Haven Indicator 7: Patent boxes

What is measured?

This indicator measures if a jurisdiction offers exemption or preferential tax treatment for income related to intellectual property rights (e.g. patent boxes) and whether the Organisation for Economic Co-operation and Development (OECD) nexus approach constraints (as explained below) are applicable to the patent box. The term 'patent box' is increasingly being used more widely than only for patent incentives alone to reflect a range of preferential tax treatments for intellectual property.[1] To explain the logic of this indicator, we hereafter define all tax regimes affecting the corporate income tax treatment for intellectual property related income as 'patent box regimes'.

A haven score of zero for this indicator is provided only if the jurisdiction fully includes foreign royalties in its domestic corporate income tax base and if it has not introduced a patent box regime, either with or without the constraints determined by the OECD nexus approach. A haven score of 100 points is given if the jurisdiction offers a patent box regime without OECD nexus constraints, exempts foreign royalties altogether from its tax base or if the patent box regime is not applicable for the jurisdiction because it imposes no corporate income tax or has a zero statutory tax rate. The haven score is reduced by 10 points if the patent box regime offered by the jurisdiction is in line with the OECD nexus approach.

The scoring matrix is shown in Table 7.1, with full details of the assessment logic presented in Table 7.3 below.

Table 7.1: Scoring Matrix Haven Indicator 7

Regulation	Haven Score [100 points= maximum risk; 0 points = minimum risk]
Patent box regime is available without OECD nexus constraints The jurisdiction offers a patent box regime without the OECD nexus approach. Or The patent box regime is not applicable for the jurisdiction given it imposes no corporate income tax or a zero statutory corporate tax rate.	100
Patent box regime is available with OECD nexus constraints The jurisdiction offers a patent box regime which is in line with the OECD nexus approach.	90
Patent box regime is not available There is no evidence that the jurisdiction offers a patent box regime.	0

Jurisdictions can entice tax avoidance, base erosion and profit shifting through the channel of intellectual property related payments by either broadly exempting foreign royalty income from its domestic tax base or by offering narrower preferential tax treatment for royalty payments.[2] In cases where a country exempts foreign-source royalty payments, the risk it creates for cross-border tax avoidance is so high that the availability of a patent box regime in that country becomes irrelevant as in effect the consequences of exempt royalty payments are potentially equal to that of a narrower patent box regime which is not in line with the nexus approach. The nexus approach by the OECD was intended to constrain the potentials for tax abuse arising purely from the narrower type of patent boxes that offer deviating preferential tax treatment.

A preferential tax treatment for intellectual property rights usually takes the form of either special cost-based tax incentives or profit-based tax incentives (e.g. lower tax rates). The first step in our analysis was, therefore, to identify whether either the income or the expenses (or both) qualify for a narrow patent box regime. For this indicator, we considered that a jurisdiction adopts a narrow patent box regime only whenever the regime is characterised as a profit-based one. If the jurisdiction has more than one regime, we assessed it according to the weakest link principle. Once a narrow patent box regime was identified in the jurisdiction, we checked whether that regime was available with or without the OECD nexus constraints.

The final [Action 5](#) report of the OECD Action Plan on Base Erosion and Profit Shifting (BEPS), which focuses on tackling harmful tax practices[3] (hereinafter: 'Action 5 report'), adopts the nexus approach as a way to identify whether a preferential tax regime is harmful. The first OECD report on Action 5 examined situations in which a preferential patent box regime is considered harmful. For example, an indication of a potentially harmful patent box regime is when the patent box regime is the primary motivation for the location of an activity.[4]

The nexus approach, as developed by the OECD and presented in 2014 in a [preliminary Action 5 report](#),[5] was one among others that were suggested for requiring substantial activity for any preferential tax regime, such as patent boxes.[6] The nexus approach requires a link between the income benefiting from the intellectual property and the underlying research and development activities that generate the intellectual property.[7] The approach allows taxpayers to benefit from an intellectual property regime only if they can link the income that stems from the intellectual property to the expenditures (such as research and development) it incurred (either by the taxpayer itself or by outsourcing it to a third party, i.e., qualified research and development activities).[8][9]

Out of the several suggested approaches, a modified nexus approach was later endorsed by all OECD and G20 countries. The modified nexus approach includes the following main changes to the original nexus approach: 1) Up to 30% uplift of qualifying expenditures can be considered in determining the nexus ratio in limited circumstances. This means that if a company has, for example, an expenditure cost of US$1m, it can set US$1.3m against tax; b) 30 June 2016 was the last date to introduce new entrants to patent box regimes that were not consistent with the nexus approach; and c) 30 June 2021 was the last date for their elimination as well as some opportunities for 'grandfathering' of existing provisions.[10] For the 2021 edition of the Corporate Tax haven Index, in cases where a jurisdiction introduced grandfathering rules that enable companies which entered the regime earlier to continue benefitting from the old patent box regime (without nexus constraints) until 30 June 2021, we considered the grandfathering provision as no longer applicable and assessed the amended regime instead.

The data for this indicator has been collected primarily through the International Bureau of Fiscal Documentation (IBFD) database (country analyses and country surveys)[11], the OECD's latest peer reviews[12] of preferential regimes, and the responses of the jurisdictions' Ministries of Finance to the Corporate Tax Haven Index' survey and preliminary assessment 2020.[13] In some instances, we have also consulted additional websites and reports of the Big 4 accountancy firms and local tax authorities.

All underlying data can be accessed in the Corporate Tax Haven Index database.[14] To see the sources we are using for particular jurisdictions please consult the assessment logic in Table 7.3 and search for the corresponding info ID (ID 515) in the database report of the respective jurisdiction.

Why is this important?

A patent box regime provides tax privileges for highly profitable businesses and enables cross-border profit shifting into these tax regimes, undermining the tax bases of jurisdictions elsewhere.[15] Promises to spur innovation, tax revenues and growth through the introduction of patent boxes have failed to materialise in empirical data. In contrast, available evidence suggests that patent box regimes are effective only for raising multinationals' share prices. For example, research conducted by the Congressional Research Service in the USA and published in May 2017 concluded the following:

> There is no evidence that a patent box necessarily increases tax revenues in the host country; rather, countries that adopt a patent

> box may find that the added revenue from new patenting activity is eclipsed by the loss of revenue from the reduced tax rates for patent income. As more countries adopt a patent box, the risk grows of an inter-government tax competition triggering a race to the bottom of the ladder of effective tax rates on patent income. Patent boxes have had little impact on innovative activity in host countries in the absence of a local development requirement.[16]

Similarly, recent empirical research, published by the Max Planck Institute for Innovation and Competition, analysed the effects of the introduction of patent box regimes in 13 European countries between 2000 and 2014. According to the research, given that a patent box regime subsidises output rather than input, it benefits mainly companies that have already had success with their invention. And while it may encourage other companies to undertake such inventions, this can be done in a better and more efficient way.[17]

Another report, published in 2015 by the European Commission, concluded that patent boxes are not the most effective way to stimulate innovation and research and development.[18] In fact, it appears that jurisdictions without such patent box regimes have been more successful in attracting and fostering innovative businesses.[19] However, although the efficiency of patent box regimes in fostering research and the associated jobs has never been proven, jurisdictions continue to provide companies with huge tax incentives by introducing these regimes.

Furthermore, in cases where patent box regimes are adopted in addition to generous tax breaks for research that are already available through deductions of actual expenditures, such regimes may cause more damage than benefit to the host country.[20] For example, in 2015, the Dutch government found that its innovation box resulted in a tax loss of €361m to the Netherlands in 2010. In 2012, this sum was almost double, increasing to €743m.[21] Finally, a report published by the Centre for European Economic Research in 2013 claims that:

> In the larger of the countries, that have significant innovation bases, it is more likely that IP [intellectual property] boxes will lead to significant revenue losses. Empirical evidence that simulates the Benelux and UK IP Boxes finds that the increase in IP income locating in the countries is insufficient to outweigh the lower tax rate.[22]

Importantly, patent box regimes confirm the futile notion of competition on tax, locking in a race to the bottom.[23] As a result, while patent boxes in theory could increase tax revenues, positive effects of an individual country's policy are likely to be eroded by the response of other governments, which respond by introducing even more aggressive and corrosive tax policies.[24] For many years, patent boxes have been used by multinational corporations to avoid taxation by shifting profits out of the countries where they do business and into a foreign country with a patent box regime, where the profits are taxed at very low levels or not at all. Researchers indicate that such profit shifting leads to misattribution of economic activities, resulting in productivity slowdown.[25] It also enables multinational companies to monopolise the market while companies that lack the scale of the multinational corporations will be disadvantaged simply because they do not have the resources available to establish global structures which can allow them to avoid tax.[26]

For all of the above reasons, patent box regimes are particularly damaging to developing countries. These countries may be used simply as manufacturing platforms, while their tax base may be drained by profit shifting, which in practice is legitimised by the patent box regime. Patent box regimes, therefore, cannot be justified as a viable fiscal incentive and should be eliminated.

While the OECD nexus approach is a step in the right direction, the constraints set out by the approach are not sufficient to prevent the abuse of patent boxes as tactics in profit shifting and base eroding tax wars. This is because profits from the use of patents are going to be taxed at a lower rate, and the size and amount of qualifying profits may be unlimited.[27] Implementing and enforcing the nexus requirements are obstacles which are near impossible to overcome in order to prevent the abuse of patent boxes for inward profit shifting. Not only does the patent box jurisdiction have little incentive to reduce the attributable profits to the patent box, the criterion for demonstrating "substantial economic activities" as a condition for profit attribution is both complex and burdensome to apply for both companies and tax authorities, and relatively easy to meet.

Governments will need to make sure that national rules comply with the agreed standard and that tax authorities are able to trace which of the expenditures is considered as "qualifying expenditure".[28] This may be a recipe for sweetheart deals[29] as we have already seen with the LuxLeaks revelations[30] and the European Commission's decisions on illegal state aid from countries including Ireland, Luxemburg and the Netherlands.[31] In addition, as long as the thresholds required by any nexus rules have been taken, the amounts of profit to be attributed to the patents can be easily manipulated under the existing indeterminacy of transfer pricing rules. Therefore, the abuse of patent boxes with a nexus constraint can hardly be prevented.

Nonetheless, we acknowledge that the nexus approach has so far only been implemented for a short period and there is not enough robust evidence and studies to confirm our arguments for its insufficiency. In acknowledging this lacking empirical validation of the nexus' rules inefficacy, we reduce the haven score by 10 for jurisdictions that offer patent box regimes in line with the OECD nexus approach.

Another significant flaw of the entire OECD review of potentially harmful tax regimes is that it only focuses on what the OECD qualifies as high risk *"geographically mobile business income"* [32], and thus ignores any other economic activities that might equally result in base erosion and profit shifting and lead to lower corporate taxes.[33] In fact, except for the modified nexus approach for patent boxes, the Action 5 framework does not require robust and clearly defined economic substance. As a result, countries may create substance rules which are easy to comply with but in effect will not require the companies to materially change the gross disproportion between substance or expenditure, and profits attributed.[34] For example, under Dutch law, a company is regarded as having substance if it has a physical office, local directors, and annual salary costs of at least €100,000,[35] enabling billions of profits to be attributed.

Furthermore, the Action 5 framework has weaknesses in its ring-fencing approach by disregarding broad exemptions or low corporate tax for all foreign source income in territorial tax systems.[36] As a result, for example, the risks arising from territorial tax systems in Gibraltar, Hong Kong, Panama and Singapore are ignored. For these reasons, we have applied a more exhaustive approach that resulted in several jurisdictions receiving a haven score of 100 points in Haven Indicator 7 despite the OECD's conclusion that the application of the nexus approach or even the complete abolishment of the patent box regime in those jurisdictions results in harmlessness.

Results Overview

Figure 7.1: Patent Boxes Overview

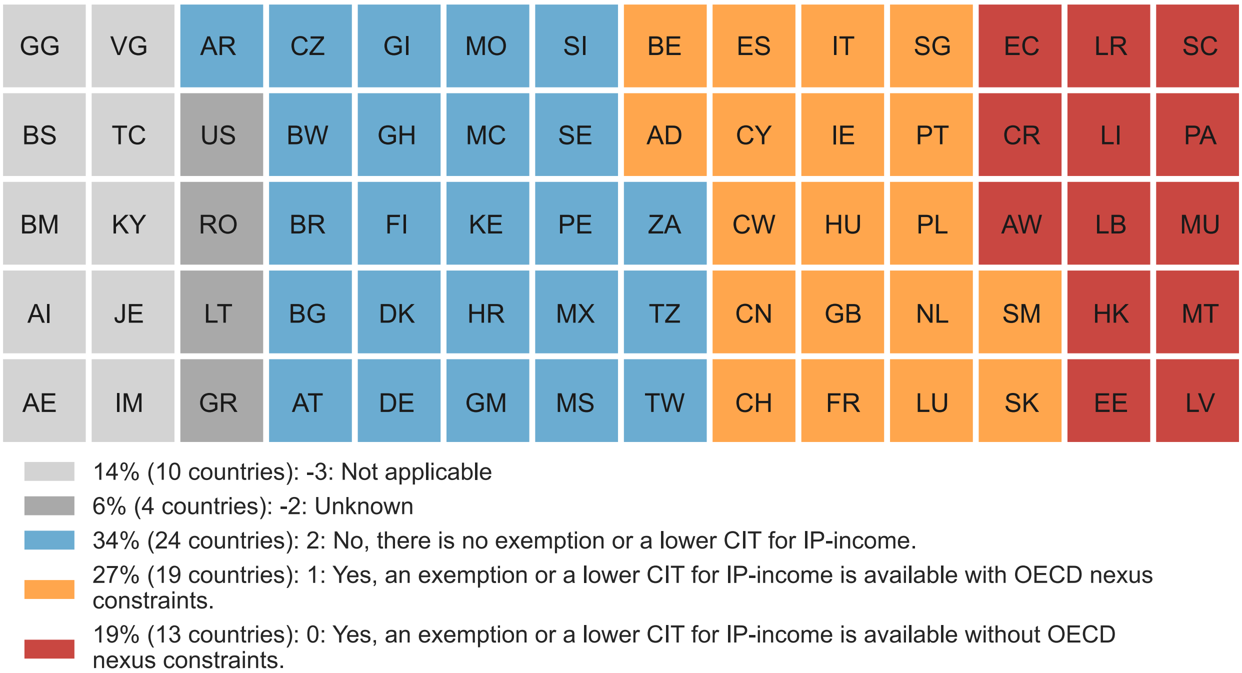

Table 7.2: Patent Boxes – Haven Indicator Scores

Haven Score	ISO2:	Country Name
100	AW:	Aruba
100	AI:	Anguilla
90	AD:	Andorra
100	AE:	United Arab Emirates
0	AR:	Argentina
0	AT:	Austria
90	BE:	Belgium
0	BG:	Bulgaria
100	BS:	Bahamas
100	BM:	Bermuda
0	BR:	Brazil
0	BW:	Botswana
90	CH:	Switzerland
90	CN:	China
100	CR:	Costa Rica
90	CW:	Curaçao
100	KY:	Cayman Islands
90	CY:	Cyprus
0	CZ:	Czechia
0	DE:	Germany
0	DK:	Denmark
100	EC:	Ecuador
90	ES:	Spain
100	EE:	Estonia
0	FI:	Finland
90	FR:	France
90	GB:	United Kingdom
100	GG:	Guernsey
0	GH:	Ghana
0	GI:	Gibraltar
0	GM:	Gambia
100	GR:	Greece
100	HK:	Hong Kong
0	HR:	Croatia
90	HU:	Hungary
100	IM:	Isle of Man
90	IE:	Ireland
90	IT:	Italy
100	JE:	Jersey
0	KE:	Kenya
100	LB:	Lebanon
100	LR:	Liberia
100	LI:	Liechtenstein
100	LT:	Lithuania
90	LU:	Luxembourg
100	LV:	Latvia
0	MO:	Macao
0	MC:	Monaco
0	MX:	Mexico
100	MT:	Malta
0	MS:	Montserrat
100	MU:	Mauritius
90	NL:	Netherlands
100	PA:	Panama
0	PE:	Peru
90	PL:	Poland
90	PT:	Portugal
100	RO:	Romania
90	SG:	Singapore
90	SM:	San Marino
90	SK:	Slovakia
0	SI:	Slovenia
0	SE:	Sweden
100	SC:	Seychelles
100	TC:	Turks and Caicos Islands
0	TW:	Taiwan
0	TZ:	Tanzania
100	US:	United States
100	VG:	British Virgin Islands
0	ZA:	South Africa

Haven Score

Low Haven Score ← → High Haven Score

0 to <25 | 25 to <50 | 50 to <75 | 75 to 100

Table 7.3. Assessment Logic

Info_ID	Text_Info_ID	Answers (Codes applicable for all questions: -2: Unknown; -3: Not Applicable)	Valuation Haven Score
515	Patent Box: Does the jurisdiction offer preferential tax treatment for income related to intellectual property?	0: Yes, an exemption or a lower CIT for IP-income is available without OECD nexus constraints. 1: Yes, an exemption or a lower CIT for IP-income is available with OECD nexus constraints. 2: No, there is no exemption or a lower CIT for IP-income.	0: 100 1: 90 2: 0

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[1] Alex Cobham, 'Will the Patent Box Break BEPS?', *Tax Justice Network*, 2015 <https://taxjustice.net/2015/07/20/will-the-patent-box-break-beps/> [accessed 5 March 2021].

[2] The consistent inclusion of all exemptions of royalty payment in this indicator represents a change of methodology between the 2019 and 2021 editions of the Corporate Tax Haven Index. This change follows a more exhaustive approach we have taken for the current edition of the Corporate Tax Haven Index 2021 with regard to the interactions between the 20 haven indicators (for more details see section 2.3 in our full methodology document, available here: https://cthi.taxjustice.net/cthi21/methodology). In some cases, a haven score of 100 points was given to a jurisdiction as a result of an interaction with haven indicator 2. As such, whenever we assess in haven indicator 2 that foreign-source royalties are tax exempt in a jurisdiction (i.e. the lowest tax rate applicable to royalty payments is 0%), we consider that the jurisdiction has a patent box regime which is not in line with the OECD nexus approach; that is even if according to the OECD, there is no patent box, or the patent box regime in that jurisdiction is compliant with the nexus approach, or the country has abolished its patent box regime.

[3] OECD, Countering Harmful Tax Practices More Effectively, Taking into Account Transparency and Substance, Action 5 - 2015 Final Report, OECD/G20 Base Erosion and Profit Shifting Project (2015) <http://www.oecd-ilibrary.org/taxation/countering-harmful-tax-practices-more-effectively-taking-into-account-transparency-and-substance-action-5-2015-final-report_9789264241190-en> [accessed 16 August 2018].

[4] Action 5 report includes two parts, the first aims at identifying whether features of patent box regimes are harmful and the second aims at ensuring transparency through the compulsory exchange of related tax rulings. The Action 5 report is one of the four minimum BEPS standards, which all members of the Inclusive Framework on BEPS have committed to implement.

[5] OECD, *Countering Harmful Tax Practices More Effectively, Taking into Account Transparency and Substance*, OECD/G20 Base Erosion and Profit Shifting Project (2014) <http://www.oecd-ilibrary.org/taxation/countering-harmful-tax-practices-more-effectively-taking-into-account-transparency-and-substance_9789264218970-en> [accessed 16 August 2018].

[6] The other two main suggested approaches for requiring substantial activity were value creation and transfer pricing. Value creation means that tax benefits apply only if specific criteria for development activities taking place in the jurisdiction are met. Transfer pricing requires the assessment of functions, assets and risks. See: https://www.taxnotes.com/tax-notes-today/intangible-

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[9] OECD, *Countering Harmful Tax Practices More Effectively, Taking into Account Transparency and Substance*, 29.

[10] OECD, *Explanatory Paper: Agreement on Modified Nexus Approach for IP Regimes*, 2015 <https://www.oecd.org/ctp/explanatory-paper-beps-action-5-agreement-on-modified-nexus-approach-for-ip-regimes.pdf> [accessed 3 April 2020].

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[12] OECD, *Harmful Tax Practices – Peer Review Results on Preferential Regimes*, November 2018 <http://www.oecd.org/tax/beps/update-harmful-tax-practices-2017-progress-report-on-preferential-regimes.pdf> [accessed 5 December 2018].

[13] The survey was conducted by the Tax Justice Network in June 2020. The questionnaire sent out to the Ministries of Finance can be viewed here: http://cthi.taxjustice.net/cthi2021/TJNSurvey2020.pdf; and the preliminary assessment of the data assessed by the Tax Justice Network was sent in November 2020 to the Ministries of Finance and can be viewed here: http://cthi.taxjustice.net/cthi2021/TJNSurvey2020a.pdf.

[14] Corporate Tax Haven Index database: https://cthi.taxjustice.net/cthi21/data-downloads

[15] Nicholas Shaxson, 'Patent Boxes: Progress, or More Racing to the Bottom?', *Tax Justice Network*, 2014 <https://www.taxjustice.net/2014/11/17/patent-boxes-progress-racing-bottom/, https://www.taxjustice.net/2014/11/17/patent-boxes-progress-racing-bottom/> [accessed 3 April 2020].

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[21] Esmé Berkhout, *Tax Battles: The Dangerous Global Race to the Bottom on Corporate Tax* (December 2016), 19 <https://www.oxfam.org/sites/www.oxfam.org/files/bp-race-to-bottom-corporate-tax-121216-en.pdf>.

[22] ZEW Centre for European Economic Research, *Intellectual Property Box Regimes: Effective Tax Rates and Tax Policy Considerations*, November 2013, 38–39 <ftp://ftp.zew.de/pub/zew-docs/dp/dp13070.pdf>.

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