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Incentivizing Innovation Through The Internal Revenue Code: Does the United States Have It Right?

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I. INTRODUCTION

The U.S. economy has become increasingly reliant on innovation in the face of global economic competition, and by the end of 2016, more than one third of the U.S. gross domestic product consisted of intellectual property-intensive industries.¹ Intellectual property (“IP”) rights “facilitat[e] entrepreneurial growth, furthering scientific and economic progress.”² This result continues to provide global benefits but has led multinational companies to seek solutions to manage IP more cost-effectively.³

Due to the mobility of IP⁴, multinational companies can easily shift IP to countries that provide better tax incentives for investing in related research and development (“R&D”) activities.⁵ This allows companies to cut investment costs and reduce tax liabilities, resulting in a competitive advantage.⁶ In addition to helping companies participate in international competition, these incentives promote investment and economic and job growth in the countries providing the more attractive incentives.⁷ Recently, governments around the world have sought investment by offering a variety of tax incentives to taxpayers that make certain R&D expenditures.⁸ Tax incentives may be in the form of R&D credits, which operate at the front end

¹ See EY, *Global taxation of intellectual property: new and emerging tax policies create high-stakes balancing act*, 3 (2016), [http://www.ey.com/Publication/vwLUAssets/EY-global-taxation-of-intellectual-property-20160518.pdf/\\$FILE/EY-global-taxation-of-intellectual-property-20160518.pdf](http://www.ey.com/Publication/vwLUAssets/EY-global-taxation-of-intellectual-property-20160518.pdf/$FILE/EY-global-taxation-of-intellectual-property-20160518.pdf).

² *Patent Boxes, Technological Innovation & Implications For Corporate Tax Reform*, AMERICAN ACTION FORUM, Feb. 22, 2016, <https://www.americanactionforum.org/research/patent-boxes-technological-innovation-implications-for-corporate-tax-reform/>.

³ *Global taxation of intellectual property*, *supra* note 1 (“And the value of IP continues to grow in the global economy, driven by the network effects of new technologies and digital business models that extend innovation worldwide.”).

⁴ Peter Merrill, *Innovation Boxes: BEPS and Beyond*, 69 NAT’L TAX J. 847, 857 (2016). (“[A] key reason why IP income is mobile for tax purposes is the difficulty in determining the arm’s-length sourcing of this income in related-party transactions.”).

⁵ *Patent Boxes, Technological Innovation & Implications For Corporate Tax Reform*, *supra* note 2.

⁶ *Id.*

⁷ *Id.*

⁸ OECD, *R&D Tax Incentives: United States*, Measuring R&D Tax Incentives (Mar. 2017); see *Patent Boxes, Technological Innovation & Implications For Corporate Tax Reform*, *supra* note 2 (discussing the direct relation between the availability of research credits and increased research spending).

of investments, or patent boxes, which operate at the back end of investments.⁹ Throughout this note, the term “patent box” is used to refer to the back end incentive, although “patent box,” “IP box,” and “IP regime” all refer to the same type of incentive. The use of one term over the others depends upon the regime implemented by a jurisdiction.

This note examines tax incentives used in the United States and in other countries to promote investment in R&D. Section II discusses the R&D incentives that the United States currently has in place. Section III defines patent boxes and describes various regimes that have been implemented in other countries and that are compliant with international standards. Section IV recommends retention of the current incentive structure in the United States and suggests that further efforts to encourage the adoption a patent box are unwarranted.

II. CURRENT U.S. R&D INCENTIVE STRUCTURE

The Internal Revenue Code (“IRC” or the “Code”) currently has two provisions that directly dictate the treatment of costs incurred in research and development. IRC section 174 allows taxpayers to either expense or capitalize research or experimental expenditures paid or incurred through December 31, 2021.¹⁰ However, the Tax Cuts and Jobs Act of 2017 (“TCJA”) amended this section for tax years beginning after December 31, 2021 and will require expenditures to be capitalized and amortized ratably over five years.¹¹ The Code also provides for a research and experimentation tax credit (“R&E credit”).¹² The R&E credit was introduced in the Economic Recovery Tax Act of 1981¹³ and became permanent as part of the Consolidated Appropriations Act, 2016 (P.L. 114-113).¹⁴

⁹ *Patent Boxes, Technological Innovation & Implications For Corporate Tax Reform*, *supra* note 2.

¹⁰ I.R.C. § 174 (2012).

¹¹ Tax Cuts and Jobs Act of 2017, Pub. L. No. 115-97, § 13206(e), 131 Stat. 2054 (to be codified at I.R.C. § 174).

¹² I.R.C. § 41 (2012).

¹³ Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, § 221(a), 95 Stat. 172, 241 (1981).

¹⁴ JANE G. GRAVELLE, CONG. RESEARCH SERV., R44522, A PATENT/INNOVATION BOX AS A TAX INCENTIVE FOR DOMESTIC RESEARCH AND DEVELOPMENT 2 (2016).

Sections 174 (before the amendment takes effect) and 41 allow for immediate tax benefits, which is attractive to companies, considering the time value of money. In addition, if an investment earns only enough to break even, allowing expensing produces the same effect as disallowing expensing and applying a zero tax rate to the income generated from the investment.¹⁵ Taxpayers may benefit from both IRC provisions simultaneously; however, there are limitations on the resulting benefits.¹⁶

A. IRC Section 174 – Research and Experimental Expenditures

Currently, section 174 permits taxpayers to deduct reasonable research and experimental expenditures incurred in the taxpayer's trade or business.¹⁷ The taxpayer is not required to make an election to benefit from this deduction.¹⁸ The taxpayer may elect to capitalize¹⁹ the expenditures, which supports the general rule of capitalizing these types of costs.²⁰ Expenditures that qualify for treatment under this section include those that “represent research and development costs in the experimental or laboratory sense.”²¹ Experimental or laboratory costs are defined as expenditures “for activities intended to discover information that would eliminate

¹⁵ *Id.*

¹⁶ See I.R.C. § 280C(c) (2012).

¹⁷ I.R.C. § 174(a). “A taxpayer may treat research or experimental expenditures which are paid or incurred by him during the taxable year in connection with his trade or business as expenses which are not chargeable to capital account. The expenditures so treated shall be allowed as a deduction.”; Treas. Reg. § 1.174-2(a)(9) (as amended in 2014) (discussing the requirement of reasonableness of costs paid or incurred).

¹⁸ I.R.C. § 174(a)(2). Taxpayers may choose this method without consent of the Secretary during the first year such expenses are incurred.

¹⁹ Capitalization refers to treating an expenditure related to property as a cost of that property, which increases the property's basis. *Capitalization*, WEST'S TAX LAW DICTIONARY, (2017). Capitalization does not allow for an immediate deduction from income. By contrast, a deduction allows a taxpayer to treat an expenditure as an immediate deduction from income. *Deductions*, WEST'S TAX LAW DICTIONARY, (2017).

²⁰ I.R.C. § 174(b). If a taxpayer chooses not to immediately expense R&D costs, he or she may capitalize them and amortize the expenditures over a period not less than 60 months, starting in the month that the expenditures produce benefits to the taxpayer. If a taxpayer wishes to capitalize costs but failed to make this election in the first year, he or she must request permission from the Secretary.

²¹ Treas. Reg. § 1.174-2(a)(1).

uncertainty concerning the development or improvement of a product.”²² Additionally, qualifying costs include “costs incident to the development or improvement of a product [and] . . . costs of obtaining a patent, such as attorney’s fees expended in making and perfecting a patent application.”²³ Success or failure of the end product does not affect a taxpayer’s eligibility for expensing.²⁴ Costs associated with the following are explicitly excluded from treatment under this section: ordinary testing and inspections, efficiency surveys, management studies, consumer surveys, marketing, acquiring another’s patent, research of literary, historical, or similar projects, and exploration of ore, oil, gas, or other minerals.²⁵ The acquisition cost of land or property that is subject to section 167 depreciation must not be expensed, but the depreciation expense associated with such property does qualify under this section.²⁶

The expensing treatment that section 174 currently permits will not be available for costs paid or incurred during tax years beginning after December 31, 2021.²⁷ The TCJA renamed these costs “specified research or experimental expenditures” and requires these expenditures to be capitalized.²⁸ Taxpayers will be allowed an amortization deduction to be recognized over a five-year period, beginning with the midpoint of the tax year in which the costs are incurred.²⁹ A fifteen-year amortization period is applied for investments attributable to foreign research, as defined in section 41.³⁰ The amendment treats costs incurred in connection with software

²² Treas. Reg. § 1.174-2(a)(1). “Uncertainty exists if the information available to the taxpayer does not establish the capability or method for developing or improving the product of the appropriate design of the product.” Once uncertainty is eliminated, subsequent costs are no longer eligible for expensing.

²³ Treas. Reg. § 1.174-2(a)(1).

²⁴ *Id.*

²⁵ Treas. Reg. § 1.174-2(a)(6); Treas. Reg. § 1.174-2(c).

²⁶ Treas. Reg. § 1.174-2(b).

²⁷ Tax Cuts and Jobs Act of 2017 § 13206.

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

development as specified research or experimental expenditures.³¹ This change from permitting expensing to requiring capitalization negatively impacts the incentive's worth, considering the time value of money. It also harms taxpayers that retire or abandon investments because historically, taxpayers have fully deducted an asset's remaining basis in such cases, but the new law will prevent such deductions.³²

B. IRC Section 41 – Credit for Increasing Research Activities

Section 41 provides for a credit equal to 20% of qualified research expenses (“QREs”) that a taxpayer paid or incurred over a base amount.³³ QREs include in-house research expenses and contract research expenses.³⁴ The base amount is calculated as a fixed-based percentage multiplied by the average annual gross receipts from the four tax years prior to the credit year.³⁵

A research activity qualifies for this credit if the activity is conducted within the United States³⁶ and passes four tests: the section 174 test, the technological information test, the business component test, and the process of experimentation test.³⁷ The section 174 test requires that the research expenditures also qualify for treatment under section 174, as discussed in

³¹ *Id. see* Justin Silva, *Tax Cut and Jobs Act changes to section 174 rules*, RSM (Jan. 10, 2018), <http://rsmus.com/what-we-do/services/tax/credits-and-incentives/tax-cut-and-jobs-act-changes-to-section-174-accounting-method-ru.html> (explaining how this change may harm taxpayers that previously expensed such costs under Revenue Procedure 2000-50 but may also be beneficial for taxpayers who wish to treat such costs as qualifying for the research and experimentation credit).

³² *Silva, supra* note 31.

³³ I.R.C. § 41(a). “... [T]he research credit determined under this section for the taxable year shall be an amount equal to the sum of (1) 20 percent of the excess (if any) of — (A) the qualified research expenses for the taxable year, over (B) the base amount, (2) 20 percent of the basic research payments determined under subsection (e)(1)(A), and (3) 20 percent of the amounts paid or incurred by the taxpayer in carrying on any trade or business of the taxpayer during the taxable year (including as contributions) to an energy research consortium for energy research.”

³⁴ I.R.C. § 41(b). In-house research expenses include the following incurred for qualified services: wages, cost of supplies, and payment to a person for the right to use computers to conduct qualified research. Contract expenses are 65% of the amounts paid to a person for qualified research.

³⁵ I.R.C. § 41(c). The percentage is determined based on the ratio of the aggregate of QREs for such tax years to the aggregate gross receipts for those tax years or is specifically stated by the Code for “start-up companies.”

³⁶ I.R.C. § 41(d)(4)(F).

³⁷ *Suder v. Comm’r*, 108 T.C.M. (CCH) 354, 362 (2014) (discussing I.R.C. § 41(d)(1)).

Section II.A.³⁸ The technological information test requires that the research is conducted to discover information that is “technological in nature,” and the business component test requires that the taxpayer engaged in such research with the intent to discover information that would aid in developing “a new or improved business component of the taxpayer.”³⁹ Lastly, the process of experimentation test requires that substantially all of the research activities be considered “experimentation,” meaning they are conducted with the intent of discovering “a new or improved function, performance, or reliability or quality” but not focusing on “style, taste, cosmetic, or seasonal design.”⁴⁰ Interestingly, the credit does not apply to research concerning computer software development under certain circumstances.⁴¹

The TCJA preserved this credit but made the following changes, which may impact certain taxpayers claiming this credit: the repeal of the corporate alternative minimum tax, the reduction to the amount of the Orphan Drug Credit, the repeal of the domestic production activities deduction, and the changes to the deduction for research and experimental expenditures that will take effect in 2022.⁴²

C. IRC Section 280C – Limitation on Benefits

As stated earlier in this section, taxpayers may benefit from the simultaneous use of both R&D tax incentive provisions, but Section 280C(c) places a limitation on such benefits. The effect of this section is not altered by the TCJA. Taxpayers that benefit from the Section 41 credit must reduce the deduction taken under Section 174 by the amount of the credit.⁴³ If the

³⁸ I.R.C. § 41(d)(1).

³⁹ *Id.*

⁴⁰ *Id.*; I.R.C. § 41(d)(3).

⁴¹ I.R.C. § 41(d)(4)(E).

⁴² Yair Holtzman, *The Tax Cuts and Jobs Act Doesn't Cut the R&D Tax Credit*, ANCHIN (Dec. 27, 2017), <http://www.anchin.com/news/anchin-alert-the-tax-cuts-and-jobs-act-doesnt-cut-the-rd-tax-credit>.

⁴³ I.R.C. § 280C(c)(1). For tax years beginning after December 31, 2021, the language of this section is amended to account for the changes to section 174.

taxpayer chooses to capitalize the expenditures and the amount of the allowable credit exceeds the allowable deduction, the amount capitalized must be reduced by such excess.⁴⁴ To avoid the obligation to reduce the Section 174 research deduction, taxpayers may elect to reduce the research credit.⁴⁵ The credit reduction is equal to the allowable credit amount under section 41(a) multiplied by the maximum corporate tax rate,⁴⁶ which was reduced to 21% for 2018 in the TCJA.⁴⁷

Choosing the credit reduction election does not impact the tax liability of corporate taxpayers. But there are other reasons to consider making the election, the most significant being to reduce state taxable income.⁴⁸ In calculating state tax liabilities, most states start with the taxpayer's federal taxable income and add back the amount deducted for the research credit.⁴⁹ But if the reduced credit election is made, instead of a reduced deduction, which results in a higher taxable income, the taxpayer adds back the reduced credit to a lower taxable income than would exist if the reduced deduction had been taken instead.⁵⁰

D. IRC Section 250 – Foreign-derived intangible income and global intangible low-taxed income

The TCJA added a new provision to the Code that is aimed at incentivizing the retention of intangibles in the United States.⁵¹ For taxable years beginning after December 31, 2017, section 250 permits domestic corporations to deduct 37.5% of their foreign-derived intangible income (“FDII”) through the end of 2025.⁵² After accounting for the new corporate tax rate, this

⁴⁴ I.R.C. § 280C(c)(2). For tax years beginning after December 31, 2021, the TCJA has removed this paragraph.

⁴⁵ I.R.C. § 280C(c)(3).

⁴⁶ *Id.*

⁴⁷ I.R.C. § 11(b) (as amended by the Tax Cuts and Jobs Act of 2017 § 13001).

⁴⁸ Kevin A. Maillet et al., *Reduced Credit for Increasing Research Activities*, THE TAX ADVISER, June 1, 2008.

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ See Tax Cuts and Jobs Act of 2017 § 14202.

⁵² I.R.C. § 250(a) (codified by the Tax Cuts and Jobs Act of 2017 § 14202). The percentage drops to 21.875% for taxable years beginning on or after January 1, 2026. This increases the effective tax rate to 16.406%.

incentive provides for a maximum tax of 13.125% on FDII. The deduction applies only to domestic corporations that are taxed as C corporations and includes “U.S. corporate subsidiaries of foreign-based multinationals.”⁵³

FDII is determined by multiplying deemed intangible income (“DII”) by the ratio of foreign-derived deduction eligible income (“foreign-derived DEI”) to deduction eligible income (“DEI”).⁵⁴ DEI is calculated as the corporation’s gross income (less amounts accounted for in section 951(a)(1), global intangible low-taxed income (“GILTI”), financial services income, dividends received from a controlled foreign corporation, domestic oil and gas extraction income, and foreign branch income) over deductions allocable to gross income.⁵⁵ Foreign-derived DEI is DEI derived from the sale of property or services to a foreign person.⁵⁶ Property must be sold to a foreign person for a foreign use, and services must be provided to a foreign person.⁵⁷ DII is calculated by starting with DEI and subtracting 10% of the corporation’s qualified business asset investment (“QBAI”).⁵⁸ QBAI is the quarterly average of the tax bases of depreciable tangible property used in a corporation’s trade or business.⁵⁹ After calculating FDII, the amount of the deduction is limited if the sum of FDII plus GILTI exceed the domestic corporation’s taxable income.⁶⁰ FDII would be reduced by an amount bearing the same ratio as the ratio of the excess just described over the sum of FDII plus GILTI.⁶¹

⁵³ Lowell D. Yoder, David G. Noren, & Jonathan Lockhart, *The New Deduction for Foreign-Derived Intangible Income*, MCDERMOTT WILL & EMERY (Jan. 24, 2018), <https://www.mwe.com/en/thought-leadership/publications/2018/01/the-new-deduction-for-foreign-derived-intangible>.

⁵⁴ I.R.C. § 250(b).

⁵⁵ I.R.C. § 250(b)(3).

⁵⁶ I.R.C. § 250(b)(4).

⁵⁷ *Id.*; see also Yoder, *supra* note 53 (“The services may be performed within or outside the United States (but not in a foreign branch of the domestic corporation, which limits the extent of permissible qualifying activity outside the United States).”).

⁵⁸ I.R.C. § 250(b)(2)(B).

⁵⁹ *Id.*

⁶⁰ I.R.C. § 250(a)(2)(A).

⁶¹ I.R.C. § 250(a)(2)(B).

In determining foreign use, there are special rules that apply for certain corporate sales.⁶² For sales to unrelated persons, income is not foreign-derived if the corporation sells property that will be further manufactured in the United States or services that will be provided to a U.S. person prior to being sold to a person outside of the United States.⁶³ If the property is sold to a related foreign person, the related person must sell the property to an unrelated foreign person for foreign use or use the property in connection with property sold to an unrelated person.⁶⁴ If services are provided to a related foreign person, the services must not be “substantially similar to services provided by such related person to persons located within the United States.”⁶⁵

The new FDII provision is not considered a patent box, but it has similar effects because it provides a lower tax rate for a certain type of intangible income and is similar to the U.K. patent box.⁶⁶ However, the FDII provision may be more generous and provide preferential treatment to a broader range of income than the regimes implemented in other jurisdictions.⁶⁷ The income base that the ratio is applied to is calculated as the excess over 10% of certain tangible depreciable property, meaning that excess is considered intangible income.⁶⁸ There is a possibility that other sources of income not traditionally considered to be derived from the development of intangibles will receive preferential treatment.⁶⁹ This is different from the Code’s former definition, which specifically listed certain assets as intangibles.⁷⁰

⁶² Yoder, *supra* note 53.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ Craig Rose, *U.S. Tax Reform and BEPS Action 5 – the EU Spots the Missing Nexus*, BLOOMBERG LAW (Dec. 12, 2017) (“In short, it is a patent box in all but name.”).

⁶⁷ Ben Stupples, *Q&A With Melissa Geiger, KPMG U.K. Head of Global Tax: Part One*, BLOOMBERG BNA DAILY TAX REPORT (Mar. 15, 2018).

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ Isabel Gottlieb, *New Intangibles Definition Causes Challenges for Multinationals*, BLOOMBERG BNA DAILY TAX REPORT (Feb. 12, 2018).

III. INTERNATIONAL USE OF PATENT BOXES

A. What is a Patent Box?

A patent box is a tax benefit available for taxpayers that have business income derived “from the commercial exploitation of qualified IP.”⁷¹ A reduced tax rate or special deduction is available for businesses with qualified income, which results in a back end tax reduction that subsidizes successful investments.⁷² The “box” refers to the box checked on an income tax form when a taxpayer reports qualified income.⁷³ Patent boxes may also be referred to as innovation boxes or intellectual IP boxes, depending on the type of income covered. Innovation or IP boxes often cover income derived from non-technological innovations, such as trademarks and copyrights.⁷⁴ Patent boxes are just one of the ways in which countries aim to encourage more domestic investment; many offer a variety of other tax incentives to cut the costs of R&D.

There are three elements of a patent box: the nature of the tax incentive, qualifying IP, and qualifying income.⁷⁵ There are two possibilities for the nature of the tax incentive.⁷⁶ A regime may provide for a lower rate to be applied to qualified IP income or may permit a deduction for a specified portion of qualified IP income.⁷⁷ Under the deduction alternative, the effective tax rate on IP income is equal to the company’s marginal tax rate multiplied by the percentage of income that remains subject to taxation.⁷⁸

Qualifying IP must be “registered and held in the host country.”⁷⁹ The types of IP that are eligible for a tax incentive vary by country. However, most countries that currently use

⁷¹ GARY GUENTHER, CONG. RESEARCH SERV., R44829, PATENT BOXES: A PRIMER 2 (2017).

⁷² Merrill, *supra* note 4, at 848.

⁷³ GUENTHER, *supra* note 71, at 2.

⁷⁴ *Id.* at 2-3.

⁷⁵ *Id.* at 3.

⁷⁶ *Id.* at 3.

⁷⁷ *Id.* at 3.

⁷⁸ *Id.* at 4.

⁷⁹ *Id.* at 4.

patent boxes permit the incentive for patented inventions.⁸⁰ Additionally, most countries permit qualifying IP to have been developed in another country if developed by a foreign permanent establishment of a resident company that is subject to tax in the jurisdiction providing preferential treatment.⁸¹ Lastly, current regimes vary on whether the patent box applies to acquired IP or IP existing before the adoption of the regime.⁸²

Qualifying income may come from any one or more of the following sources: royalties, licensing fees, gains on sale/disposal of IP property, sales of goods or services integrating IP, and patent infringement awards.⁸³ Countries have been divided in applying the patent box to gross income or net income generated from a company's use of qualified IP.⁸⁴ This distinction is relevant because it determines which rate expenses incurred in producing IP are valued at, in terms of tax savings.⁸⁵ Implementing a patent box that applies to gross income, thereby allowing a company to deduct expenses from total gross income, will generally provide a more attractive tax benefit.⁸⁶

B. Summary of Various International Regimes

This section summarizes the patent boxes implemented by countries that are centers for substantial R&D investment and that have complied with the Organization for Economic Cooperation and Development's ("OECD") recommendations set forth as part of the Base Erosion and Profit Shifting Project.⁸⁷ These countries include Belgium, Italy, the Netherlands,

⁸⁰ *Id.* at 4. Of the sixteen countries that have implemented a patent box, Israel is the only country whose regime does not cover patented inventions.

⁸¹ See OECD, COUNTERING HARMFUL TAX PRACTICES MORE EFFECTIVELY, TAKING INTO ACCOUNT TRANSPARENCY AND SUBSTANCE, ACTION 5 – 2015 FINAL REPORT 25 (2015) [hereinafter ACTION 5 FINAL REPORT].

⁸² GUENTHER, *supra* note 71 at 4.

⁸³ *Id.* at 4.

⁸⁴ *Id.* at 4.

⁸⁵ *Id.* at 4. Deductible expenses may include R&D expenditures, marketing costs, and other administrative costs incurred to improve and finance qualified IP.

⁸⁶ *Id.* at 4.

⁸⁷ *Id.* at 6, 13.

Switzerland, and the United Kingdom.⁸⁸ In addition to these countries, several other countries have implemented some form of a patent box.⁸⁹

The OECD is an organization that aims to promote policies that benefit the well-being of people around the world.⁹⁰ It is made up of thirty-five member countries that work together to set international standards in a wide range of fields.⁹¹ The OECD supports encouraging R&D through the use of tax incentives.⁹² Its recommendations related to implementing patent boxes can be found in the OECD's Action 5: 2015 Final Report ("Action 5 Report"), which was published in October 2015.⁹³ The Action 5 Report focuses on the requirement of substantial activity when countries implement preferential regimes to prevent profit shifting.⁹⁴ This reliance on "substantial activity" was set forth in the framework of the OECD's 1998 Report, which initially proposed the need to focus on "counter[ing] harmful tax practices with respect to geographically mobile activities."⁹⁵ Although the report is dated twenty years ago, the importance of targeting harmful preferential regimes to achieve the goals initially set forth by the OECD has not diminished.⁹⁶ Countries that have implemented harmful preferential regimes

⁸⁸ *Id.* at 3. While Italy's regime going forward is in compliance with the Action 5 framework, it is important to note that the grandfathering treatment for older trademarks is still considered harmful by the OECD.

⁸⁹ *Id.* ("At the end of 2015, 16 countries provided some kind of patent box."); OECD, *Harmful Tax Practices – 2017 Progress Report on Preferential Regimes*, OECD/G20 Base Erosion and Profit Shifting Project 17 (2017) (listing additional regimes reviewed after October 2015).

⁹⁰ *About the OECD*, OECD, www.oecd.org/about/. (last visited Nov. 15, 2017).

⁹¹ *Id.* A list of the current member countries can be found at www.oecd.org/about/membersandpartners/.

⁹² OECD, *Growth, Innovation and Competitiveness: Maximising the Benefits of Knowledge-Based Capital*, OECD 7 (2013) ("International cooperation should extend not only to unintended tax relief for R&D . . . but also statutory policies for supporting R&D through tax credits and patent boxes.").

⁹³ ACTION 5 FINAL REPORT, *supra* note 81, at 11. "The goal of the OECD's work in the area of harmful tax practices is to secure the integrity of tax systems by addressing the issues raised by regimes that apply to mobile activities and that unfairly erode the tax bases of other countries, potentially distorting the location of capital and services." The OECD committed the Forum on Harmful Tax Practices ("FHTP") to evaluating preferential tax regimes and providing recommendations for implementing such regimes while avoiding artificial profit shifting.

⁹⁴ *Id.*

⁹⁵ *Id.* at 12.

⁹⁶ *Id.* In determining whether a regime qualifies for consideration under Action 5, there are three factors to consider: (1) whether the regime is preferential; (2) whether the regime is potentially harmful; and (3) whether the regime is actually harmful. *Id.* at 19. A regime is preferential for Action 5 purposes if it targets geographically mobile activities and their income and offers even a small preference for taxation of such income in the home country, as

should either abolish such regimes or modify their features to comply with OECD recommendations.⁹⁷

Regarding IP preferential regimes, the OECD has endorsed the “nexus approach.”⁹⁸ The goal of recommending the nexus approach is not to require implementation of a regime or to recommend a specific regime, rather it is to identify the outer limits of a patent box that will not have harmful, base-eroding effects on other countries.⁹⁹ The nexus approach uses expenditures to meet the “substantial activity” requirement required by Action 5.¹⁰⁰ This approach multiplies income derived from an IP asset by a “nexus ratio” to determine the IP income to receive preferential treatment, where the nexus ratio is calculated as the proportion of qualifying expenditures incurred in developing the IP asset to the overall expenditures incurred in developing the IP asset.¹⁰¹ The purpose of applying a nexus ratio is to ensure that qualifying taxpayers only receive benefits from the patent box to the extent that they actually incurred expenditures themselves and that such expenditures were directly related to development activities.¹⁰² This supports the rationale for implementing preferential regimes, which is to encourage taxpayers to invest in R&D.

compared with the taxation of other forms of income. *Id.* Income from intangibles is considered to be derived from geographically mobile activities. *Id.* To determine whether the preferential regime is potentially harmful, consideration should be given to the existence of now or a low effective tax rate on geographically mobile income, a ring-fenced regime, a regime that lacks transparency, and a lack of effective exchange of information. *Id.* at 20. Lastly, a potentially harmful regime is actually harmful if it creates harmful economic effects, such as shifting activity to a country with a more preferential regime without generating significant new activity. *Id.* at 21.

⁹⁷ *Id.* at 21.

⁹⁸ *Id.* at 9. The FHTP considered two other approaches: the value creation approach and the transfer pricing approach. The value creation approach gathered little support, as it required taxpayers to engage in a “set number of significant development activities.” *Id.* at 24. The transfer pricing approach would have required taxpayers to have a set level of significant functions in the regime’s jurisdiction. It also required that the taxpayer claiming the benefit of the regime was the legal owner of the IP, was using the IP, and was subject to the risks associated with the IP qualified for benefits under the regime. This gained some support, but many countries were concerned. *Id.*

⁹⁹ *Id.* at 24.

¹⁰⁰ *Id.* at 24-25.

¹⁰¹ *Id.* at 25.

¹⁰² Qualifying taxpayers include “resident companies, domestic permanent establishments of foreign companies, and foreign permanent establishments of resident companies” subject to tax in the regime’s jurisdiction. *Id.* at 25.

Jurisdictions may use their own definition of what meets the criteria for qualifying expenditures, but expenditures must be linked to a specific IP asset and be for the purpose of conducting research and development.¹⁰³ Examples include salary and wages, direct costs, overhead costs, and supplies costs as long as they are incurred to “advance the understanding of scientific relations or technologies, address known scientific or technological obstacles, or otherwise increase knowledge or develop new applications.”¹⁰⁴ Excluded costs “include interest, building costs, acquisition costs, and other costs that cannot be directly linked to a specific IP asset.”¹⁰⁵

Interestingly, the nexus approach allows for a 30% “lift-up,” which permits taxpayers to treat non-qualifying expenditures as qualifying expenditures, in an amount equal to 30% of the actual qualifying expenditures.¹⁰⁶ The “lift-up” cannot cause qualifying expenditures to exceed overall expenditures (the nexus ratio may not exceed 100%).¹⁰⁷ Qualifying expenditures are included in the nexus ratio in full in the year they are incurred, regardless of whether they must be capitalized for other purposes.¹⁰⁸ Overall expenditures include all qualifying expenditures, acquisition costs, and related-party outsourcing costs that are not qualifying expenditures but exclude costs associated with unsuccessful R&D.¹⁰⁹ The nexus ratio must be recalculated regularly because the nexus approach requires that life-time expenditures are used in the calculation.¹¹⁰

¹⁰³ *Id.* at 27.

¹⁰⁴ *Id.* at 41-42.

¹⁰⁵ *Id.* at 27.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 27.

¹⁰⁸ *Id.* at 27.

¹⁰⁹ *Id.* at 28.

¹¹⁰ *Id.* at 29.

For example, Company has one IP asset that generated income of 600. Company incurred qualified expenditures of 100, acquisition costs of 10, and related party expenditures of 40, so the nexus ratio will be 66.67% ($100 / 150$).¹¹¹ As a result, Company will receive preferential treatment for IP income of 400 ($600 * 66.67\%$). If Company's jurisdiction allows for the 30% "lift-up," Company's maximum qualifying expenditures will be 130 ($100 * 30\%$), and Company's new nexus ratio will be 86.67% ($130 / 150$).¹¹² Now Company will receive preferential treatment for IP income of 520 ($600 * 86.67\%$). However, if instead of related party expenditures of 40, Company had related party expenditures of 15, by using the "lift-up," Company's maximum qualifying expenditures would be 125 ($100 * 30\% = 130$, but qualifying expenditures cannot exceed overall expenditures).¹¹³

The nexus ratio is to be applied to income as defined by each jurisdiction, but the definition should follow two principles. Qualifying income should only include income generated by IP and may include royalties, capital gains, income from the IP asset's sale, and embedded income.¹¹⁴ Additionally, qualifying income should not be defined in terms of gross IP income; at most, it should be based on gross IP income minus IP expenditures.¹¹⁵ This ensures that taxpayers who do not have a 100% nexus ratio are unable to receive the patent box benefit on 100% of net income.¹¹⁶

The nexus approach is only intended to apply to patents and other IP assets that are "functionally equivalent to patents," as long as they are legally protected in a similar manner.¹¹⁷

¹¹¹ *Id.* at 27.

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.* at 29. Embedded income is income derived "from the sale of products and the use of processes directly related to the IP asset."

¹¹⁵ *Id.* at 29.

¹¹⁶ *Id.* at 29.

¹¹⁷ *Id.* at 26.

In addition to the obvious inclusion of patents,¹¹⁸ the nexus approach would also cover copyrighted software and other assets that are “non-obvious, useful, and novel.”¹¹⁹ Other copyrighted assets and marketing-related IP assets, such as trademarks, are not considered qualifying IP assets.¹²⁰

Because of the nexus requirement, jurisdictions that implement patent boxes must track expenditures and income related to IP assets to ensure that the only income receiving preferential treatment is income resulting from qualifying expenditures on qualifying assets.¹²¹ This is not a significant issue for companies that have only one IP asset, but it becomes more complex when there are multiple IP assets.¹²² In the event that relating expenditures to certain IP assets would require arbitrary judgment, such as where more than one IP asset is used to create a product, the nexus ratio can be determined by accounting for expenditures incurred to create products that are the result of IP assets, and then the ratio would be applied to income generated from those products.¹²³ This form of tracking complies with the nexus approach, but taxpayers must demonstrate a need to use this products-based approach.¹²⁴

If any existing or new FHTP jurisdiction plans to abolish its regime or amend it to comply with Action 5, the OECD has provided guidelines for either closing off or grandfathering the regime.¹²⁵ No new entrants can benefit from a non-compliant regime after the sooner of the

¹¹⁸ As used here, the term “patents” includes utility models, IP assets that protect plants and genetic material, orphan drug designations, and extensions of patent protection. It also includes extensions for certain patent protections. *Id.* at 26.

¹¹⁹ *Id.* at 26. Jurisdictions that implement a regime that covers other non-obvious, useful, and novel assets must be transparent in the types of assets they cover. There should also be financial limitations on the taxpayers that seek to benefit from this category of IP assets.

¹²⁰ *Id.* at 26, 27.

¹²¹ *Id.* at 30.

¹²² *Id.* at 30-31.

¹²³ *Id.* at 31.

¹²⁴ *Id.* at 31, 32.

¹²⁵ *Id.* at 34-35; OECD, HARMFUL TAX PRACTICES – 2017 PROGRESS REPORT ON PREFERENTIAL REGIMES 28 (2017) [hereinafter 2017 PROGRESS REPORT].

date a compliant regime takes effect or June 30, 2016.¹²⁶ For taxpayers that have already benefited from an existing non-compliant regime, the grandfathering rules permit such treatment to be continued until June 30, 2021 at the latest.¹²⁷ Jurisdictions should implement safeguards to ensure compliance with these rules and to prevent taxpayers from using related-party transactions to shift assets to benefit from grandfathered non-compliant regimes.¹²⁸

During 2016 and 2017, the FHTP reviewed a number of regimes for compliance with the Action 5 framework.¹²⁹ Of the fourteen regimes listed in the 2015 Action 5 Final Report, nine jurisdictions have regimes that are not harmful, with one jurisdiction in the process of amending the regime, two were abolished, one is potentially harmful, and one is harmful.¹³⁰ As of October 4, 2017, twenty-three additional regimes have been reviewed. Six have been determined to be not harmful, and thirteen are in the process of being amended to comply with Action 5.¹³¹ During 2018, the FHTP will continue to review regimes for compliance and will consider revising the criteria used to assess regimes to provide clearer guidance.¹³² The remainder of this section summarizes key aspects of five regimes that comply with the OECD recommendations.

C. Belgium

In 2007, Belgium implemented a patent income deduction (“PID”), which allowed Belgian companies and Belgian permanent establishments of foreign companies (“PE”) to deduct 80% of qualifying income.¹³³ At the time, this resulted in an effective tax rate of 6.8% on gross

¹²⁶ ACTION 5 FINAL REPORT, *supra* note 81, at 34.

¹²⁷ *Id.* at 35.

¹²⁸ *Id.* at 35.

¹²⁹ 2017 PROGRESS REPORT, *supra* note 125, at 13.

¹³⁰ *Id.* at 15-16.

¹³¹ *Id.* at 16-18.

¹³² *Id.* at 23.

¹³³ Peter R. Merrill et al., *Is It Time for the United States to Consider the Patent Box*, 134 Tax Notes 1665, 1666 (2012). Qualifying income was considered gross patent income and excluded capital gain realized upon disposal of a patent.

patent income.¹³⁴ Additionally, the law permitted deductions for development costs and other related expenses, lowering the potential effective tax rate even further.¹³⁵ The PID applied to patents and supplementary protection certificates owned by Belgian companies or PEs or acquired by one as long as the patented product or process was further improved by the company at its R&D center.¹³⁶ The R&D center could be domestic or foreign, but it must be able to operate autonomously.¹³⁷ Patents must have been “granted or first commercially used on or after January 1, 2007.”¹³⁸

Upon notification that the OECD found that the PID was inconsistent with the nexus approach, Belgium abolished the PID and implemented a new regime consistent with the OECD’s nexus approach, and this remains the current regime in force in Belgium.¹³⁹ This regime permits a deduction equal to 85% of net income from qualifying IP, which includes income related to patents or supplementary protection certificates, breeders’ rights, orphan drugs, data and market exclusivity, and copyrighted software.¹⁴⁰ The deduction is limited to net income, but the unused portion may be carried forward.¹⁴¹ This created a new effective tax rate of 5.1% on qualifying income.¹⁴² Qualifying income is based on net income from royalties, capital gains from sale of qualified IP, process innovation income, and damages from infringement of qualified IP rights.¹⁴³ Such net income is further adjusted to account for the

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.* The regime excludes income generated from know-how, trademarks, designs, models, secret recipes or processes, or information concerning experience with respect to trade or science. Although under certain circumstances, know-how closely related to patents or supplementary protection certificates may qualify.

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ KPMG, *Parliament has approved deduction for innovation income*, (2017), <https://home.kpmg.com/content/dam/kpmg/xx/pdf/2017/02/tnf-belgium-feb3-2017.pdf>.

¹⁴⁰ *Id.*

¹⁴¹ GUENTHER, *supra* note 71 at 6.

¹⁴² *Id.* at 6.

¹⁴³ *Id.* at 6.

proportion of qualified IP expenditures to a broader base of costs, including acquisition and related party outsourcing costs.¹⁴⁴

D. Italy

Italy's regime was enacted more recently and permits an exemption for 50% of qualifying income starting in 2017, creating an effective tax rate of 15.7% on qualifying income.¹⁴⁵ Qualifying income is net income from qualified IP, which includes income generated from a property owner's direct use of IP.¹⁴⁶ Qualified property must have been developed by an Italian-based company or an Italian subsidiary of foreign companies.¹⁴⁷ Qualified property includes patents, industrial IP, and acquired IP.¹⁴⁸ Trademarks were recently removed from the list of qualified property for companies electing treatment under this regime after December 31, 2016.¹⁴⁹ Those that opted for this treatment for trademarks before the preceding date are grandfathered in until June 31, 2021 at the latest.¹⁵⁰

E. Switzerland

Switzerland permits an exemption only in the canton of Nidwalden.¹⁵¹ The exemption applies to 80% of qualifying income, which is determined based on gross income from qualified IP sales and licensing, reduced by income derived from non-patent related services, such as financing, manufacturing, and routine work, and more notably, income from trademarks.¹⁵²

¹⁴⁴ *Id.* at 6.

¹⁴⁵ *Id.* at 7.

¹⁴⁶ *Id.* at 7.

¹⁴⁷ *Id.* at 7.

¹⁴⁸ *Id.* at 7. Although acquired IP receives preferential treatment, only 30% of acquisition or licensing costs are covered.

¹⁴⁹ KPMG, *Italy: Conversion of Law Decree no. 50/2017- Corporate income tax measures*, (June 23, 2017), <https://home.kpmg.com/content/dam/kpmg/xx/pdf/2017/06/tnf-italy-june23-2017.pdf>. This new rule was adopted to comply with the Action 5 Final Report recommendation that trademarks should never qualify for treatment under a preferential regime.

¹⁵⁰ *Id.*

¹⁵¹ GUENTHER, *supra* note 71, at 9. A canton is a member state of the Swiss Confederation.

¹⁵² *Id.* at 9.

Qualifying income must be generated by new and existing Swiss patents or comparable rights.¹⁵³ Overall, this creates an effective tax rate of 8.8%.¹⁵⁴ In early 2017, the Swiss Federal Council proposed a new tax package entitled Tax Proposal 17, part of which would require all cantons to adopt a patent box regime to provide no greater than 90% relief and R&D deductions to provide no greater than 50% relief.¹⁵⁵ The Federal Council aims to finalize the dispatch on Tax Proposal 17 by the end of March 2018, which may lead to the implementation of the new patent box rules in early 2019 or 2020.¹⁵⁶

F. The Netherlands

The Netherlands applies a 5% preferential rate to qualifying profits, which include net income from qualifying IP, including embedded royalties and gains on sales.¹⁵⁷ The 2017 Tax Plan set forth a new definition for qualifying property (qualifying intangible fixed assets), which is based on the size of the taxpayer.¹⁵⁸ For small taxpayers, the regime applies to in-house developed intangible fixed assets if an R&D certificate was issued by the Dutch government, and for large taxpayers, it applies to in-house developed intangible fixed assets (except for software) if an R&D certificate was issued and if a patent or similar right was granted to the taxpayer.¹⁵⁹ The Tax Plan also implemented the OECD's recommended nexus approach.¹⁶⁰

G. United Kingdom

¹⁵³ *Id.* at 9.

¹⁵⁴ *Id.* at 9.

¹⁵⁵ *Switzerland Announces Consultation on Revised Corporate Tax Reforms*, 2017 WTD 172-22 (Sept. 7, 2017).

¹⁵⁶ *Switzerland to Prepare Tax Proposal 17 Dispatch*, 2018 WTD 22-21 (Feb. 1, 2018).

¹⁵⁷ GUENTHER, *supra* note 71, at 8.

¹⁵⁸ KPMG: Meijburg & Co., *Cabinet presents tax measures for 2017 on Budget Day*, 8 (Sept. 20, 2016), <https://meijburg.com/uploads/files/news/2016/09/Tax%20Plan%202017.pdf>.

¹⁵⁹ *Id.* A business is considered a small taxpayer if the average group turnover for five years is not greater than 50 million euros per year and if the benefits derived from WBSO assets (R&D tax credit) is less than 7.5 million per year. Any taxpayer that does not meet these requirements is considered a large taxpayer.

¹⁶⁰ *Id.* at 9.

The patent box adopted by the United Kingdom was enacted by Finance Act 2012 and went into effect in April 2013.¹⁶¹ The regime provides for a reduced rate of 10% on qualifying income, but the calculation is not as simple as just applying the rate to the amount of qualifying income.¹⁶² Companies may deduct, from their total profits, an amount equal to qualifying IP profits multiplied by the ratio of the difference between the corporate rate and the reduced rate to the corporate rate.¹⁶³ After taking this deduction, the remaining profits are taxed at the corporate rate.¹⁶⁴ The amount of tax payable on the total income should be the same as if the IP profits were taxed separately from non-IP profits, but the deduction approach was adopted to simply corporate tax return filing.¹⁶⁵ Qualifying IP profits include income from the sale or licensing of qualified IP rights, proceeds from the sale of qualifying IP rights or licenses, and IP right infringement awards or other compensation.¹⁶⁶ Qualifying profits may be derived from patents and related rights, plant breeders' rights, and community plant variety rights.¹⁶⁷

The regime was modified by Finance Act 2016, which has resulted in different treatment for companies that have submitted patent applications or elected into the patent box regime for accounting periods starting after July 1, 2016.¹⁶⁸ For these companies, the calculation for determining the amount of income that can qualify for the patent box benefit changes¹⁶⁹ to comply with the OECD's nexus regime recommendation. Neither this Act nor the 2012 Act imposes a cap on the annual benefits provided by the regime.¹⁷⁰

¹⁶¹ *U.K. Issues Patent Box Technical Note*, 2012 WTD 62-40 (Mar. 30, 2012).

¹⁶² Finance Act 2012, c. 1 (Eng.), <http://www.legislation.gov.uk/ukpga/2012/14/schedule/2/paragraph/1/enacted>.

¹⁶³ *U.K. Issues Patent Box Technical Note*, *supra* note 161.

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ Finance Act 2012, c. 3 (UK), <http://www.legislation.gov.uk/ukpga/2012/14/schedule/2/paragraph/1/enacted>.

¹⁶⁷ Finance Act 2012, c. 2 (UK), <http://www.legislation.gov.uk/ukpga/2012/14/schedule/2/paragraph/1/enacted>.

¹⁶⁸ Rob Peers, *UK Patent Box*, EY (2016), [http://www.ey.com/Publication/vwLUAssets/EY-UK-Tax-Services-UK-Patent-Box/\\$FILE/EY-UK-Tax-Services-UK-Patent-Box.pdf](http://www.ey.com/Publication/vwLUAssets/EY-UK-Tax-Services-UK-Patent-Box/$FILE/EY-UK-Tax-Services-UK-Patent-Box.pdf).

¹⁶⁹ Finance Act 2016, c. 2A (Eng.), <http://www.legislation.gov.uk/ukpga/2016/24/section/64/enacted>.

¹⁷⁰ GUENTHER, *supra* note 71, at 11.

IV. SHOULD THE UNITED STATES ADOPT A PATENT BOX REGIME?

In 2012, the Economic & Statistics Administration at the U.S. Department of Commerce and the U.S. Patent and Trademark Office prepared a report to determine which industries are the greatest users of IP commonly targeted by patent boxes.¹⁷¹ The report further analyzed the effect that the identified industries had on economic activity in the U.S.¹⁷² Industries that were the most intensive users of IP were defined as those that had a ratio of IP holdings to total employment that was greater than the industry average.¹⁷³ The report was updated in 2016, concluding that 12 industries were patent-intensive between 2009 and 2014.¹⁷⁴ The identified industries consisted largely of those developing chemicals/pharmaceuticals and electronic/computer equipment.¹⁷⁵

However, most patent boxes have been adopted too recently for researchers to definitively report on the long-term effects of the regimes, but some studies have indicated that countries that are currently using a patent box have seen an increase in the number of patent applications from both domestic and foreign companies.¹⁷⁶ Because of the uncertainty as to the patent box long-term effects, this section will discuss the expected benefits and risks associated with adopting a patent box regime. It will further discuss recent proposals for adopting one in the United States and will conclude with a discussion about the future of incentivizing R&D in the United States.

A. Expected Benefits of Adopting a Patent Box Regime

¹⁷¹ *Id.* at 13.

¹⁷² *Id.* at 13.

¹⁷³ *Id.* at 14.

¹⁷⁴ *Id.* at 13.

¹⁷⁵ *Id.* at 14-16.

¹⁷⁶ Cherie L. Jones et al., *Should the United States Enact a Patent Box?*, THE TAX ADVISER (Nov. 1, 2016), https://www.thetaxadviser.com/issues/2016/nov/should-us-enact-patent-box.html#fnref_4.

The more obvious reason for adopting a patent box is to encourage IP investment in a host country, which can lead to larger tax revenues, preservation of the country's tax base, and increased job growth.¹⁷⁷ This same rationale supports the use of other incentives; however, patent boxes differ from other R&D tax incentives. Patent boxes cast a wider net by promoting the commercialization of innovation, whereas R&D tax credits promote a narrower range of activities, solely related to conducting research.¹⁷⁸ The commercialization encouraged by patent boxes is essential to respond to the increasingly competitive global environment and to promote economic growth.¹⁷⁹

Another reason that countries adopt patent box regimes is to attempt to correct market failure.¹⁸⁰ Economists argue that companies engaging in R&D do not realize even close to all of the benefits that their investments produce because of the intangible nature of innovation that allows society to reap the benefits of a firm's innovation.¹⁸¹ It has been estimated that inventors capture only 4% of the social gains provided by their innovations.¹⁸² While IP may be afforded protection, innovation still creates positive externalities, which effectively reduces the rate of return realized by the investor.¹⁸³ Additionally, due to the amount of expenditures made before any benefit is realized, investments involve substantial risk. Evidence suggests that the riskier projects are likely to result in more significant positive externalities, generating lower return.¹⁸⁴ Patent boxes attempt to resolve this problem not by reducing the cost of R&D but instead by

¹⁷⁷ GUENTHER, *supra* note 71, at 2.

¹⁷⁸ Robert D. Atkinson & Scott Andes, *Patent Boxes: Innovation in Tax Policy and Tax Policy for Innovation*, THE INFORMATION TECHNOLOGY AND INNOVATION FOUNDATION, Oct. 2011, at 1, www.itif.org/files/2011-patent-box-final.pdf.

¹⁷⁹ *Id.* at 3.

¹⁸⁰ Jones et al., *supra* note 176 (citing Atkinson, *supra* note 178, at 4).

¹⁸¹ *See id.*

¹⁸² Atkinson, *supra* note 178, at 4.

¹⁸³ *Id.*

¹⁸⁴ *Id.* at 6. For example, the average time it takes for a drug to reach the market is twenty-five years after the initial R&D stages.

“increasing the benefits of success” by reducing the tax rate on qualifying income.¹⁸⁵ While benefiting private companies, this can simultaneously benefit society by preventing firms from getting stuck in low-innovation equilibriums and incentivizing investment in higher value projects.¹⁸⁶

The adoption of a patent box regime does not require that a country abandon other R&D incentives.¹⁸⁷ Patent boxes encourage the commercialization of the products created after R&D activities are complete, thus providing additional benefits for successful endeavors.¹⁸⁸

If a country is compliant with the OECD’s recommendations set forth in the Action 5 Final Report, adopting a patent box should not pose tax avoidance or transparency issues.¹⁸⁹ For a country to avoid having its regime labeled as actually harmful or potentially harmful, it must incorporate the nexus approach and require that companies benefiting from the regime track income and related expenditures expected to result in tax benefits.¹⁹⁰

B. Expected Risks of Adopting a Patent Box Regime

The most obvious risk of adopting a patent box regime would be the potential for decreased tax revenue.¹⁹¹ There is a concern over the need to offset the cost of implementing an patent box, especially considering the competitive rates adopted by other countries.¹⁹² The cost of reducing the tax rate would have to be smaller than the societal benefit that would be gained by implementing a patent box.¹⁹³ And as stated at the beginning of this section, the success of

¹⁸⁵ *Id.* at 7.

¹⁸⁶ *Id.* at 7.

¹⁸⁷ Jones, *supra* note 176.

¹⁸⁸ *Id.*

¹⁸⁹ *Id.*

¹⁹⁰ Section III.B, *supra*.

¹⁹¹ See DAN COATS, CHAIRMAN OF THE JOINT ECONOMIC COMMITTEE, PATENT BOXES: A BRIEF HISTORY, RECENT DEVELOPMENTS, AND NECESSARY CONSIDERATIONS (Mar. 10, 2016), https://www.jec.senate.gov/public/_cache/files/02a2a18a-1e08-42ce-8c14-72b6138b54dd/031016-patent-boxes.pdf.

¹⁹² Merrill, *supra* note 4, at 860.

¹⁹³ *Id.* at 860.

patent boxes is uncertain. This consideration is especially important considering the recent significant reduction in the corporate tax rate.

More direct tax incentives can be more advantageous than using a patent box and can achieve the same goal of incentivizing R&D.¹⁹⁴ Front end incentives such as research credits can encourage certain types of R&D activities that may have a more significant effect on the economy.¹⁹⁵ Additionally, these incentives may be more beneficial to companies in need of cash because they provide more immediate benefits, whereas patent boxes do not provide benefits until the project is successful, if at all.¹⁹⁶ In addition to this delay in receiving benefits, which is not attractive for the cash-strapped taxpayers, the use of a patent box creates a disparity in the benefits received by taxpayers, resulting from the regime's reliance on the profitability of the R&D investment.¹⁹⁷ While countries that adopt a patent box regime need not eliminate R&D credits, the issue remains that providing tax incentives reduces national revenue, and using a patent box may impact other R&D incentives or other non-IP related incentives to make up for lost revenue.

Lastly, while not permanent, implementation of a patent box that is compliant with the BEPS project would result in increased administrative costs due to the necessity of tracking expenditures and income.¹⁹⁸ The mobility of IP income poses a challenge in offering a lower tax rate on such income due to tracking concerns.¹⁹⁹ On the other side of the mobility argument, certain R&D activities may be difficult to move back to the United States because of the need for specialized facilities and skilled researchers.²⁰⁰ The nexus approach permits R&D activities to

¹⁹⁴ *Id.* at 855.

¹⁹⁵ *Id.* at 855.

¹⁹⁶ *Id.* at 855.

¹⁹⁷ *Id.* at 855.

¹⁹⁸ *Id.* at 855.

¹⁹⁹ *Id.* at 857.

²⁰⁰ *Id.* at 857.

take place outside of the taxpayer’s home country, but “this generally would give rise to a permanent establishment” in that other country and consequently income in that country.²⁰¹

To conclude, countries with patent boxes also provide other R&D incentives, which suggests that countries adopt patent boxes to attract mobile income, which has been identified as a potentially harmful preferential tax practice by the OECD.²⁰² There is a risk that encouraging R&D may not be the main motivator for adopting patent boxes, which is what the focus should be based on the Action 5 Final Report.²⁰³

C. Past U.S. Patent Box Proposals

A patent box proposal was first considered in 2007, when, in a report prepared by the U.S. Treasury, an issue was presented concerning the tax system’s distortion of where multinational corporations should exploit intangible assets, resulting in decisions about where income should be produced and expenses incurred.²⁰⁴ The report suggested a territorial system and lower tax rate or quicker investment write-off could provide a solution but concluded that the financial benefits might not be significant enough to counter the revenue loss.²⁰⁵

Since then, there have been various other proposals for patent boxes. Senator Dianne Feinstein introduced the Leveling the Playing Field Act of 2012, which proposed a 15% tax rate on “income from the sale of domestically manufactured products whose value is derived from domestically produced patents,” in an effort to incentivize R&D and promote manufacturing job growth in the United States.²⁰⁶ The Manufacturing Innovation in America Act of 2012 (H.R.

²⁰¹ *Id.* at 852 n.8.

²⁰² *Id.* at 860.

²⁰³ *Id.* at 860.

²⁰⁴ U.S. DEPARTMENT OF THE TREASURY, APPROACHES TO IMPROVE THE COMPETITIVENESS OF THE U.S. BUSINESS TAX SYSTEM FOR THE 21ST CENTURY 45 (2007).

²⁰⁵ *Id.* at 46.

²⁰⁶ DIANNE FEINSTEIN, LEVELING THE PLAYING FIELD ACT OF 2012, PUTTING AMERICA BACK TO WORK (2012), https://www.feinstein.senate.gov/public/_cache/files/c/7/c7efe846-c626-40a5-b9b3-1a8b2c5e589a/97A30383A047F78C777C2ED7EF26DB24.patent-box-final-04-11-12-.pdf.

6544) and The Manufacturing Innovation in America Act of 2013 (H.R. 2605) both proposed a deduction of 71% from income, creating a 10% effective rate on qualifying income.²⁰⁷ None of these proposals were adopted.

Representatives Boustany and Neal introduced The Innovation Promotion Act of 2015, which identified three goals: encouraging U.S. multinationals to remain in the United States to conduct IP activities, offsetting tax incentives for corporate redomiciliation, and incentivizing the retention of IP and jobs in the United States.²⁰⁸ It proposed a 71% deduction from a corporation's innovation box profit, creating a 10.15% maximum effective corporate tax rate.²⁰⁹ Innovation box profit was calculated as profits from the sale or license of qualified property multiplied by the ratio of domestic R&D costs to total costs, over the previous five years.²¹⁰ Qualifying property included patents, inventions, formulas, processes, designs, patterns, knowhow, products produced using manufacturing IP, films, videos, and computer software.²¹¹ The proposal was not adopted. It was estimated to lose billions of dollars over the course of ten years, and it was not believed to benefit innovators as other successful regimes are intended to.²¹²

D. The New FDII Provision

According to Martin Kreienbaum, Chair of OECD's Committee on Fiscal Affairs, the FDII provision has caught the interest of European Union policymakers.²¹³ As a result, the EU Code of Conduct Group is planning to assess the provision's compliance with BEPS

²⁰⁷ Jones, *supra* note 176; GRAVELLE, *supra* note 14, at 1 (discussing the effective tax rate).

²⁰⁸ Merrill, *supra* note 4, at 849.

²⁰⁹ *Id.* at 849.

²¹⁰ *Id.* at 849.

²¹¹ *Id.* at 849.

²¹² John Gimigliano, *The "innovation box" makes a comeback*, KPMG (June 30, 2017), <http://www.kpmg-institutes.com/institutes/tax-governance-institute/articles/campaigns/tax-reform-under-trump/tax-reform-remarks0/2017/6/innovation-box-comeback.html>.

²¹³ Ryan Finley, *FDII Rules are not Harmful Tax Practices, Treasury Official Says*, 2018 WTD 33-5 (Feb. 16, 2018).

standards.²¹⁴ The provision does not incorporate the nexus approach; however, Lafayette G. Chip Harter III, Treasury Deputy Assistant Secretary for International Tax Affairs, has assured that the United States will defend the provision because it has a “different purpose and effect from harmful preferential regimes for intellectual property income and must be assessed in the broader legislative context.”²¹⁵ Harter further states that the FDII provision is not harmful because its intent is to remove the tax incentive to move mobile income outside of the United States.²¹⁶ The House Ways and Means Committee also believes that the FDII provision complies with international tax rules and standards.²¹⁷

Additionally, finance ministers in the European Union indicated disapproval of the FDII deduction, claiming that it violates World Trade Organization (“WTO”) rules by creating an impermissible export subsidy.²¹⁸ Professor Rebecca Kysar of Brooklyn Law School argues that this provision likely violates the WTO because the reduced tax rate on FDII will cause U.S. corporations to focus more on that market.²¹⁹ Doing so will effectively create a government subsidy that makes the export market more attractive, which improperly interferes with international trade.²²⁰ Other export provisions have been enacted in the past but were subsequently scrapped due to international trade issues.²²¹

²¹⁴ *Id.*

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ Casey Wooten, *Tax Break Meant to Attract Intellectual Property Could See WTO Challenge*, NATIONAL JOURNAL (Feb. 26, 2018), <https://www.nationaljournal.com/s/664455/tax-break-meant-attract-intellectual-property-could-see-wto-challenge>.

²¹⁸ Yoder, *supra* note 53; Letter from Federal Minister of Finance Altmaier, Minister of Economy and Finance Le Maire, Chancellor of the Exchequer Hammond, Minister of Economy and Finance Padoan, and Minister of Finance and Civil Service Romero to US Secretary of the Treasury Mnuchin (Dec. 2017) (printed in Joe Kirwin, *EU Finance Chiefs Warn of U.S. Tax Plan’s Harmful Trade Effects*, BLOOMBERG BNA DAILY TAX REPORT (Dec. 12, 2017)).

²¹⁹ Alexander Lloyd, *What Do the Tax Cuts and Jobs Act, Foreign-Derived Intangible Income, and the World Trade Organization Have in Common?* COLUM. J. OF TRANSNATIONAL L. (2018).

²²⁰ *Id.*

²²¹ Wooten, *supra* note 217. These provisions include the Domestic International Sales Corporation (“DISC”) export-tax benefit, the Foreign Sales Corporation, and the extraterritorial-income-exclusion (“ETI”) provision. After

As of April 2018, no one has filed a claim with the WTO, but the OECD began review of the provision on April 4, in response to the European Union's request.²²² Nothing has been reported on this review as of now, but if the OECD determines the FDII provision has created an illegal export subsidy, the EU intends to file a complaint.²²³

E. What Should the United States Do?

At this point the United States should not adopt a patent box due to the revenue loss and concerns and the complexity that arises with the tracking requirements. If the United States were to adopt a patent box, the legislation would need to address several issues, including the sources of income the patent box would cover, what the preferential treatment would be, and how the preferential treatment would apply to qualifying income. All of the features would need to comply with the Action 5 Final Report because the United States is a member of the Inclusive Framework on BEPS.²²⁴ This would likely prove to be difficult, considering the recent proposals that have been rejected.

V. CONCLUSION

While the expected benefits of a patent box sound attractive, the success of incentivizing R&D in such a manner is uncertain, so the United States should hold off for now on implementing a patent box regime. This is especially true considering the recent overhaul of the IRC. With uncertainty over the effects of new tax provisions, the already existent debate over the FDII provision, which is currently under review by the OECD, and the failure of multiple

the ETI's repeal, Congress replaced the provision with the Section 199 deduction for domestic manufacturers, which has recently been repealed by the TCJA.

²²² Joe Kirwin, *OECD's Review of U.S. Tax Reform is Underway*, BLOOMBERG BNA DAILY TAX REPORT (Apr. 6, 2018).

²²³ *Id.*

²²⁴ Jones, *supra* note 176.

Congressional proposals in recent years, the United States is not in a position to incentivize R&D further through the use of a patent box.