 2003).

<sup>221</sup> OECD, *supra* note 59, at 7.

<sup>222</sup> *Ibid.*, at 6.

<sup>223</sup> OECD, *supra* note 14, at 28.

<sup>224</sup> For example, Merck & Co., Inc.'s headquarters is located in New Jersey, its principal research facilities are in New Jersey, Pennsylvania, California, Nebraska, and the Netherlands. Merck also has production facilities in Australia, Canada, Japan, Singapore, Puerto Rico, South Africa, and other countries in Western Europe, Central and South America, and Asia: Merck & Co., Inc., "Annual Report 2011," *US SEC Form-10K*, February 28, 2012, at 34 (<http://www.merck.com/investors/financials/form-10-k-2011.pdf>).

Thus, FDI is less mobile in the IP creation and development phases. Once an MNE has identified the jurisdictions that best fit its business needs, it will structure its affairs to minimize its tax burden resulting from that necessity. Tax credits are not a substitute for expertise, but they nevertheless promote the development of that expertise. This can be seen through the success of the province of Quebec's multimedia tax credits.<sup>225</sup> However, the companies that have established branches in the province of Quebec to benefit from these credits did not move their headquarters to the province. Therefore, Canada's economy remains a "branch plant economy."

R & D has proven to be a highly successful tool in the development and growth of an economy. It has led to job creation, productivity improvements, new product development and has contributed to a number of social objectives, such as health and environment. However, when not combined with incentives related to IP income, R & D tax incentives actually fail to support and stimulate sustainable economic growth. While FDI is attracted to Canada, foreign-based MNEs do not move their headquarters and all related jobs and activities, including strategic management, accounting, marketing and other administrative high-value jobs, and activities associated with the exploitation of IP to Canada. Highly skilled jobs are created in R & D, but the educated individuals who perform these jobs do so for the sole benefit of non-resident MNEs. By largely financing the creation of jobs through tax incentives, Canada is effectively buying jobs. Thus, the increased R & D activity does not necessarily result in the expected increased tax revenue and economic growth. Today, because other countries have adopted patent boxes and similar regimes, and because research centers are developed around the world, the above

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<sup>225</sup> According to Foreign Affairs and International Trade Canada, "Québec is rapidly becoming one of the most attractive places in the world for interactive digital media companies. Over 500 companies are active in the industry, employing more than 12,000 employees. This figure includes the more than 5,000 people working in video-game companies such as Ubisoft, Eidos Interactive, EA (Electronic Arts), Activision and THQ, all located in Montréal. Montréal is also home to Autodesk, Hybride and Toon Boom Animation. Québec City is home to such successful studios as Behaviour, Sarbakan, Frima Studio and TransGaming": Canada, Foreign Affairs and International Trade Canada, *Digital Media – Canada's Competitive Advantages*, Invest in Canada 2011 (Ottawa: Canada, Foreign Affairs and International Trade Canada, 2011).

observations are truer than ever. Given that countries now often provide such regimes together with expertise centers and more generous R & D incentives, and that IP and its exploitation are far more mobile than the R & D activities, Canada must not only ensure that its R & D program and research centers maintains an elite status, but it also needs to create incentives to move IP to, and keep IP in, Canada. Otherwise, Canada will not be competitive in global markets and will continue to have a “branch plant economy.” These goals could be achieved with a Canadian patent box. This said, it is important to carefully weigh the benefits of a patent box against its costs and shortcomings in order to assess its impact on the Canadian economy and tax base.

### **2.3.2. Cost-Benefit Analysis of a Canadian Patent Box**

The policy rationale behind implementing a patent box has been expressed as being to “increase innovation activities, create and maintain high-value jobs, and foster global leadership in patented technology” by encouraging the IP mobility into a jurisdiction through lower effective tax rates to IP income or profits.<sup>226</sup> Governments have only recently responded to, and taken advantage of, the inherent mobility of IP by tailoring their tax regimes accordingly, realizing that MNEs do effectively locate their IP ownership in jurisdictions providing favourable tax regimes.<sup>227</sup> A Canadian patent box would enhance the competitiveness of the Canadian tax system for high-tech companies that generate profits from IP.<sup>228</sup> Creating a Canadian patent box would likely result in (i) Canadian MNEs becoming less likely to shift their IP rights outside the country; (ii) foreign MNEs establishing branches or subsidiaries in Canada to hold their IP rights; and (iii) additional patenting where currently no patent protection is sought. Furthermore, some high-tech companies may also establish their headquarters in Canada. Nevertheless, given the uncertainty as to whether implementing a patent box will ultimately increase tax revenue, the

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<sup>226</sup> Merrill et al., *supra* note 173.

<sup>227</sup> HM Revenue & Customs, *supra* note 2, at 51.

<sup>228</sup> *Ibid.*

primary objective of adopting a patent box should remain the fostering of innovation, productivity, and economic growth, while establishing the country as a world-leading destination for IP ownership, development, and licensing. As Mustard, Pantaleo, and Wilkie noted:

Taxation is not an end in itself. It funds public consumption of public goods; it shapes and influences economic choices to implement government economic planning; and, in the international arena, it assists in marking the boundaries of a country's economic and fiscal interest in relation to its peers.<sup>229</sup>

The primary benefit associated with creating and implementing a patent box is that it yields significant increases in IP holdings in a given jurisdiction. For example, the respective share of new patent applications in Benelux<sup>230</sup> countries grew substantially following the introduction of their patent boxes.<sup>231</sup> The anticipated distribution of patents after the introduction of patent boxes in these countries is illustrated in Figure 4 in appendix B. Jurisdictions that have adopted a patent box operate under the assumption that the influx of IP yields wide-ranging ancillary macro-economic benefits and spillovers. The ancillary benefits resulting from a patent box have a direct and positive effect on the sectors generating the majority of IP, which include the high-tech, pharmaceuticals, biotechnology and energy industries. As most of these sectors are vital to Canada's economy, the resulting productivity and innovation would provide a competitive advantage to Canada, which has consistently struggled to compete in these areas compared to other industrialized countries. While Canada excels in R & D activities, it lags behind many developed countries with respect to commercialization of innovation:

Studies have repeatedly documented that business innovation in Canada lags behind other highly developed countries. This gap is of vital concern because innovation is the ultimate source of the long-term competitiveness of businesses and the quality of life of Canadians. The ability to conjure up new products and services, to find novel uses for existing products and to develop new

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<sup>229</sup> Mustard et al., supra note 27.

<sup>230</sup> "Benelux" is the common term constituted of the first letters of Belgium, the Netherlands, and Luxembourg.

<sup>231</sup> Griffith et al., supra note 40, at 5. See Figure 4 in appendix B.

markets – these fruits of innovation are the tools that will ensure Canada’s success in the twenty-first century.<sup>232</sup>

The IP lifecycle demonstrates that successful transformation of innovative R & D into competitive marketable products requires a range of complementary activities during the introduction, growth, and maturity stages that R & D alone does not address. As MNEs tend to consider their IP business on a global basis and seek to centralize their IP rights, implementing a patent box would help to improve Canada’s innovation record by extending support for innovation far beyond R & D activities. Combined with its R & D program and tax incentives provided to the manufacturing industry, a patent box would complete Canada’s innovation program, and would enable Canada to attract and retain businesses and their highly skilled workers, whose expertise relating to the marketing and exploitation of IP would supplement the presence of already strong R & D specialists.<sup>233</sup> Encouraging innovative businesses to invest in Canada is vital to securing a strong and growing private sector. In sum, a Canadian patent box would spur innovation and productivity by complementing its existing R & D program. Needless to say, Canada would benefit from establishing itself as a leading jurisdiction for IP holding by adopting a patent box regime at the earliest opportunity, particularly with the US at its doorstep that, arguably, has currently limited financial ability for implementing such a regime.

Many countries have changed, or are considering changes to, their tax systems to better compete for capital, jobs, and growth in the global economy. Therefore, one principle that should guide the development of Canadian tax policy with respect to patent boxes, now and in the future, is that Canada’s international tax system should be regularly benchmarked against the tax systems of our major trading partners. This principle recognizes that Canada’s tax policy must anticipate continuous changes in the global environment and retain the flexibility to adapt

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<sup>232</sup> Canada, Industry Canada, *Innovation Canada: A Call to Action – Review of Federal Support to Research and Development*, Expert Panel Report (Ottawa: Industry Canada, 2011).

<sup>233</sup> This view of the UK regime was outlined in HM Revenue & Customs, *supra* note 2.

accordingly in order to ensure that Canada's international tax rules stay in step with or ahead of international norms.<sup>234</sup> As of now, there are only a few countries that have adopted, or announced the adoption of, a patent box regime, all of which are located in Europe (with the exception of China). Therefore, Canada's proximity to the US may entice MNEs to hold their IP in Canada. Canada is also well-positioned to benefit from America's large base of IP holdings, and the creation of a patent box would surely create incentives for American businesses to transfer their IP holdings to Canada.<sup>235</sup> Indeed, Griffith, Miller, and O'Connell found that countries that are similar socially and culturally will be seen as better fits by firms when choosing a location. For example, they observed that a 1% decrease in the Belgian tax rate resulted in a 0.05% decrease in the proportion of new patents held in the UK, while the same decrease in the French tax rate decreased the UK share by 0.26%. Canada's ability to use its proximity to the US as a catalyst for the successful implementation of a patent box becomes more compelling when one realizes that the US has lagged behind international standards in IP tax incentives for innovation,<sup>236</sup> and has been more affected by the global financial crisis than Canada. Conversely, as patent box regimes gain popularity, especially in Europe, the effects for Canada will likely not be as severe.

On the other hand, a Canadian patent box may have significant shortcomings. Canada's current federal-provincial combined corporate tax rates on general active business and investment

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<sup>234</sup> Mustard et al., *supra* note 27, at 5.

<sup>235</sup> For example, Griffith, Miller, and O'Connell found that a 1% decrease in the UK statutory corporate tax rate will lead to a 1.2% increase in the proportion of new patents held in the UK: Rachel Griffith, Helen Miller and Martin O'Connell, *Corporate Taxes and Intellectual Property: Simulating the Effect of Patent Boxes*, IFS Briefing Note 112 (London: The Institute for Fiscal Studies, 2010), at 8 (<http://www.ifs.org.uk/bns/bn112.pdf>).

<sup>236</sup> David W. Scott, "Intellectual Property in the 1990s, A Guide to a Changing Canadian Landscape," in *Report of Proceedings of the Forty-Third Tax Conference*, 1991 Conference Report (Toronto: Canadian Tax Foundation, 1992) 44:1-44, at 4. Whereas the US was the first to introduce an R & D tax credit in 1981, more than 35 nations now provide R & D tax incentives. In 1999, the US ranked 8th among the 30 OECD nations with respect to the generosity of its R & D credit. As of 2011, the US ranks only 17th: Atkinson and Andes, *supra* note 13; Organisation for Economic Co-operation and Development, *OECD Science, Technology and Industry (STI) Outlook 2004* (Paris: OECD, 2004); and Robert D. Atkinson and Scott Andes, *17 Is Not Enough: The Case for a More Robust R & D Tax Credit*, The Information Technology & Innovation Foundation (Washington DC: ITIF, February 2011) (<http://www.itif.org/files/2011-17-is-not-enough.pdf>).

income earned by corporations other than CCPCs generally fall between 25% and 31%. Reduced combined tax rates are available to CCPCs on their first \$400k or \$500k of active income, but they are subject to high combined tax rates on investment income, generally ranging between 44.7% and 50.7% (albeit a portion of which is refundable). Upon introducing a Canadian patent box, the resulting decreased effective tax rate on IP income would likely lead to substantial financial consequences for Canadian coffers.<sup>237</sup> Indeed, tax revenue projections made for Benelux countries and the UK demonstrate that implementing patent boxes would lead to a significant decrease in IP revenue, despite the corresponding increase in IP holdings.<sup>238</sup> In fact, the UK Treasury's own estimates in June 2011 predicted that the implementation of a patent box scheme would cost £500M in 2013, £800M in 2014, £900M in 2015 and would rise to £1.1 billion annually thereafter.<sup>239</sup> The decrease in revenue is a consequence of the lower tax rate on all IP income, which outweighs any income gained from the increased amount of IP income.

Furthermore, tax revenue would likely decline further upon the establishment of patent boxes in other countries, in particular if the US were to adopt such a regime. The implementation of the patent box has stimulated, and will continue to stimulate, the creation of similar incentives as a way to maintain a jurisdiction's competitiveness. The proliferation of the patent box will likely lead to a global decrease in IP taxation rates, effectively creating a "race to the bottom," a harmful tax competition the OECD has continuously discouraged. For example, Griffith, Miller, and O'Connell analyzed a hypothetical scenario in which either France or Sweden introduced a patent box. They found that, in either case, the country introducing the patent box would gain market

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<sup>237</sup> Statistics Canada does not maintain information on "how much tax revenue Canada would lose by significantly reducing the rate of tax levied on IP developed and owned in Canada and licensed to non-residents": Mustard et al., *supra* note 27.

<sup>238</sup> Figure 5 in appendix B demonstrates the decreased tax revenue of Benelux countries resulting from lower taxation rates, as well as the negative impact on other countries' tax revenue as some of the taxable income from patented products shifted to Benelux countries.

<sup>239</sup> HM Revenue & Customs, *supra* note 182, at 29.

share while others would lose market share. However, such negative effects could be mitigated substantially if other countries quickly respond by also adopting patent box regimes.

In addition to decreased tax revenues, critics have claimed that a policy subsidizing income from patents and other types of IP is not well designed to promote innovation. While patent boxes target income received from an innovation, the largest source of external benefits arises from the R & D activity associated with such innovations, as Atkinson and Andes note:

Countries that have patent boxes but that do not require domestic R & D and/or production are not reaping the full benefits of their patent box policies. European patent boxes likely help reduce the market failure surrounding innovation and do increase firms' incentive to innovate. However, they do less to determine where that activity will take place. The lion's share of economic value from innovation to society comes from R & D, a high-skilled workforce, and domestic high-value manufacturing, not simply housing a greater number of patents.<sup>240</sup>

Proponents of this argument note that, while the commercial application of an idea can also lead to external benefits, the majority of benefits at this stage are captured by the innovator rather than by society.<sup>241</sup> As Griffith, Miller, and O'Connell note, "In fact, the grant of a patent, by issuing monopoly rights over that technology, is designed to ensure that the owner can capture the returns to the invention."<sup>242</sup> Furthermore, whereas R & D incentives benefit a wide range of innovators, the pool of patent box beneficiaries will likely be much smaller since the distribution of IP holdings is weighted heavily in favour of a small group of persons. Because the bulk of IP income is received by a handful of MNEs, these MNEs would receive a disproportionately large benefit from the patent box. The result of such a regime would likely increase the disparity between the corporate leaders and other smaller innovators, and may actually have a propensity to decrease innovation and competition. However, this may be mitigated by a patent box regime imposing a recapture of a portion of the tax savings when they are distributed outside the country.

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<sup>240</sup> Atkinson and Andes, *supra* note 13, at 14.

<sup>241</sup> Rachel Griffith and Helen Miller, "Patent Boxes: An innovative way to race to the bottom?" (Vox, June 30, 2011) (<http://www.voxeu.org/article/patent-boxes-innovative-way-race-bottom>).

<sup>242</sup> *Ibid.*

In the last few years, countries have become concerned with the loss of revenue due to tax avoidance and have tightened their anti-abuse rules accordingly, including their CFC regimes. Consequently, MNEs from countries operating a CFC regime have a reduced incentive to move their IP portfolio to countries offering a patent box regime.<sup>243</sup> The success of a Canadian patent box will depend largely on whether other nations' respective CFC regimes mitigate the benefits of the patent box. Similar to FAPI, these regimes typically assess whether income has been artificially displaced based, in part, on the location of the real activity having generated the IP.<sup>244</sup> In these cases, transfer prices must also be justified according to whether real activity took place.<sup>245</sup> If these regimes were broadened to capture all profits from IP held through foreign subsidiaries, then a patent box would fail to attract foreign IP because profits from that IP would still be taxed in the home country.

The effort to enhance Canada's competitive edge must be undertaken without an unprincipled sacrifice of the tax base.<sup>246</sup> As observed by the 2007 Competition Policy Review Panel ("CPRP"):

[T]he goal for Canada should be to make this country the location of choice for the higher-value elements of...global value chains – whether led by Canadian firms or as part of others' supply chains – as higher-value productive activity translates into higher wages and salaries, more occupational choice and a better quality of life for Canadians.<sup>247</sup>

It is generally acknowledged that the introduction of a patent box regime will increase a jurisdiction's IP holdings and correspondingly decrease its IP tax revenue – that is, the increased IP tax base resulting from the influx of IP seeking to benefit from lower tax treatment is more than offset by the reduced IP income tax rate for profits from IP that are already taxed in the country. Although the proportionate decrease in Canada's tax revenue may be less than that of certain

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<sup>243</sup> Griffith et al., supra note 235, at 8.

<sup>244</sup> Griffith et al., supra note 40, at 5.

<sup>245</sup> Ibid.

<sup>246</sup> Mustard et al., supra note 27.

<sup>247</sup> Canada, Competition Policy Review Panel, *Sharpening Canada's Competitive Edge* (Ottawa: Industry Canada, October 2007), at 6.

countries, such as the US, a significant amount of real activity would nevertheless need to accompany the newly created patent income in order to outweigh this loss in revenue.

Because of the significant decrease in IP tax revenue, a patent box regime should not be implemented in Canada with the sole objective of increasing tax revenues. Indeed, if the success of patent boxes is looked at only from this angle, it would seem that these regimes are all doomed to failure. However, if the patent box is used and designed specifically to complement broader economic policy, then its overall effect may be positive for Canada. While this statement is both theoretical and speculative without empirical data, a strong argument can be made in support of the benefits of a Canadian patent box in the context of a broad-based economic policy focused on creating high-value jobs and strengthening the Canadian economy, especially the pharmaceutical, biotech, technology, and energy sectors. As the CPRP observed:

Tax policy involves more than deciding how much revenue must be raised. An equally important policy issue is the design of a scheme of taxation and its impact on individual and corporate incentives and behaviour.<sup>248</sup>

The decrease in IP tax revenues may be justified if the effect of the implementation of a patent box adequately promotes overall economic growth, job creation, and innovation in Canada, which may lead to increased indirect tax revenues, such as from personal and corporate tax on other income sources, as well as sales tax, while lowering the cost of certain governmental social programs, such as employment insurance. Furthermore, acknowledging that Canada has already ceded the tax base of IP developed in Canada and currently held offshore, it would be relatively inexpensive to encourage the migration of the IP back to Canada without material taxation.

One may argue the mere fact that a patent box may create additional income from technology and increase the related commercializing activities does not in itself represent an adequate justification, and because the patent box entails reducing the tax rate for an activity that would

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<sup>248</sup> Canada, Competition Policy Review Panel, *Compete To Win: Final Report* (Ottawa: Industry Canada, June 2008), at 63.

have occurred anyway, there would be a large dead weight cost associated with implementing a patent box. This argument is unconvincing. IP is highly mobile, and IP income arises from exploitation, if not development, activities that in many respects can be performed almost anywhere. A patent box specifically has the objective of “retain[ing] and encourag[ing] the propagation in Canada of highly mobile income-earning activities that could just as well be conducted offshore by Canadians and in any event would otherwise have no reason to be relocated to Canada by non-resident[s].”<sup>249</sup> For instance, through their respective tax regimes applicable to international financial centres, the provinces of British Columbia and Quebec already have recognized the value of creating tax niches “that offer much the same tax advantage without the complexity and administrative difficulties” of operating offshore.<sup>250</sup> As the characteristics of a place that is attractive to mobile financial services are also attractive to other kinds of mobile businesses, a patent box would be consistent with the proposition that positive economic spill-over effects arise from the conduct of a meaningful commercial activity, even though the profits from such are taxed at a low tax rate. Thus, Canada should adopt a patent box to foster the migration of IP income to its jurisdiction, income it would not be able to tax otherwise. A lower percentage of something is better than 25% to 31% of nothing.

## CONCLUSION

The CPRP recognizes that, “Canada is near the top of the OECD in public research funding for R & D,” and it is acknowledged that Canada has one of the world’s most favourable R & D tax regimes.<sup>251</sup> But with respect to private R & D, “Canada ranks only 15<sup>th</sup> out of 30 OECD countries in terms of business expenditures on [R & D,] although the heavy weighting of resource industries

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<sup>249</sup> Mustard et al., supra note 27.

<sup>250</sup> Ibid.

<sup>251</sup> Competition Policy Review Panel, supra 248, at 92.

in Canada's economy affects our ranking."<sup>252</sup> As Mustard, Pantaleo, and Wilkie highlight, "There is a concern that Canada's current investment in R & D is not adequate and, as a result, Canada is not developing new technologies and products at the level necessary for it to be competitive globally."<sup>253</sup> In addition, there is an exodus of the IP developed in Canada as a result of the increasing number of acquisitions of Canadian innovative businesses by foreign MNEs. Indeed, through business structures similar to the Licensing Model, MNEs effectively transfer the IP offshore while avoiding adverse tax consequences under FAPI and transfer pricing rules.

It is time for Canada to reverse this IP exodus trend and re-establish itself as a top location for innovation by adopting a patent box. Such a regime would "seek not to reform but rather to improve our existing system,"<sup>254</sup> which already provides for generous R & D incentives as well as preferential taxation of IP, while integrating a tax policy for innovation into the inbound and outbound taxation rules. Despite the possibility that a patent box may result in decreased tax revenues in the short term, it would enable Canada to preserve its tax base with respect to the IP it has partly financed through R & D credits while attracting foreign IP to Canada, which would likely result in economic benefits and spillovers in the long term, increasing tax revenues from other sources while lowering the cost of certain governmental social programs. A patent box would also be a tax incentive specifically targeted to encouraging FDI in Canada, which is an attractive option in the context of increased global tax competition:

Rather than reducing the burden of tax provisions of general application, certain countries prefer to explicitly target tax relief with the aim of encouraging additional [FDI] at a lower cost in terms of foregone tax revenue. Targeting mobile activities [...] is regarded by some policy makers as an attractive option. In considering reductions in the effective tax rate on the most mobile elements of

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<sup>252</sup> Ibid.

<sup>253</sup> Mustard et al., *supra* note 27.

<sup>254</sup> Canada, Advisory Panel on Canada's System of International Taxation, *Final Report: Enhancing Canada's Competitive Tax Advantage* (Ottawa: Department of Finance, December 2008), at paragraph 1.12.

the tax base, the tax treatment of [...] royalty income is increasingly under review, with some countries indicating the dependence of their future policy actions on the actions of others.<sup>255</sup>

A Canadian patent box should be a broad, inclusive regime designed to encourage businesses across a wide range of sectors to invest in Canada, generating economic growth and high-value jobs.<sup>256</sup> As recognized by the UK, this solution must be preferred to other alternatives:

Rather than tightening exit rules, which could inhibit commercial transactions and risk making UK businesses uncompetitive on the global stage, the Government would prefer to encourage businesses to retain and exploit IP in the UK through the introduction of the Patent Box [...]. The UK would then benefit both from activities associated with the commercialisation of patents and from the additional tax on the consequential profits.<sup>257</sup>

In addition to a low taxation rate on qualifying IP income, a Canadian patent box could provide for an increased incentive with respect to qualifying IP resulting, in whole or in part, from R & D performed in Canada.<sup>258</sup> In designing a patent box for Canada, considerations should also be given to qualifying IP (including ownership requirement, IP development location, and pre-existing, acquired and contract IP), types of qualifying income (including gross or net income, capital gains, pre-patent income, and embedded income) and its tax treatment (including exemption or reduced rate, capped income, elective nature, foreign tax credit, and anti-avoidance rules). For example, a Canadian patent box could be generally designed as follows: (i) an IP income taxation rate of approximately 10%; (ii) qualifying IP including most types of IP, particularly patents, computer software copyrights, and IP related to the exploitation of natural resources; (iii) broad qualifying IP income, including royalties, capital gains and income

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<sup>255</sup> Organisation for Economic Co-operation and Development, *Tax Effects on Foreign Direct Investment: Recent Evidence and Policy Analysis*, Tax Policy Studies no. 17 (Paris: OECD, 2007), at. 15.

<sup>256</sup> With respect to the US, Atkinson and Andes recommend a taxation rate ranging between 10% and 17.5%. They also state that the country needs “a hybrid approach to innovation policy. European-style patent boxes that do not require domestic R & D or production will not induce enough R & D or high-tech manufacturing, while the [US] R & D credit, useful as it is, does not go far enough to promote commercialization and domestic production. A patent box that reduces the corporate tax rate on revenue from qualifying IP to a significantly lower rate, coupled with an incentive for corresponding R & D and production to be located in the [US], would provide firms with a much stronger incentive to innovate and to produce in the [US]”: Atkinson and Andes, supra note 13, at 17-18.

<sup>257</sup> HM Revenue & Customs, supra note 2, at 49.

<sup>258</sup> “[I]f designed appropriately, patent boxes would likely complement R & D tax credits by promoting commercialized innovation, which would foster economic growth. On the other hand, if designed inappropriately, firms, may adopt legal but not innovation-promoting strategies”: Atkinson and Andes, supra note 13, at 14.

recapture, and embedded income; (iv) qualifying income determined on a net basis, based on a formulaic approach and without a cap; and (v) specific anti-avoidance rules.<sup>259</sup>

Countries that have introduced patent boxes have reinforced their position as top-tier locations for developing and holding IP. For example, even though Luxembourg has been a well-known jurisdiction in the past for tax-efficient holding and financing structures, it nevertheless decided to go a step further with a patent box, thus increasing its appeal as a preferred jurisdiction for development of R & D and innovation clusters as well as IP holding.<sup>260</sup> If the Canadian tax system encourages IP exploitation from within the country, the R & D activity would likely increase as well, thus leading to more development and exploitation of IP.

In addition to adopting a patent box, Canada should design more competitive FA rules for IP income by refocusing the rules on taxing artificially diverted Canadian profits, thereby delivering a more territorial approach to IP income taxation. Indeed, transfer pricing rules are not specifically designed for combating tax avoidance and, “It is generally acknowledged by both governments and businesses, as well as in the OECD’s Transfer Pricing Guidelines themselves, that the application of transfer pricing to transactions involving [IP] presents particular difficulties.”<sup>261</sup> In order to make Canadian FA rules more competitive as they apply to IP, income from IP with minimal connection to Canada should be exempted from any potential FAPI charge, as should entities that have an incidental or ancillary amount of IP income with a Canadian connection.<sup>262</sup> On the other hand, FAPI rules should be tightened to target high-risk areas such as: (i) where IP that has been developed in Canada is transferred to a low-tax jurisdiction; (ii) where

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<sup>259</sup> Merrill et al., *supra* note 173, at 1672-74.

<sup>260</sup> Macovei and van der Heyden, *supra* note 2.

<sup>261</sup> This view of the UK regime was outlined in HM Revenue & Customs, *supra* note 2, at 33.

<sup>262</sup> *Ibid.*, at 34. Similarly, situations where entities only make small amounts of profit on IP with a Canadian connection (below a de-minimis amount) should be outside the scope of FAPI rules. As well, sub-contracting activities to Canada should fall outside the scope of FAPI rules in order not to discourage such activities to be carried on with respect to foreign IP.

IP held offshore is effectively managed in Canada; and (iii) when Canadian funds finance offshore IP investments while Canada does not receive a return on that investment.<sup>263</sup>

Although a patent box must undergo fiscal and economic policy scrutiny before its benefits may be ascertained, the stakes are too high not to give it some attention in re-evaluating Canada's tax regime for innovation. Canada's law of taxation has greatly evolved since the original Income War Tax Act, and a patent box would constitute another step toward an integrated tax system that maximizes its competitive edge. As some existing patent boxes have significant shortcomings, the Canadian patent box would not be the world's first, but it could be the world's best.

It is not clear whether industrialized countries, including Canada, would be better off in a world where they need to compete aggressively to attract IP, as opposed to one where there is some level of cooperation. The OECD and the EU, via the EU Code of Conduct for business taxation, have actively discouraged harmful tax competition.<sup>264</sup> While it may be beneficial for countries to align their tax rules regarding IP income and deny tax treaty benefits to residents living in tax havens and to other countries not cooperating, in our day and age this remains both an idealistic and unrealistic vision.

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<sup>263</sup> Ibid., at 35.

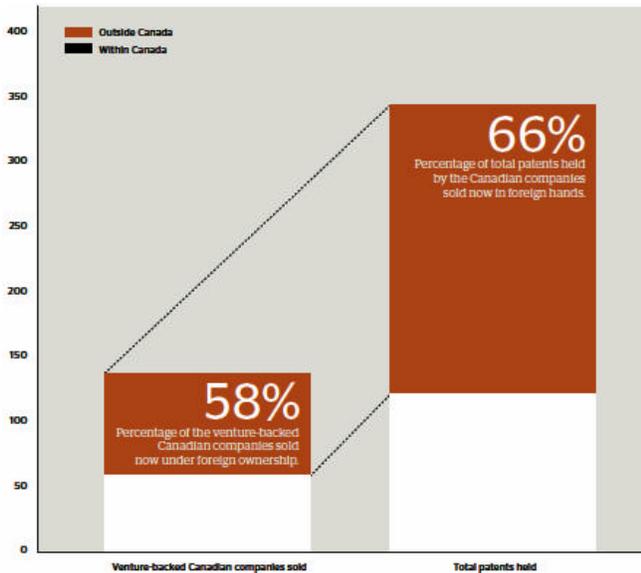
<sup>264</sup> Griffith and Miller, *supra* note 241. The Code of Conduct for business taxation was set out in the Council of Economics and Finance Ministers' conclusions of December 1, 1997.

## APPENDIX A – LIST OF ABBREVIATIONS

<b>CA</b>	Court of Appeal	<b>K</b>	Thousand
<b>CCA</b>	Capital Cost Allowance	<b>M</b>	Million
<b>CCPC</b>	Canadian-Controlled Private Corporations	<b>MNE</b>	Multinational Enterprise
<b>CFA</b>	Controlled Foreign Affiliate	<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>CFC</b>	Controlled Foreign Company	<b>PC</b>	Privy Council
<b>CPRP</b>	Competition Policy Review Panel	<b>PE</b>	Permanent Establishment
<b>CRA</b>	Canada Revenue Agency	<b>R &amp; D</b>	Research and Development
<b>DTC</b>	Dominion Tax Cases	<b>RMB</b>	Ren Min Bi
<b>EU</b>	European Union	<b>SEC</b>	Securities and Exchange Commission
<b>FA</b>	Foreign Affiliate	<b>SCC</b>	Supreme Court of Canada
<b>FAPI</b>	Foreign Accrual Property Income	<b>SCR</b>	Supreme Court Reports
<b>FC</b>	Federal Court	<b>TA</b>	Taxation Act
<b>FCA</b>	Federal Court of Appeal	<b>TC</b>	Tax Cases
<b>FCTD</b>	Federal Court Trial Division	<b>TCC</b>	Tax Court of Canada
<b>FDI</b>	Foreign Direct Investment	<b>US</b>	United States
<b>IP</b>	Intellectual Property	<b>UK</b>	United Kingdom
<b>ITA</b>	Income Tax Act		

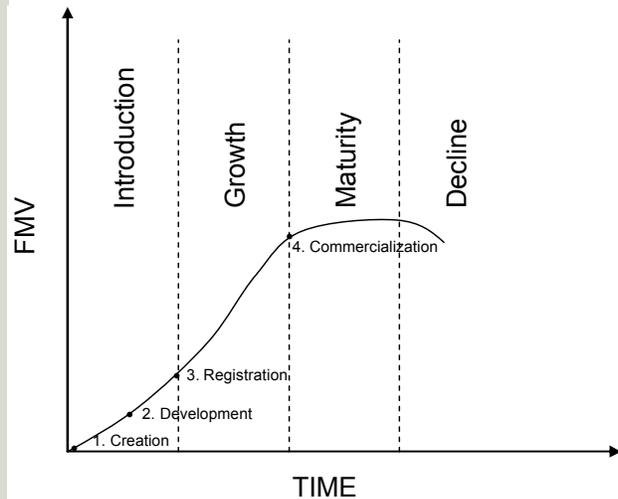
## APPENDIX B – FIGURES

**Figure 1 – Venture-Backed Canadian Companies Sold and Patents Held**



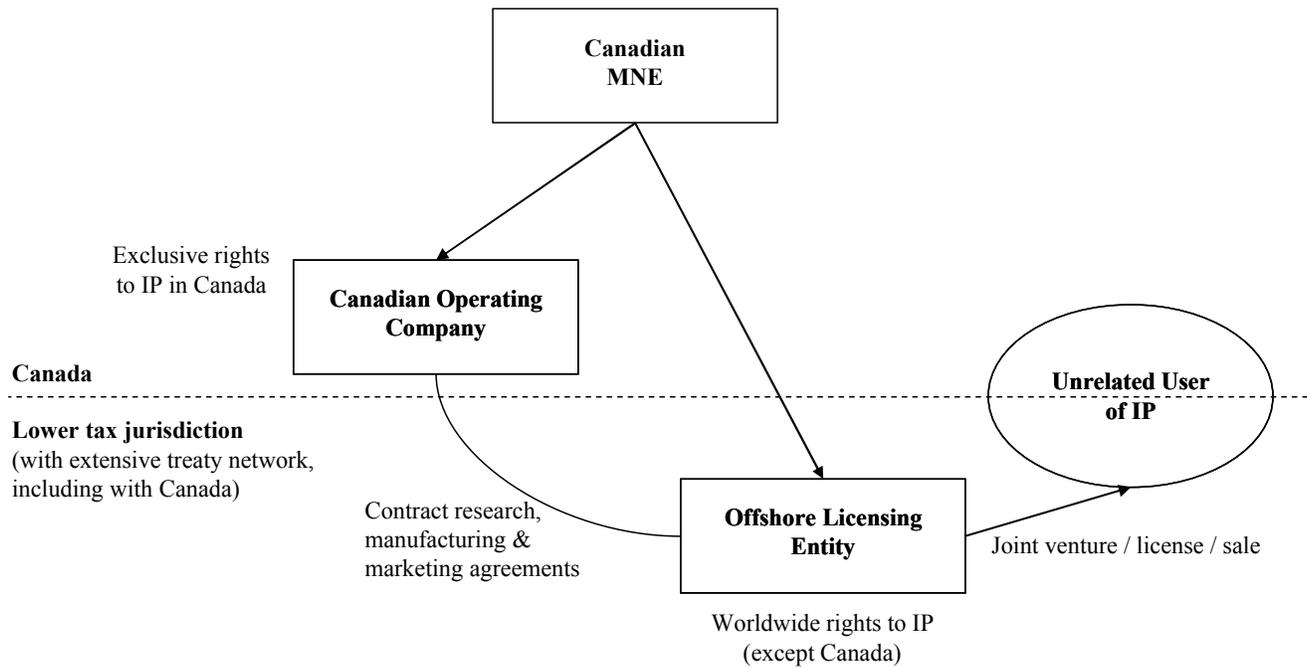
Source: Canadian International Council, supra note 20, at 38.

**Figure 2 – The IP Lifecycle**



Source: This figure is inspired from “Product Life Cycle (PLC)” (Notes Desk, March 26, 2009) (<http://notesdesk.com/notes/marketing/product-life-cycle-plc/>).

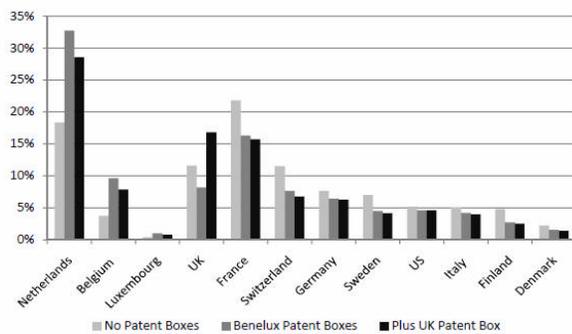
**Figure 3 – The Licensing Model**



Source: This figure is inspired from Kurrant, supra note 127.

**Figure 4 – The Anticipated Distribution of Patents After Patent Boxes Are Introduced in Benelux Countries**

Figure 1. Share of new patent applications across countries

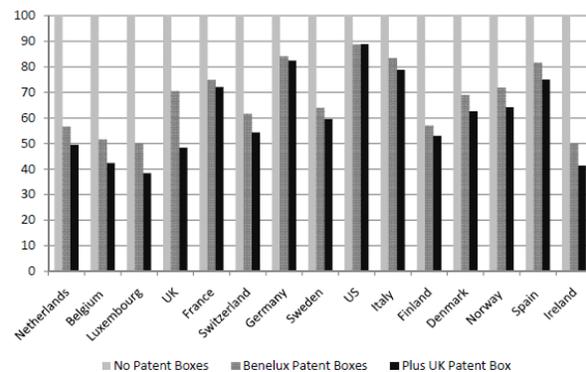


Notes: The first bar for each country shows the predicted shares of patents held in each location before any Patent Boxes have been introduced. The second bar shows the predicted shares of newly created patents after the Benelux countries have introduced Patent Boxes (Belgium at 6.8%, Luxembourg at 5.9% and the Netherlands at 10%). These can also be interpreted as the steady-state shares. The final bar shows predicted shares of newly created patents when the UK additionally introduces a Patent Box, at a rate of 10%. Our analysis includes three additional countries (Ireland, Norway and Spain) not shown here because changes in their small shares are hard to ascertain on this scale.

Source: Griffith, Miller, and O’Connell, supra note 235, at 6.

**Figure 5 – Impact on Tax Revenue of Benelux Countries Patent Boxes**

Figure 3. Government tax revenues from new patent income



Notes: The graph shows government tax revenue from new patents (= tax rate × share of new patents), assuming the 2005 level of patenting. Initial revenue (before any Patent Box introductions) is indexed to 100 (first bar). Shares used are those reported in Figure 1. Figures do not include revenue gained from applying CFC regimes to patents held in low-tax countries. The second and third bars show relative revenue when the Benelux countries and also the UK respectively introduce Patent Boxes.

Source: Griffith, Miller, and O’Connell, supra note 235, at 11.

## APPENDIX C – TABLES

**Table 1 – Overview of Predominant R & D Tax Incentives in Certain Countries**

	Tax Credits	Super Deductions	Accelerated Capital	Grants & Loans	Favourable Sales Tax	Patent Box
<b>Belgium</b>			√	√		√
<b>Canada</b>	√		√	√		
<b>China</b>		√			√	√
<b>France</b>	√		√	√		√
<b>Hungary</b>		√				√
<b>Ireland</b>	√			√		(abolished)
<b>Netherlands</b>		√				√
<b>Spain</b>	√					√
<b>UK</b>		√				(proposed)
<b>US</b>	√					

Source: Deloitte, supra note 51; and supra note 9.

**Table 2 – Overview of the Tax Treatment of Qualifying Income**

<b>Belgium</b>	<ul style="list-style-type: none"> <li>- Deduction equal to 80% of qualifying gross patent income for Belgian company or PE.</li> <li>- 20% of gross patent income is taxable at the standard corporate tax rate of 33.99%, resulting in a nominal tax rate of 6.8%.</li> <li>- Eligible royalties are calculated based on an arm's length fee.</li> <li>- Development costs and other patent-related expenses, except licence fees and amortization for acquired patents, remain deductible at the rate of 33.99% and, together with notional interest deduction and R &amp; D tax credits, may lower the effective rate below 6.8%.</li> <li>- Net operating loss may not be created and, thus, no carry-forward of the deduction.</li> <li>- Foreign withholding taxes are credited against Belgian tax liability (including patent box liability).</li> </ul>
<b>China</b>	<ul style="list-style-type: none"> <li>- 100% exemption for revenue below RMB5M and 50% exemption thereafter, resulting in a reduced rate of 0% or 12.5% under the patent box.</li> <li>- Most expenses can reduce the qualifying income.</li> <li>- Incentive generally available to China tax resident companies – non-resident companies may nevertheless enjoy a 5% business tax exemption.</li> <li>- Incentive not available if the transferor/licensee is a related party in which the taxpayer directly or indirectly holds 100% shares.</li> </ul>
<b>France</b>	<ul style="list-style-type: none"> <li>- Regular corporate tax rate of 33.33% – rate reduced at 15% under the patent box.</li> <li>- Royalty payments received under licence and sublicense agreements (exclusive or not), net of costs related to the management of qualified IP rights licensed.</li> <li>- Capital gain related to qualified IP, net of transfer costs.</li> <li>- Royalty payments deductible by French corporations at the rate of 33.33%.</li> <li>- Foreign withholding taxes are credited against French tax liability (including patent box liability).</li> </ul>
<b>Ireland</b>	<ul style="list-style-type: none"> <li>- Tax exemption on patent royalties was abolished as of November 24, 2010.</li> <li>- Annual exemption for patent royalty income was capped at €5M.</li> <li>- Income up to €5M was exempted from paying the 10% regular corporate tax rate.</li> </ul>

<b>Hungary</b>	<ul style="list-style-type: none"> <li>- Deduction equal to 50% of royalty payments received from related or unrelated parties, up to 50% of pre-tax income.</li> <li>- Regular corporate tax rate of 10% on first €2M of income, and 19% thereafter, resulting in a maximum reduced rate of 9.5% under the patent box.</li> <li>- Since January 1, 2012, capital gains from qualifying IP are exempt if reported to tax authorities. If not reported, still exempt if taxable capital gain used to purchase qualifying IP within three years.</li> <li>- Foreign withholding taxes are credited against French tax liability (including patent box liability).</li> </ul>
<b>Luxembourg</b>	<ul style="list-style-type: none"> <li>- 80% tax exemption of the net income deriving from the use and the right to use qualifying IP rights. The exemption also covers capital gains.</li> <li>- 20% of net qualifying IP income taxable at the standard corporate tax rate of 28.8%, resulting in a nominal tax rate of 5.76%.</li> <li>- Amortization, R &amp; D expenses, interest charges, and other related expenses can be deducted against the gross IP income.</li> <li>- Foreign withholding taxes are partially credited against Luxembourg tax liability (including patent box liability).</li> </ul>
<b>Netherlands</b>	<ul style="list-style-type: none"> <li>- Gross income and capital gains from qualifying IP, net of related expenses and depreciation.</li> <li>- Qualifying income includes income from patent, IP resulting of R &amp; D activities, and income embedded in products and services.</li> <li>- Losses from qualifying IP are deductible at the general corporate tax rate of 25%.</li> <li>- Qualifying income benefits from a 5% effective tax rate, but losses and certain R &amp; D costs must first be recaptured at the general corporate tax rate.</li> <li>- Foreign withholding taxes are credited against Dutch tax liability (including patent box liability), subject to certain limitations.</li> </ul>
<b>Spain</b>	<ul style="list-style-type: none"> <li>- 50% tax exemption on qualifying gross income.</li> <li>- Effective tax rate for qualifying income of 15%.</li> <li>- R &amp; D and amortization expenses are deductible at the standard corporate rate of 25%.</li> <li>- The exemption is capped at six times the development costs, but applies to intra-group transactions.</li> <li>- Licensee cannot be a resident of a Spanish-listed tax haven or zero-tax jurisdiction.</li> <li>- Foreign withholding taxes are credited against Spanish tax liability (including patent box liability), but limited to the tax that would have been payable in Spain on that income.</li> </ul>
<b>Switzerland</b>	<ul style="list-style-type: none"> <li>- Specific rules on exemption rate, which ranges from 0% to 12%.</li> <li>- Most expenses can reduce the qualifying income.</li> </ul>
<b>UK</b>	<ul style="list-style-type: none"> <li>- Proposed regime.</li> <li>- Net qualifying income and gains taxed at a nominal rate of 10% instead of the normal rate of corporation tax of 26%.</li> <li>- Rate reduction is phased in over a five-year period, starting at 60% of the benefit, plus 10% per year.</li> </ul>

Source: Atkinson and Andes, *supra* note 13; Eynatten, *supra* note 4; Merrill et al., *supra* note 173; Deloitte, “Belgium Highlights 2012” (2012); Deloitte, “China Highlights 2012” (2012); Deloitte, “France Highlights 2012” (2012); Deloitte, “Hungary Highlights 2012” (2012); Deloitte, “Ireland Highlights 2012” (2012); Deloitte, “Luxembourg Highlights 2012” (2012); Deloitte, “Netherlands Highlights 2012” (2012); Deloitte, “Spain Highlights 2012” (2012); Deloitte, “Switzerland Highlights 2012” (2012); Deloitte, “United Kingdom Highlights 2012” (2012) (all Deloitte Highlights 2012 are available at: <http://www.deloitte.com>); PricewaterhouseCoopers, “A Comparison of Key Aspects of the International Tax Systems of Major OECD and Developing Countries,” *Business Roundtable* (May 10, 2010) ([http://businessroundtable.org/uploads/studies-reports/downloads/BRT\\_14\\_country\\_international\\_tax\\_comparison\\_20100510.pdf](http://businessroundtable.org/uploads/studies-reports/downloads/BRT_14_country_international_tax_comparison_20100510.pdf)); and Shanahan, *supra* note 13.

**Table 3 – Overview of Tax Factors Relating to EU Countries’ and China’s Patent Boxes**

Tax Factors	Belgium	China	France	Hungary	Ireland (abolished)	Luxembourg	Netherlands	Spain	Switzerland	UK (proposed)
Nominal tax rate	6.8%	0-12.5%	15%	9.5%	2.5-12.5%	5.76%	5%	15%	8-12%	10%
Standard corporate tax rate	34%	25%	34%	19%	12.5%	17%	25%	25%	21%	24%
Exemption rate	80% exemption on patent income	Exemption for revenue below RMB 5M (\$783K) and 50% above RMB 5M	15% reduced rate, plus social tax contributions	50% exemption on royalties	80% exemption on IP income	80% of patent income is exempt	Flat rate	50% exemption on patent income	Reduced rates or exemptions variable between cantons	56.5% exemption
Qualified IP	Patents and supplementary patent certificates	Patents, copyright of software; integrated circuits, new variety of plants or biomedicine, know-how	Patents, extended patent certificates, patentable inventions, and industrial processes	Patents, know-how, trademarks, business names, business secrets, and copyrights	Most IP, including patents, trademarks, domain names, designs, and know-how	Patents, trademarks, designs, domain names, models, and software copyrights	Patented IP or R & D IP	Patents, secret formulas, processes, plans, models, designs, and know-how	Most IP (IP as found in the definition of “royalties” in the OECD Model Tax Convention)	Patents, supplementary protection certificates, regulatory data protection and plant variety rights
Acquired IP?	Yes, if IP is further developed	Yes	Yes, subject to specific conditions	Yes	Yes	Yes, from non-directly associated companies	Yes, if IP is further self-developed	No	Yes	Yes, if further developed and actively managed
Can R & D be performed abroad?	Yes, if qualifying R & D center	Yes	Yes	Yes	Yes	Yes	Yes for patented IP; strict conditions for R & D IP	Yes, but must be self-developed by the licensor	Yes	Yes
Expenses that reduce qualified income	Expenses except licence fees and amortization of acquired patents	Most expenses	Includes management expenses related to licensing IP	Certain expenses, including the super deduction	For capital expenditures after May 7, 2009	Most expenses	Most expenses	None	Most expenses	Specific rules
Qualified income	Royalties less cost of acquired IP	Royalties	IP income and gains	Royalties and gains	IP exploitation income and certain gains	IP income, gains and damages for breach of IP	Net IP income and gains	Royalties	Royalties and gains	IP income, gains and damages for infringement
Cap on benefit?	Deduction limited to 100% of pretax income	No	No	Deduction limited to 50% of pretax income	Yes, €5M	No	No	Yes, six times the costs incurred to develop the IP	No	No
Includes embedded royalties?	Yes	No	No	No	N/A	Yes	Yes	No	N/A	Yes
Credit for tax withheld on qualified royalty?	Yes	Yes	Yes	Yes	Yes	Yes	Yes, subject to limitations	Yes, subject to limitations	Yes	Yes
Year enacted	2007	2008	2001, 2005, 2010	2003	1973 (abolished in 2010)	2008	2007, 2010	2008	N/A:	2013 (proposed)
Applicable to existing IP?	IP granted or first used on or after Jan. 1, 2007	Yes	Yes	Yes	Yes	IP developed or acquired after Dec. 31, 2007	Patented IP developed or acquired after Dec. 31, 2006	Yes	Yes	Yes

Source: Deloitte, supra page 70; PricewaterhouseCoopers, supra page 70; PricewaterhouseCoopers (2011) in Merrill et al., supra note 173; and Wei et al., supra note 175.

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