DIGITAL TAXATION AROUND THE WORLD

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INTRODUCTION

The digitalization of the economy has been a key focus of tax debates in recent years. Political debates have focused on the differences between taxing physical business operations and virtual operations. These debates have intersected with multiple layers of tax policy including consumption and corporate tax policies. Novel policies have also been developed including equalization levies and digital services taxes alongside more common use of gross-based withholding taxes targeted at digital services.

However, in some cases political expediency has outpaced consistent policy designs in line with sound principles of tax policy. As policymakers continue to evaluate the options to tax digital businesses it will be necessary to avoid creating new distortive tax policies driven by political agendas.

This paper reviews a multitude of digital tax policies around the world with a focus on OECD countries and points out the various flaws and benefits associated with the wide set of proposals.

What Are Digital Taxes?

The digital economy means many different things. The same is true for digital taxes. In this paper, digital taxes include policies that specifically target businesses which provide products or services through digital means using a special tax rate or tax base.[1]

These include policies that extend existing rules to ensure a neutral tax policy toward all businesses, such as when a country extends its Value-added Tax to include digital services. They also include special corporate tax rules designed to identify when a digital company has a permanent establishment even without a physical presence.

This paper reviews and analyzes digital taxes using the following categories:

1. Consumption taxes

Consumption taxes are Value-added Taxes (VAT) and other taxes on the sale of final goods or services. Countries have been expanding their consumption taxes to include digital goods and services.

2. Digital services taxes

Digital services taxes are gross revenue taxes with a tax base that includes revenues derived from a specific set of digital goods or services or based on the number of digital users within a country.

3. Tax preferences for digital businesses

Tax preferences are policies such as research and development (R&D) credits and patent boxes that reduce the tax burden on digital businesses. Though most preferences are available for any business, some specifically lend themselves to digital business models.

4. Digital permanent establishment rules

These policies include redefining what constitutes a permanent establishment to include digital companies that have no physical presence within a jurisdiction. These virtual or digital permanent establishments are usually defined using specific criteria including engagement with the local market.

1 Though many countries are implementing digital tax policies to improve tax administration, these changes to tax administration are not considered in this paper.

5. Gross-based withholding taxes on digital services

Gross-based withholding taxes are used by some countries instead of corporate taxes or consumption taxes to tax revenue of digital firms in connection to transactions within a jurisdiction. As gross income taxes, these policies do not substitute for income or consumption taxation.

Principles for Digital Taxation

Just as with other areas of tax policy, it is important to evaluate digital taxes using principles of sound tax policy: simplicity, transparency, neutrality, and stability.[2] Many digital tax policies fail to adhere to these principles by design.

Simplicity

Tax codes should be easy for taxpayers to comply with and for governments to administer and enforce. Digital tax policies fail the simplicity test when they leave important definitions unclear or add unnecessary compliance challenges for businesses that are trying to understand how much tax they owe. This arises in unclear standards for identifying in-scope business elements for virtual permanent establishments and digital services taxes. Though the broad designs of some digital taxes are conceptually simple, the complexity arises in the practical details of identifying relevant users and revenues, sometimes without clear guidance on how to do so. Governments will also face challenges evaluating whether a digital company has paid the correct amount of tax, especially for digital tax policies that rely on the location of users.

Transparency

Tax policies should clearly and plainly define what taxpayers must pay and when they must pay it. Disguising tax burdens in complex structures should be avoided. Digital taxes are sometimes designed as thinly veiled proxies for other taxes (either consumption or corporate taxes) rather than pure extensions of those existing policies. Additionally, digital services taxes and gross-based withholding taxes usually have low statutory rates, but because they apply to revenues rather than income the tax burden is effectively much higher than the rate implies.

Neutrality

The purpose of taxes is to raise needed revenue, not to favor or punish specific industries, activities, and products. Some digital taxes work to create neutrality between digital business models and other businesses. Extending consumption taxes to include digital products and services can result in neutral treatment of consumption. Expanding permanent establishment rules to create equivalent virtual permanent establishments in line with clear market connections can also improve neutrality. However, targeted digital services taxes and preferences for hi-tech firms create unequal tax treatment based on a business's industry or sector.

Stability

Taxpayers deserve consistency and predictability in the tax code. Governments should avoid enacting temporary tax laws, including tax holidays, amnesties, and retroactive changes. Many digital tax policies are designed to be temporary, with some timelines tied to international agreements on changes. Temporary tax policy creates uncertainty and challenges for both administration and compliance. Additionally, digital taxes often target specific business activities that are constantly evolving as the digitalization of the economy continues. Policies should not be designed to rely on definitions of

2 "Principles," Tax Foundation, accessed May 18, 2020, https://taxfoundation.org/principles/.

business activities that are subject to change in a dynamic economy.

The Digital Tax Debate

The growth of the digital economy in recent decades has been paired with policy debates about the taxes that digital companies pay and where they pay them. Many digital business models do not require physical presence in countries where they have sales, reaching customers through remote sales and service platforms.

Business models including social media companies, e-commerce marketplaces, cloud services, and web-based services platforms have all motivated targeted tax policies. In some cases, the policies are extensions of old rules to new players, while other policies are special taxes directed specifically at a business or platform.[3]

Consumption tax policies have shifted to account for the growth of products and services delivered through digital means, often without a business having a taxable presence within the country where the products are consumed. Additionally, policymakers have examined ways to change corporate taxes to capture activity of digital firms in countries.

Preferential tax regimes including shorter depreciation schedules for intangibles, targeted R&D tax relief, and patent boxes to a certain degree have caused digital firms to benefit from lower taxation. While the arguments behind these preferences are to spur innovation and attract investment in the newest technologies, the lighter tax burden resulting from the incentives has created a gap between the taxation of digital businesses relative to other sectors.[4]

In response to the difference in tax burdens, policymakers have sought new taxation tools targeted (in some cases) at the same businesses that are eligible for the targeted preferences.[5]

Because the major digital companies are multinational businesses, the digital tax discussion has led to the need for an international agreement on whether rules need to change. Without a multilateral agreement, individual country policies are likely to intersect or contradict one another, resulting in double taxation.[6]

Whither Value Creation?

Changing international rules on digital taxation will impact both where and how much tax the impacted digital businesses pay. International norms of corporate income taxation rely on the concept of value creation to decide where a business pays taxes. In the digital tax debate, a new angle to the value creation debate has arisen.

Proponents of digital taxation often argue that digital value creation should take account of the value contributed by users of social media platforms or e-commerce websites because the data provided by user habits are then translated into targeted advertisements or other customized services.[7]

3 In many cases policies become known by the business they are targeting because the policy and political rhetoric is directed at those businesses. For example, see Angelique Chrisafis, "France Hits Back at US over Tax on Digital Giants," *The Guardian*, July 11, 2019, https://www.theguardian.com/world/2019/jul/11/france-us-tax-big-digital-companies-donald-trump-amazon-facebook.

4 Christoph Spengel et al., "Steuerliche Standortattraktivität digitaler Geschäftsmodelle" ZEW, PwC, December 2018, https://www.pwc.de/de/steuern/pwc-studie-steuerlicher-digitalisierungsindex-2018.pdf.

5 Though the European Commission and many European politicians incorrectly interpret the cause of the tax gap between digital and traditional businesses, this gap was a key motivation for significant tax proposals for the EU. European Commission, "Fair Taxation of the Digital Economy," Taxation and Customs Union - European Commission, Mar. 21, 2018, https://ec.europa.eu/taxation_customs/business/company-tax/fair-taxation-digital-economy_en.

6 OECD, "Programme of Work to Develop a Consensus Solution to the Tax Challenges Arising from the Digitalisation of the Economy," 2019, https://www.oecd.org/tax/beps/programme-of-work-to-develop-a-consensus-solution-to-the-tax-challenges-arising-from-the-digitalisation-of-the-economy.pdf.

7 Gary D. Sprague, "A Critical Look at the European Commission Staff Impact Assessment Relating to the Proposed EU Directives on Taxation of the Digital Economy," Bloomberg BNA, July 13, 2018.

Attributing value to a user that accesses a free service is economically challenging because there is no price signal connected to the single user, and treating a network of users as a value-creating asset comes with similar measurement and valuation challenges. Although network effects are prevalent in some digital business models, such effects are also common throughout other parts of the economy and do not give rise to special tax rules.[8]

Policies that follow the logic of value created by users implies that the location of value creation for tax purposes would necessarily change. Just as the global population is not evenly distributed across countries, recent measures of value created by digital companies are concentrated in certain jurisdictions.

In 2015, a bit more than one-third of global internet users were in East and Southeast Asia, while 20 percent of value created in information industries originated there. Conversely, just 11 percent of internet users in 2015 resided in North America while 37 percent of value created in information industries originated there.

Multilateralism or Unilateralism?

Because of the mismatch in the current distribution of internet users and the location of digital production, changing tax rules to reflect where users are located would change where businesses owe and pay taxes. This highlights the political challenge of rewriting the rules in ways that impact which countries receive tax revenue from digital businesses. This is where the Organisation for Economic Co-operation and Development (OECD) has stepped in to manage negotiations among more than 130 countries.[9]

The conflicting policies that have arisen unilaterally—such as digital services taxes—require multilateral action to avoid a harmful tax and trade war at the end of 2020.[10] However, the solutions on the table at the OECD already violate sound principles of tax policy. As that work continues, this paper takes stock of existing digital tax measures and highlights the strengths and weaknesses of the various approaches.

TABLE 1.

The Geographic Mismatch Between Users and Digital Value Creation, 2015

Regions	Millions of Internet Users	Share	Information Industries (Trade in Value Added in Millions of U.S. Dollars)	Share
North America	343	11%	1,179,632	37%
Europe	508	16%	818,529	26%
East and Southeast Asia	1,080	34%	625,194	20%
South and Central America	206	7%	99,675	3%
Other Regions	997	32%	432,448	14%
World	3,133	100%	3,155,478	100%

Note: Information industries includes publishing, audiovisual, broadcasting activities, telecommunications, IT, and other information services (industry codes: D58T60, D61, D62T63).
North America includes Canada, Mexico, and the United States; Europe includes Iceland, Norway, Switzerland, Russia, the United Kingdom, and the 27 member countries of the European Union; East and Southeast Asia includes Japan, Korea, Brunei, China, Hong Kong, Indonesia, Cambodia, Malaysia, Philippines, Singapore, Thailand, Chinese Taipei, and Vietnam; Other Regions include Australia, Israel, New Zealand, Turkey, India, Morocco, Saudi Arabia, South Africa, and Tunisia; World includes the remainder from the rest of the world.
Source: "Number of Internet Users by Country," Our World in Data, accessed May 22, 2020, https://ourworldindata.org/grapher/number-of-internet-users-by-country; and OECD, "Trade in Value Added (TiVA): Principal Indicators," accessed May 22, 2020, https://stats.oecd.org/Index.aspx?DataSetCode=TIVA_2018_C1.

8 Itai Grinberg, "International Taxation in an Era of Digital Disruption: Analyzing the Current Debate," SSRN Scholarly Paper Rochester, NY: Social Science Research Network, Oct. 29, 2018, https://doi.org/10.2139/ssrn.3275737.

9 OECD, "Members of the OECD/G20 Inclusive Framework on BEPS," December 2019, https://www.oecd.org/tax/beps/inclusive-framework-on-beps-composition.pdf.

10 Daniel Bunn, "Chaos to the Left of Me. Chaos to the Right of Me," Tax Foundation, May 5, 2020, https://taxfoundation.org/pascal-saint-adams-oecd-digital-tax-negotiation-timeline/.

KEY RECOMMENDATIONS

The digital tax debate is far from over, and policymakers should seek to follow sound principles in developing, refining, and (in some cases) removing digital tax policies.

In two policy areas, consumption and corporate income taxes (and associated permanent establishment rules), countries are working to extend their existing rules to digital businesses. This presents an opportunity to move toward equal treatment of physical and digital business models, but also real challenges to align standards and implement policies on a multilateral basis. Policies in these areas should meet a high bar for alignment with other jurisdictions, minimize complexity and compliance costs, and avoid differential treatment of targeted business sectors.

In two other policy areas, digital services taxes and gross-based withholding taxes, countries are relying on novel, but distortive and discriminatory, approaches to taxing digital businesses. These policies have the potential to lead to an economically harmful tax and trade war and should be avoided.

Preferences for digitalized businesses should be focused on innovation rather than creating tax windfalls. Research & development tax credits can be improved to avoid compliance challenges that limit the benefits to businesses that can afford to comply. However, patent boxes create tax windfalls that only provide benefits following innovation and can be used in ways that distort investment and income patterns.

The following recommendations should be used to guide design and implementation of policies meant to address the challenges of taxing digital business models.

Consumption Taxes

The expansion of consumption taxes to include digital services and products can achieve a neutral broadening of the tax base. Because the purpose of consumption taxes is to tax where consumption occurs, broadening tax bases to digital consumption is simply an extension of that principle. However, differences in compliance costs, rates, or registration thresholds can create new distortions or unnecessarily increase compliance costs.

Countries should pursue:

- A broad consumption tax base that includes digital services and products and achieves equal treatment between digital and physical businesses.
- Alignment with general standards for collecting data on remote sales and digital transactions.
- Compliance requirements that are designed to minimize the costs associated with building new systems and identifying the location of a sale or customer.

Countries should avoid:

- Policies targeting digital cross-border transactions with rates that differ from those that would apply to similar, local commerce.

Digital Services Taxes

Digital services taxes should, by and large, be removed to avoid the distortions that taxes on revenues create. Absent repeal, countries should clarify ways that businesses can avoid being taxed twice on digital income.

Countries should pursue:

- Clear timelines for removal of digital services taxes to avoid a harmful tax and trade war.
- Policies that clearly allow for relief from double taxation.

Countries should avoid:

- Adopting digital services taxes to prevent the distortions that such revenue-based taxes create.

Tax Preferences for Digital Businesses

Preferences for digital businesses create an unlevel playing field and are not in line with the principle of neutral tax policy. Countries should consider how their preferences spur innovation or simply create tax windfalls.

Countries should pursue:

- Neutral treatment of investment in capital assets using either full expensing or a neutral cost recovery system to avoid distorting investment decisions due to better tax treatment of investment in intangible assets.

Countries should avoid:

- Research & development tax credits with high compliance costs which only benefit firms that can afford to comply.
- Using patent boxes to attract intangible asset income because the policies lead to tax windfalls and distort investment and income patterns.

Digital Permanent Establishment Rules

When developing policies to tax corporate income of digital businesses, some countries are adjusting their definitions of permanent establishments. However, this immediately creates the potential for double taxation.

While disagreements among countries on the allocation of taxable corporate income remain, the challenges associated with some countries attempting to tax digital business income without creating double taxation will continue. Though comprehensive reforms to international taxation would also address the digitalization of the economy, it is likely that countries will remain focused on reforms targeted at digital business models rather than taking up the challenge to broadly adopt fundamental reforms.[11]

Outside of a fundamental reform to the international tax system, countries should recognize that navigating definitions of digital permanent establishments comes with risks.

Countries should pursue:

- Multilateral negotiations when developing new approaches for taxing corporate income of nonresident businesses.

11 Fundamental changes include broad adoption of destination-based cash flow taxes or a fundamental global agreement on allocating taxing rights based on a set formula. Both would rearrange taxing rights across the globe more significantly than changes directed at digital business models, meaning that adoption remains unlikely given the political challenges of getting countries to agree to either.

Countries should avoid:

- Rules targeted at specific industries or sectors that would create unstable policies in the context of a rapidly changing and digitalizing economy.

- Unilateral pursuit of digital permanent establishment regulations that are likely to result in double taxation and harm efforts to coordinate policies.

Gross-based Withholding Taxes on Digital Services

Gross-based withholding taxes on digital services are a poor proxy for corporate income taxes and represent a shortcut to taxing digital companies without considering the challenges of identifying a virtual permanent establishment. Policymakers should avoid relying on gross-based withholding taxes to tax digital businesses that do not have a local presence.

Countries should avoid:

- Relying on policies that are neither efficient nor transparent as rough substitutes for either consumption or income taxes.

CONSUMPTION TAXES AND THE DIGITAL ECONOMY

Consumption tax changes to account for digital services and goods sold over the internet are often meant to level the playing field between international and domestic providers. Consumption tax policies can remove the bias in favor of the digital acquisition of goods and services relative to their local, physical acquisition. Nevertheless, when broadening the VAT base to include digital goods and services, equal treatment in tax rates and compliance costs needs to be ensured.

The increasing digitalization of the economy has changed the nature of retail distribution. Many digital companies engage in remote sales in countries where they don't have a physical presence. Consumption-based taxation of remote sales or services allows for taxing a transaction when a seller or service provider has no local physical presence.

The estimated[12] e-commerce sales value, which includes business-to-business (B2B) and business-to-consumer (B2C) sales, reached $25.6 trillion globally in 2018, the equivalent of 30 percent of the global gross domestic product (GDP).

The value of global B2C e-commerce in 2018 was $4.4 trillion, representing 17 percent of all e-commerce. Of this, cross-border B2C e-commerce sales amounted to $404 billion in 2018, representing an increase of 7 percent over 2017.

TABLE 2.

E-commerce sales reached $26 trillion in 2018

Country	Total e-commerce sales ($ billion)	Share of total e-commerce sales in GDP (%)	B2B e-commerce sales ($ billion)	Share of B2B e-commerce sales in total e-commerce (%)	B2C e-commerce sales ($ billion)
United States	8,640	42	7,542	87	1,098
Japan	3,280	66	3,117	95	163
China	2,304	17	943	41	1,361
Korea	1,364	84	1,263	93	102
United Kingdom	918	32	652	71	266
France	807	29	687	85	121
Germany	722	18	620	86	101
Italy	394	19	362	92	32
Australia	348	24	326	94	21
Spain	333	23	261	78	72
10 above countries	19,110	35	15,772	83	3,338
World	*25,648*	*30*	*21,258*		*4,390*

Note: Figures in italics are UNCTAD estimates.
Source: UNCTAD, based on national sources.

12 UNCTAD, "UNCTAD Estimates of Global E-Commerce 2018," Apr. 27, 2020, https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d15_en.pdf.

TABLE 3.

Cross-border B2C e-commerce sales reached $404 billion in 2018

Rank	Country	Cross-border B2C e-commerce sales ($ billion)	Share of cross-border B2C e-commerce sales in merchandise exports (%)	Share of crossborder B2C sales in total B2C e-commerce sales (%)
1	China	100	4.0	7.3
2	United States	85	5.1	7.8
3	United Kingdom	40	8.2	15.0
4	Hong Kong, China	35	6.2	94.3
5	Japan	21	2.9	13.1
6	Germany	15	1.0	14.9
7	France	12	2.0	10.6
8	Italy	4	0.8	13.9
9	Korea	3	0.5	3.2
10	Netherlands	1	0.2	4.4
	Ten above	317	3.2	9.6
	World	404	2.1	

Source: UNCTAD estimates based on national sources.

The United Nations Conference on Trade and Development (UNCTAD) estimates[13] that 1.45 billion people, or one-quarter of the world's population aged 15 and older, made purchases online in 2018. The interest in buying from foreign suppliers continued to expand. The share of cross-border online shoppers to all online shoppers rose from 17 percent (200 million) in 2016 to 23 percent (330 million) in 2018.

As cross-border e-commerce increases, governments want to charge tax based on the location of the purchaser of the product or service. Value-Added Tax (VAT) and Goods and Services Tax (GST) rules are being amended to ensure that foreign suppliers—which typically do not have a local physical presence—become liable for the collection and remittance of these taxes. Not having a physical presence in the country poses a great challenge to the seller as it needs to deal with disparate and changing requirements in each of the countries where it has sales. This presents unique bookkeeping requirements, as well as having to deal with paperwork or online forms in the language of that country. This can be both a time-consuming and resource-intensive process for businesses.

Additionally, since 1998, members of the World Trade Organization (WTO) have agreed not to impose customs duties on electronic transmissions. The moratorium of customs on digital trade, worth an estimated $354 million,[14] was due to expire in December 2019 but was extended, for now, until June 2020.[15] E-commerce could be at risk if countries decide not to renew the moratorium and instead opt to place tariffs on e-commerce alongside consumption and digital taxation measures.

This will impose a great risk not only on the digital economy but also on economies more broadly. The Organisation for Economic Co-operation and Development (OECD) found[16] that the relative fiscal benefits of lifting

13 UNCTAD, "UNCTAD Estimates of Global E-Commerce 2018."

14 Owing to different methods and assumptions the revenue implications of the Moratorium range between $280 million and $8.2 billion, underscoring wide disagreement on measurement. See Andrea Andrenelli and Javier López González, "Electronic transmissions and international trade – shedding new light on the moratorium debate," OECD, Nov. 13, 2019, http://dx.doi.org/10.1787/57b50a4b-en.

15 Emma Farge, "WTO ban on tariffs for digital trade extended until June 2020," *Reuters*, Dec. 10, 2019.

16 Andrenelli and López González, "Electronic transmissions and international trade – shedding new light on the moratorium debate."

the moratorium would be small and vastly outweighed by the disruption to gains in consumer welfare and export competitiveness.

Remote Sales

For VAT purposes, goods are referred to as "tangible property." The VAT treatment of supplies of goods depends on the location of the goods at the time of the transaction or as a result of the transaction. When a transaction involves goods being moved from one jurisdiction to another, the exported goods are generally free of VAT in the seller's jurisdiction, while the imports are subject to domestic VAT in the buyer's jurisdiction.

Remote Services

When services are considered, the VAT legislation in many countries tends to define a "service" as "anything that is not otherwise defined," or a "supply of services" as anything other than a "supply of goods." While this generally also includes intangibles, some jurisdictions regard intangibles as a separate category. To identify the place of taxation of service for VAT purposes, a wide range of proxies can be used, including the place of performance of the service, the location of the supplier, the location of the customer, or the location of the tangible property related to the service. The OECD's International VAT/GST Guidelines[17] recommend that the place of taxation is the location of the customer, especially for B2B supplies of services. In this way, it avoids the need for cross-border refunds of VAT to businesses that have acquired services abroad.

What OECD Countries Are Doing

Most of the countries in the OECD have implemented or considered implementing VAT or GST on a broad number of digital products and services. Nevertheless, some countries have excluded certain types of products or services like e-books, live broadcasts, online courses, etc., or decided to apply a lower tax rate for certain categories.

In general, B2B transactions apply a "reverse charge" mechanism, where the recipient, not the seller, deals with the tax. The problem arises when transactions are B2C. Many countries are requesting sellers with no physical presence in the buyer's country to register for VAT purposes if their annual sales in the country exceed a certain threshold. The threshold ranges from $5,681 in Norway to $100,604 in Switzerland, while countries like Mexico, South Korea, or Turkey have no minimum threshold.[18]

Also, in order to determine customer location, some countries are requiring businesses to collect information on billing address, IP address of the device used in the transaction, bank details, or country code of phone number. Finally, once registered, businesses will be expected to file VAT returns. In countries like Turkey or Mexico, providers are expected to report monthly on VAT collected.

17 OECD, "International VAT/GST Guidelines," Apr. 12, 2017, https://doi.org/10.1787/9789264271401-en.

18 See Table 3.

TABLE 4.

Cross-Border Consumption Taxes on Digital Goods and Services in OECD Countries

Jurisdiction	VAT/GST Rate	Description	Excluded Goods and Services	Threshold for VAT Registration	Current Status
Australia	10%	10% GST on sales of digital goods and services to consumers by nonresident e-commerce companies; since July 2018 low-value goods and services (under A$1,000) are also subject to GST		Turnover threshold of A$75,000 ($52,120)	Adopted, July 1, 2017; modified July 1, 2018
Canada	State-specific	Quebec and Saskatchewan have implemented a GST on nonresident suppliers of digital services		State-specific	State-specific
Chile	19%	A new law has been approved which will oblige VAT registrations for foreign sellers of streaming media/video, apps, e-books, gaming, e-learning, SaaS, and other internet-based services; the measure goes into effect on June 1, 2020			Adopted, June 1, 2020
Colombia	18%	1. Colombia is close to approving an 18% VAT on digital services from foreign suppliers 2. There would be no tax registration threshold, and B2B transactions would use the reverse-charge mechanism 3. The law was intended to go into effect in July 2018 but remains under review		No threshold	Not enforced yet
European Union	Country-specific	1. Digital businesses that sell to European consumers must apply, collect, and remit VAT against all customer invoices 2. Sales to VAT-registered businesses are exempt under a reverse-charge scheme, but business's VAT registration details are needed 3. There is no "EU" VAT rate. The rate to be charged is the rate of the country in which the customer resides 4. Digital businesses can register to MOSS (mini one-stop shop) to administer VAT returns and distribute collected VAT 5. The VAT exemption for small consignments of less than €22 ($24.60) will be abolished throughout the European Union, going into effect from January 1, 2021, based on a tax package related to cross-border e-commerce approved by the EU Council in December 2017 and November 2019		Country-specific	Adopted, January 1, 2003 for non-EU suppliers; January 1, 2015 for EU suppliers
Iceland	22.5%; 11% on e-books	Foreign companies which sell digital services to consumers from Iceland with sales exceeding the threshold of ISK 2,000,000 ($16,317) are required to register for VAT in Iceland; if these foreign companies sell to VAT-registered businesses, the registration is not required as the "reverse charge" mechanism applies		ISK 2,000,000 ($16,317) in any 12-month consecutive period and not a calendar year	Adopted, November 1, 2011

TABLE 4, *CONTINUED.*

Cross-Border Consumption Taxes on Digital Goods and Services in OECD Countries

Jurisdiction	VAT/GST Rate	Description	Excluded Goods and Services	Threshold for VAT Registration	Current Status
Israel	16%	Since early 2016, Israel has been working on the proposals to levy 16% VAT on supplies of digital services to Israeli consumers by foreign companies			Under review by Parliament
Japan	10%	1. The tax is charged on all B2C e-commerce transactions delivered by foreign businesses to Japanese consumers; Japanese businesses were already paying the tax 2. Foreign companies must register and designate a tax agent in Japan 3. B2B transactions apply a "reverse charge" mechanism, where the recipient deals with the tax, not the seller	E-books and courses	JPY 10 million ($91,736)	Adopted, October 1, 2015
Mexico	16%	1. Mexico has advised nonresident providers of electronic or digital services to Mexican consumers that they must register for VAT by July 1, 2020; this is one month after VAT will be introduced on foreign-sourced e-services on June 1, 2020 2. Nonresidents must appoint a local VAT representative as a correspondent with the Mexican authorities 3. Once VAT-registered, providers will be expected to report monthly on VAT collected, and file by the 17th of the month following the reporting month	Electronic books, newspapers, and magazines	No threshold	Adopted, June 1, 2020
New Zealand	15%	1. Digital sellers who provide their services to New Zealand-based consumers must also collect two non-conflicting pieces of evidence proving the customer location (for example billing address, IPN location, bank details, or country code of phone number) 2. No distinction is made between B2B and B2C customers		NZD $60,000 ($39,526)	Adopted, October 1, 2016
Norway	25%	1. For B2C transactions, businesses must register for Norwegian VAT if their annual sales in the country exceed the tax threshold of NOK 50,000 ($5,681) 2. Concerning B2B services, they operate a similar scheme to the EU, where VAT is accounted for by the purchaser under a reverse-charge mechanism		NOK 50,000 ($5,681)	Adopted, July 1, 2011
South Korea	10%	1. There is no registration threshold 2. All sellers need to register as a "Simplified Business Operator" and file VAT returns via Hometax 3. Returns need to be paid in Korean Won on a quarterly basis into a VAT bank account operated by Woori Bank (The Korean National Tax Service)	Live broadcasts of webcasts, access to recorded webcasts, email services, or discussion forums	No threshold	Adopted, July 1, 2015

TABLE 4, *CONTINUED.*

Cross-Border Consumption Taxes on Digital Goods and Services in OECD Countries

Jurisdiction	VAT/GST Rate	Description	Excluded Goods and Services	Threshold for VAT Registration	Current Status
Switzerland	7.7%; 2.5% on e-books and e-journals	1. Any person who carries on a business based abroad is liable to register for Swiss VAT if it provides taxable supplies in Switzerland and the value of those supplies (including non-Swiss revenue) exceeds CHF 100,000 ($100,604) 2. Taxable supplies include electronic supplies to Swiss customers who are not registered for Swiss VAT 3. Customers that are VAT-registered will self-assess VAT under the reverse charge mechanism and will not require the nonresident supplier to charge VAT 4. Customers that are not registered for VAT cannot reverse charge electronic services received from abroad and so the supplier will need to register in Switzerland (subject to the registration threshold) 5. After the registration, the supplier shall charge VAT to both registered and non-registered customers	1.The communication between the persons providing and receiving the service by wire, wireless, optical, or other electro-magnetic media 2. Educational services in interactive form 3. The lending for use of specifically designated equipment or equipment parts for the sole use of the lessee for the transmittal of data	CHF 100,000 ($100,604)	Adopted, January 1, 2010
Turkey	18%	1. If selling to a VAT-registered business in Turkey, the foreign business does not need to charge VAT; the buyer will handle all Turkish VAT through the reverse-charge mechanism 2. If selling to Turkish consumers, the foreign business must register for VAT in Turkey; there is no sales registration threshold 3. It is possible to register directly as a business owner, online through MERSIS, the commercial registry 4. It has to file VAT returns every month; filings are due on the 24th of the following month, and payments are due the 28th		No threshold	Adopted, January 1, 2018
United States	State-specific	1. Individual states across America have been adopting a new digital tax law called economic nexus 2. Nearly half the U.S. states are part of the Streamlined Sales and Use Tax Agreement (SSUTA) 3. These states share a simpler, more uniform tax system, which includes everything from product definitions to tax policy 4. In this case, retailers with annual sales exceeding $100,000 or with more than 200 separate transactions in the state must register, collect, and pay sales taxes there 5. Annual sales amounts include both B2B and B2C transactions; however, some states might design their own threshold amounts		$100,000 or more than 200 separate transactions in the state; some states might design their own threshold amounts	State-specific

Source: Annie Musgrove, "Digital Tax Around The World: What To Know About New Tax Rules," Inside Quaderno, June 13, 2016, https://quaderno.io/blog/digital-taxes-around-world-know-new-tax-rules/; "Digital Tax Rules in Operation across the Globe," Accessed May 20, 2020, https://blog.taxamo.com/insights/digital-tax-rules-in-operation; Office, Australian Taxation, "GST on Low Value Imported Goods," Accessed May 20, 2020, https://www.ato.gov.au/Business/International-tax-for-business/GST-on-low-value-imported-goods/?default; "Online Resource for Digital Services Value Added Tax," Accessed May 20, 2020, https://rsmus.com/what-we-do/services/tax/indirect-tax/global-indirect-tax/digital-services.html.

Revenue Impact

More than 50 countries worldwide have already implemented OECD recommendations[19] for the effective collection of VAT on cross-border online sales. Following OECD guidance on tax collection, the European Union VAT revenues collected from these measures rose from €3 billion ($3.4 billion) in 2015 to more than €4.5 billion ($5 billion) in 2018.[20] Australia reported AUD 348 million ($242 million), higher than initially budgeted,[21] of new revenues collected from the implementation of the OECD standards on online sales of services and digital products for the year 2017.

Nevertheless, the European Union's total VAT revenue in 2015 was €1,037 billion and €1,135 billion ($1,271 billion) in 2018.[22] Therefore, VAT revenue raised from these measures only accounted for 0.3 to 0.4 percent of the total VAT raised in the EU. Australia's GST revenue from online digital sales represented 0.5 percent of the total VAT collection.[23]

High Compliance Costs

More than 80 countries have already implemented requirements for companies to use e-invoicing for reporting taxes on business transactions. International companies face serious challenges to comply with disparate and changing requirements in each of the countries where they have sales. Even if only the software requirements were to be taken into consideration and the continuous updates needed, the operating costs rise significantly with each country where they have sales.

Complying with the reporting requirements can be incredibly expensive, and potentially prohibitive.[24]

Reporting systems may become an obstacle for smaller or newer firms to enter the market or operate across borders. This is bad both for competition and for consumers. Also, if there is a threshold for compliance, companies will try to shift their activities to avoid reaching that threshold.

Pitfalls

First, enforcing local rules on companies established abroad is difficult, especially if there is no cooperative agreement between the countries involved. The supplier might not register in the country of destination if its sales exceed the threshold to avoid additional compliance obligations, and the country of origin for the supplier has no incentives to ensure that the selling regime is applied correctly. Many tax authorities lack resources to deal with the volume of transactions to be verified.

Second, as seen in one of the previous sections, VAT collected from cross-border transactions represents less than 0.5 percent of the country's VAT total revenue. Countries should take into consideration doing an in-depth cost-benefit analysis before implementing consumption-based taxation of remote sales. Nevertheless, as e-commerce continues to grow so will VAT revenue from cross-border digital transactions. This will broaden the VAT tax base and could allow for lower rates in the long term to raise similar amounts of revenue.

19 OECD, "Addressing the Tax Challenges of the Digital Economy, Action 1 - 2015 Final Report," Oct. 5, 2015, https://doi.org/10.1787/9789264241046-en.

20 OECD, "OECD Secretary-General Tax Report to G20 Finance Ministers and Central Bank Governors," February 2020, http://www.oecd.org/ctp/oecd-secretary-general-tax-report-g20-finance-ministers-riyadh-saudi-arabia-february-2020.pdf.

21 Ibid.

22 Eurostat, "Main National Accounts Tax Aggregates," Feb. 24, 2020, https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_taxag&lang=en.

23 Australia's total VAT revenue in 2017 was AUD 65.7 billion ($46 billion) (OECD, Global Revenue Statistics Database).

24 The additional annual software costs for compliance could be in the millions. See Siri Bulusu and Hamza Ali Jan, "Global Value-Added Tax Crackdown Costing Companies Millions," Bloomberg Tax, Jan. 28, 2020.

Third, depending on the level of tax, the VAT treatment of certain digital goods could significantly increase prices for certain services. For example, Chileans will have to start paying significantly more for video streaming services starting in June 2020, when the government's 19 percent VAT begins to apply to such services.[25] Similarly, in Mexico, streaming customers will see the impact of the 16 percent VAT on streaming services.[26]

Best Practices

First, the neutrality of the tax system is important. Taxes should not interfere in taxpayers' decisions, making them prefer one form of trade over another: for example, cross-border electronic commerce over local conventional commerce. Therefore, countries that apply the same VAT rate for cross-border transactions and domestic ones, the same VAT for digital and non-digital products, offer a neutral tax system. Also, based on the same neutrality principle, similar VAT exemption/registration thresholds should apply to foreign and domestic sellers. A neutral VAT expansion to digital services removes the distortion of digital consumption being untaxed while similar goods or services acquired locally face tax.

Second, it's important to implement systems that are efficient and easy to deal with from an administrative and compliance standpoint. According to the Ottawa Taxation Framework Conditions,[27] a tax system should be efficient in the sense that "compliance costs for taxpayers and administrative costs for the tax authorities should be minimized as far as possible." Nevertheless, the amount of information that businesses have to collect in some countries regarding the transactions and their customers are burdensome and, in some cases, could violate privacy laws governing trade secrets.[28] In Italy, for example, businesses must now issue electronic receipts to all customers. Additionally, companies need to register for a "digital address" number with the tax authority and obtain the digital addresses of all their customers and suppliers.[29] Policymakers need to balance the compliance costs of information requirements against the need to verify compliance with VAT rules.

25 Tom Azzopardi, "Chile's New Digital Services Tax to Send Netflix Prices Up," Bloomberg Tax, May 12, 2020, https://news.bloombergtax.com/daily-tax-report-international/chiles-new-digital-services-tax-to-send-netflix-prices-up.

26 "Netflix to Bill Customers for Mexican VAT on Digital Services," Tax Notes, May 11, 2020. https://www.taxnotes.com/tax-notes-today-international/value-added-tax/netflix-bill-customers-mexican-vat-digital-services/2020/05/11/2chrb.

27 OECD, "Electronic Commerce: Taxation Framework Conditions," Oct. 8, 1998, https://www.oecd.org/ctp/consumption/1923256.pdf.

28 Tech companies criticized Mexico's digital tax as portions of the plan, such as reporting confidential information about digital transactions, could violate privacy laws governing trade secrets. See Suman Naishadham, "Mexico Forges Ahead on Plan to Tax Digital Services," Bloomberg Tax, Oct. 18, 2019.

29 Siri Bulusu and Hamza Ali, "Global Value-Added Tax Crackdown Costing Companies Millions," Bloomberg Tax, Jan. 28, 2020.

DIGITAL SERVICES TAXES

As outlined previously, there has been growing concern about the existing international tax system not properly capturing the digitalization of the economy. Under current international tax rules, multinationals generally pay corporate income tax where production occurs rather than where consumers or, specifically for the digital sector, users are located. However, some argue that through the digital economy, businesses (implicitly) derive income from users abroad but, without a physical presence, are not subject to corporate income tax in that foreign country.

To address those concerns about a misalignment between value creation and corporate taxation, the OECD has been hosting negotiations with over 130 countries that aim to adapt the international tax system. As explained in detail in the section below on corporate taxation and the digital economy" the current proposal would realign international taxing rights with new measures of value creation, requiring multinational businesses to pay some of their corporate income taxes where their consumers or users are located.

However, despite these ongoing multilateral negotiations, several countries have decided to unilaterally move ahead with a different form of digital taxation—namely, digital services taxes (DSTs)—as a proxy for corporate taxation. Instead of adapting the current international tax rules to better capture the digital economy, countries impose DSTs to tax large businesses based on their revenues derived from certain digital services provided to domestic users or consumers.

Digital Services Taxes around the World

Over the last few years, countries around the world have announced, proposed, and in some cases already implemented DSTs. First proposed as an EU-wide tax, DSTs are now unilateral measures found on every continent.

EU Proposal for a DST

In March 2018, the European Commission put forth a proposal to establish rules that allow for corporate taxation of businesses with a significant digital presence.[30] While this is the long-term objective of the proposal, it also proposes a DST that would be implemented as an interim measure until the significant digital presence rules are in place.[31]

The EU's DST would be a 3 percent tax on revenues from digital advertising, online marketplaces, and sales of user data generated in the EU. Businesses are in scope if their annual global revenues exceed €750 million (US $840 million[32]) and EU revenues exceed €50 million ($56 million). The tax is estimated to generate €5 billion ($5.6 billion) annually for EU member states,[33] translating to 0.08 percent of total tax revenues collected in the EU in 2018.[34]

The European Commission was unable to find the necessary unanimous support for the proposal to be adopted. However, it has indicated that, in case the OECD does not reach an agreement, it will resume its work on taxing the digital economy.

30 See the section on corporate taxation and the digital economy for more on the European Commission's proposal on a significant digital presence.

31 European Commission, "Proposal for a Council Directive on the Common System of a Digital Services Tax on Revenues Resulting from the Provision of Certain Digital Services," Mar. 21, 2018, https://ec.europa.eu/taxation_customs/sites/taxation/files/proposal_common_system_digital_services_tax_21032018_en.pdf.

32 The 2019 average yearly exchange rate was used (0.893). See Internal Revenue Service, "Yearly Average Currency Exchange Rates," accessed Apr. 27, 2020, https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates.

33 European Commission, "Digital Taxation: Commission Proposes New Measures to Ensure That All Companies Pay Fair Tax in the EU," accessed Apr. 27, 2020, https://ec.europa.eu/commission/presscorner/detail/en/IP_18_2041.

34 Total tax revenue data covers EU-28 and is based on Eurostat data. See Eurostat, "Main National Accounts Tax Aggregates," Feb. 24, 2020, https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gov_10a_taxag&lang=en.

Unilateral DSTs[35]

Since the European Commission was unable to reach an agreement on an EU-wide DST, several European countries have decided to move forward with DSTs unilaterally. In addition, countries outside of Europe have also moved towards DSTs. While each country's DST is unique in its design, most have adopted several elements from the EU's DST proposal. The following four countries—France, United Kingdom, Austria, and India—are examples of countries that have implemented DSTs with various design elements.

France

France introduced its DST in July 2019, retroactive to January 2019. The DST imposes a 3 percent levy on gross revenues generated from digital interface services, targeted online advertising, and the sale of data collected about users for advertising purposes.[36] Companies will be in scope if they have both more than €750 million ($840 million) in worldwide revenues and €25 million ($28 million) in French revenues. The tax is estimated to generate €500 million ($560 million) annually—1.01 percent of France's corporate income taxes and 0.05 percent of total tax revenue collected in 2018.[37]

Following France's adoption of the DST, the United States Trade Representative opened a Section 301 investigation into whether the French DST was a discriminatory tax on U.S. businesses. It found the tax to be discriminatory and proposed retaliatory tariffs.[38] To prevent such tariffs, France agreed to postpone the collection of its DST in 2020 (although tax liability accrues in 2020), as the OECD hopes to reach an agreement by the end of 2020.[39]

United Kingdom

The UK's DST became effective in April 2020,[40] with the first payment due in April 2021.[41] The tax is levied at a rate of 2 percent on revenues from social media platforms, internet search engines, and online marketplaces. Unlike other proposals, the tax includes an exemption for the first £25 million ($31.9 million[42]) of taxable revenues and provides an alternative DST calculation under a "safe harbor" for businesses with low profit margins on in-scope activities. The revenue thresholds are set at £500 million ($638 million) globally and £25 million ($31.9 million) domestically.[43]

35 A summary of all announced, proposed, and implemented DSTs around the world can be found in Table 1 of the Appendix.

36 Ministère de l'Économie et des Finances de la République française, "Projet de Loi Relatif à La Taxation Des Grandes Entreprises Du Numérique," Mar. 6, 2019, https://src.bna.com/F9D.

37 Total and corporate tax revenue data is based on OECD statistics. See OECD, "Global Revenue Statistics Database," accessed Apr. 27, 2020, https://stats.oecd.org/Index.aspx?DataSetCode=RS_GBL.

38 Office of the United States Trade Representative, "Report on France's Digital Services Tax Prepared in the Investigation under Section 301 of the Trade Act of 1974," Dec. 2, 2019, https://ustr.gov/sites/default/files/Report_On_France%27s_Digital_Services_Tax.pdf.

39 Chris Giles, "US and France Agree Deal on Digital Tax," *Financial Times*, Jan. 23, 2020, https://www.ft.com/content/76cf4008-3db1-11ea-b232-000f4477fbca.

40 The U.K. Finance Bill 2020—which includes the digital tax measure—is at the committee stage in the House of Commons as of April 2020. See UK Parliament, "Finance Bill 2019-21," accessed Apr. 29, 2020, https://services.parliament.uk/Bills/2019-21/finance.html.

41 HM Treasury, "Budget 2020," Mar. 12, 2020, https://www.gov.uk/government/publications/budget-2020-documents/budget-2020.

42 The 2019 average yearly exchange rate was used (0.784). See Internal Revenue Service, "Yearly Average Currency Exchange Rates."

43 HM Revenue & Customs, "Introduction of the New Digital Services Tax: Draft Legislation," 2019, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/816361/Digital_services_tax.pdf.

TABLE 5.

Revenue Estimate of the UK's DST (Million £)

FY	Revenue
2019 to 2020	+5
2020 to 2021	+275
2021 to 2022	+370
2022 to 2023	+400
2023 to 2024	+440

Note: The UK fiscal year ends on April 5 each year.
Source: HM Revenue & Customs, "Introduction of the New Digital Services Tax," July 11, 2019, https://www.gov.uk/government/publications/introduction-of-the-new-digital-services-tax/introduction-of-the-new-digital-services-tax.

The tax is expected to raise £275 million ($358 million) in fiscal year 2020-21 and £440 million ($572 million) in fiscal year 2023-24.[44] The fiscal year 2023-24 revenue estimate constitutes 0.06 percent of total tax revenue and 0.72 percent of corporate tax revenue in 2018.

Austria

Effective January 2020, Austria implemented a DST. The new digital advertising tax applies at a 5 percent rate on revenue from online advertising provided by businesses that have worldwide revenues exceeding €750 million ($840 million) and Austrian revenues exceeding €25 million ($28 million).[45] As Austria's DST is only levied on online advertising, its scope is narrower than, for example, France's or UK's DST.

Traditional advertisement is subject to a special advertisement tax in Austria.[46] One can argue that the DST thus levels the playing field between traditional and digital advertisement. However, the DST's global and domestic revenue thresholds effectively exclude most domestic providers of digital advertisement, creating new distortions.

The DST is expected to raise €25 million ($28 million) in 2020, climbing to €34 million ($38 million) in 2023. The revenue raised in 2023 compares to 0.33 percent of corporate tax revenues and 0.02 percent of total tax revenues raised in 2018.

TABLE 6.

Revenue Estimate of Austria's DST (Million €)

FY	Revenue
2020	+25
2021	+28
2022	+31
2023	+34

Source: Bundesministerium für Finanzen, "Vorblatt und Wirkungsorientierte Folgenabschätzung," Apr. 4, 2019, https://www.parlament.gv.at/PAKT/VHG/XXVI/ME/ME_00132/fname_746835.pdf.

India

Effective from June 2016, India introduced an "equalisation levy," a 6 percent tax on gross revenues from online advertising services provided by nonresident businesses.[47] As of April 2020, the equalisation levy expanded to apply a 2 percent tax on revenues of e-commerce operators[48] that are nonresident businesses without a permanent establishment in India and are not subject to the already existing 6 percent equalisation levy. The annual revenue threshold is set at Rs. 2 crores ($284,115[49]).[50]

44 HM Revenue & Customs, "Introduction of the New Digital Services Tax," July 11, 2019, https://www.gov.uk/government/publications/introduction-of-the-new-digital-services-tax/introduction-of-the-new-digital-services-tax.

45 Bundesministerium für Digitalisierung und Wirtschaftsstandort, "Digitalsteuergesetz 2020 (DiStG 2020)" (2019), https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20010780.

46 Bundesministerium für Finanzen, "Werbeabgabe," accessed Apr. 28, 2020, https://www.bmf.gv.at/themen/steuern/steuern-von-a-bis-z/werbeabgabe.html#heading_Bemessungsgrundlage.

47 Income Tax Department - Government of India, "Equalisation Levy," accessed Apr. 29, 2020, https://incometaxindia.gov.in/Pages/acts/equalisation-levy.aspx.

48 An "e-commerce operator" is defined as a nonresident that owns, operates, or manages a digital or electronic facility or platform for online sale of goods or the online provision of services.

49 The 2019 average yearly exchange rate used was 70.394. See Internal Revenue Service, "Yearly Average Currency Exchange Rates."

50 "The Finance Bill, 2020," Pub. L. No. 26-C of 2020, http://164.100.47.4/BillsTexts/LSBillTexts/PassedLoksabha/26-C_2020_LS_Eng.pdf.

The change essentially expands the equalisation levy from online advertising to nearly all e-commerce done in India by businesses that do not have a taxable presence in India, making it a much broader tax than the European DSTs described above and explicitly exempting domestic businesses.

Overview of DSTs in Europe

About half of all European OECD countries have either announced, proposed, or implemented a DST. As of May 2020, Austria, France, Hungary, Italy, Turkey, and the United Kingdom have implemented a DST. The Czech Republic, Poland, Slovakia, and Spain have published proposals to enact a DST, and Latvia, Norway, and Slovenia have either officially announced or shown intentions to implement such a tax.

Overview of DSTs outside of Europe

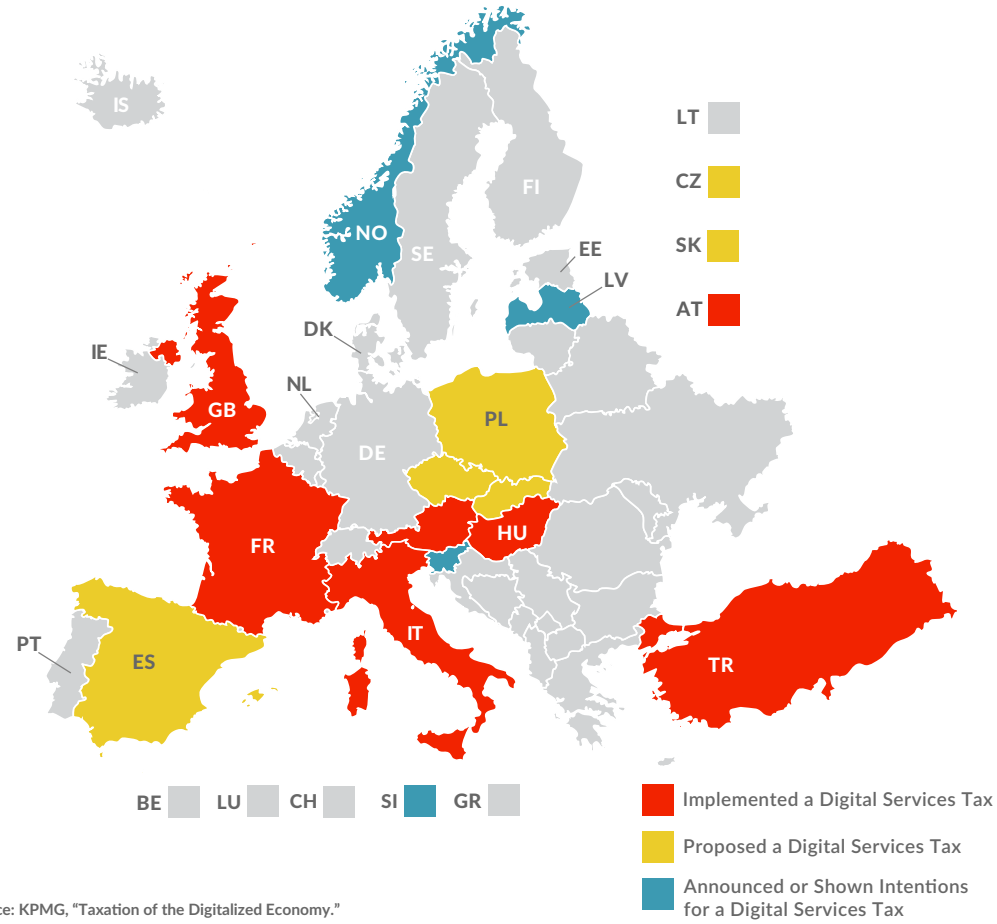
Although most prevalent in Europe, DSTs have also been announced, proposed, or implemented in other regions of the world. India, Indonesia, and Tunisia have all implemented DSTs. Brazil and Kenya have proposed a DST, and Canada, Israel, and New Zealand have shown intentions to propose such a tax. The Chilean government ultimately rejected a 2018 proposal to introduce a DST.

Economic Incidence of DSTs

The economic incidence of a DST is likely to be closer in nature to an excise tax than to a corporate income tax.[51] While economic literature shows that the corporate income tax is largely borne by shareholders—with shareholder income disproportionately

What is the Current State of Digital Services Taxes in Europe?

Announced, Proposed, and Implemented Digital Services Taxes in Europe, as of May 2020



Source: KPMG, "Taxation of the Digitalized Economy."

51 Sean Lowry, "Digital Services Taxes (DSTs): Policy and Economic Analysis," Congressional Research Service, Feb. 25, 2019, https://fas.org/sgp/crs/misc/R45532.pdf.

concentrated in higher-income households—excise taxes are usually borne by consumers through higher prices. As lower-income individuals consume a larger share of their income, excise taxes tend to be rather regressive.

The exact equity effects of a DST, however, depend on the ability to pass the tax on to consumers, the type of goods and services sold, and consumers' responsiveness to the tax.[52] Anecdotal evidence suggests that some companies targeted by DSTs have passed the tax on to customers or consumers. For instance, Google has announced that it will add Austria's 5 percent DST entirely to the invoices of customers who have purchased Google advertisements that are clicked on or seen by users in Austria, regardless of where the advertiser is located.[53] Similarly, Amazon has decided to pass on France's DST by increasing its commission rate on businesses selling on Amazon's French marketplace by 3 percent.[54]

DSTs and their Design Issues

Unlike corporate income taxes, DSTs are levied on revenues rather than profits, not taking into account profitability. Seemingly low tax rates of such turnover taxes can translate into high-tax burdens.[55] For instance, a business with $100 in revenue and $85 in costs has a profit margin of $15—or 15 percent. A DST rate of 3 percent means the business is required to pay $3 in revenue tax (3 percent of $100 revenue), corresponding to a profit tax of 20 percent ($3 tax divided by $15 profit). This implies that the corresponding effective profit tax rates vary by profitability, disproportionately harming businesses with lower profit margins.

Turnover taxes can apply multiple times over the supply chain as—unlike in the case of Value-Added Taxes (VAT)—there is no built-in credit system for already paid taxes. Such tax pyramiding can distort economic activity and magnify effective tax rates.[56] Although such an effect is less likely in the case of DSTs as they are only levied at certain stages in the supply chain as opposed to all stages, it is a source of inefficiency inherent to turnover taxes. Unlike VATs, turnover taxes also do not exempt business inputs. DSTs may tax business inputs such as advertising and cloud computing.

In addition, DSTs are discriminatory in terms of firm size. The domestic and worldwide revenue thresholds result in the tax being solely applied to large multinationals. While this can ease the overall administrative burden, it also provides a relative advantage for businesses below the threshold and creates an incentive for businesses operating near the threshold to alter their behavior. Similarly, digital businesses are at a relative disadvantage to non-digital businesses operating in a similar field—e.g., online and traditional advertising.

The introduction of a DST also creates new administrative and compliance costs. Governments have to provide detailed guidelines of how the tax is calculated and remitted, and administer and enforce it. At the same time, businesses are required to identify the location of users and determine its taxable base.

52 Ibid.

53 The Local, "Google to Raise Ad Fees to Cover Austrian Tax: Source," Feb. 1, 2020, https://www.thelocal.at/20200201/google-to-raise-ad-fees-to-cover-austrian-tax-source.

54 Le Figaro, "Amazon France répercutera la «taxe Gafa» sur ses tarifs aux entreprises," Aug. 1, 2019, https://www.lefigaro.fr/flash-eco/amazon-france-repercutera-la-taxe-gafa-sur-ses-tarifs-aux-entreprises-20190801.

55 European Commission, "Impact Assessment Accompanying the Document Proposal for a Council Directive Laying down Rules Relating to the Corporate Taxation of a Significant Digital Presence and Proposal for a Council Directive on the Common System of a Digital Services Tax on Revenues Resulting from the Provision of Certain Digital Services," Mar. 21, 2018, https://ec.europa.eu/taxation_customs/sites/taxation/files/fair_taxation_digital_economy_ia_21032018.pdf.

56 Garrett Watson, "Resisting the Allure of Gross Receipts Taxes: An Assessment of Their Costs and Consequences," Tax Foundation, Feb. 6, 2019, https://taxfoundation.org/gross-receipts-tax/.

Due to the issues outlined above and to enhance the functioning of the European cross-border market, Europe replaced its turnover taxes with VATs in the 1960s.[57] The emergence of DSTs reintroduces the negative economic consequences of turnover taxes—a step back in terms of sound tax policy.

57 Garrett Watson and Daniel Bunn, "Learning from Europe and America's Gross Receipts Tax Experiences," Tax Foundation, Feb. 12, 2019, https://taxfoundation.org/europe-america-gross-receipts-taxes/.

TAX PREFERENCES FOR DIGITAL AND HI-TECH INCOME

Innovation leads to technological progress and is the main driver of long-term economic growth. To foster such innovation, countries around the world have implemented various financial support instruments that aim to incentivize private research and development (R&D) investments. Many governments provide direct grants for R&D. Tax preferences for innovation-related activities have become more common over the last years.[58]

Countries compete to attract and hold intellectual property assets—such as patents, copyrights, and trademarks—as they are associated with positive economic effects and potentially provide new tax revenue streams. However, such intangible assets are highly mobile, making it relatively easy to shift them from one country to another.[59] One way through which countries attempt to attract and hold such assets is through preferential tax treatments.

Incentives to spur innovation and competition to attract and hold intangible assets have led to a broad application of tax preferences for various innovation-related activities. Digital business models tend to rely more heavily on such activities and can thus disproportionately take advantage of associated tax preferences, indirectly providing them with a tax advantage over less R&D-heavy business models.

Innovation-Related Tax Preferences in the OECD

Preferential tax treatments for innovation-related activities generally take the form of *expenditure-based* tax incentives—e.g., shorter depreciation schedules for intangible assets or R&D tax credits—or *income-based* tax incentives—e.g., patent boxes. Each of these incentives lowers businesses' effective tax rates on income derived from activities that qualify for the preferential tax treatment.

Immediate Cost Deductions

Software development and the development of other intangible assets tend to play a more important role for digital companies than for more traditional business models. Costs related to such activities—employees' wages and other current development costs—are immediately deductible in most countries' tax codes, lowering a business's taxable income and thus its effective tax rate.[60]

Depreciation Schedules for Intangible Assets

Traditional corporate income tax systems require businesses to depreciate their capital investments over a certain number of years, with the number of years depending on the asset category. By the end of the depreciation period, the business would have deducted the initial dollar cost of the asset. However, in most cases, depreciation schedules do not consider the time value of money (a normal return plus inflation). As a result, amounts written off in later years are less valuable in real terms.

The costs of a capital investment that can be written off in real terms can be expressed as a percentage of the net present value of capital allowances that businesses can deduct over the life of an asset. A 100 percent capital cost recovery rate represents a business's ability to deduct the full cost of the investment (including a normal return plus inflation), increasing the after-tax rate of return and thus making the

58 Silvia Appelt, "OECD Time-Series Estimates of Government Tax Relief for Business R&D" OECD, Dec. 18, 2019, http://www.oecd.org/sti/rd-tax-stats-tax-expenditures.pdf.

59 Silvia Appelt et al., "R&D Tax Incentives: Evidence on Design, Incidence and Impacts" OECD, Sept. 10, 2016, https://doi.org/10.1787/5jlr8fldqk7j-en.

60 Christoph Spengel et al., "Steuerliche Standortattraktivität digitaler Geschäftsmodelle" ZEW, PwC, December 2018, https://www.pwc.de/de/steuern/pwc-studie-steuerlicher-digitalisierungsindex-2018.pdf.

investment more profitable.[61]

For digital businesses, software, hardware, and intangible assets are the most important types of capital investments.[62] A study by Spengel et al. shows that around two-thirds of the 33 countries covered[63] provide shorter depreciation schedules for software and hardware than for other movable capital assets,[64] translating into higher capital allowances in real terms and thus a capital cost recovery rate closer to 100 percent. In other words, the shorter depreciation schedules for software and hardware lower the effective tax rates on such investments.

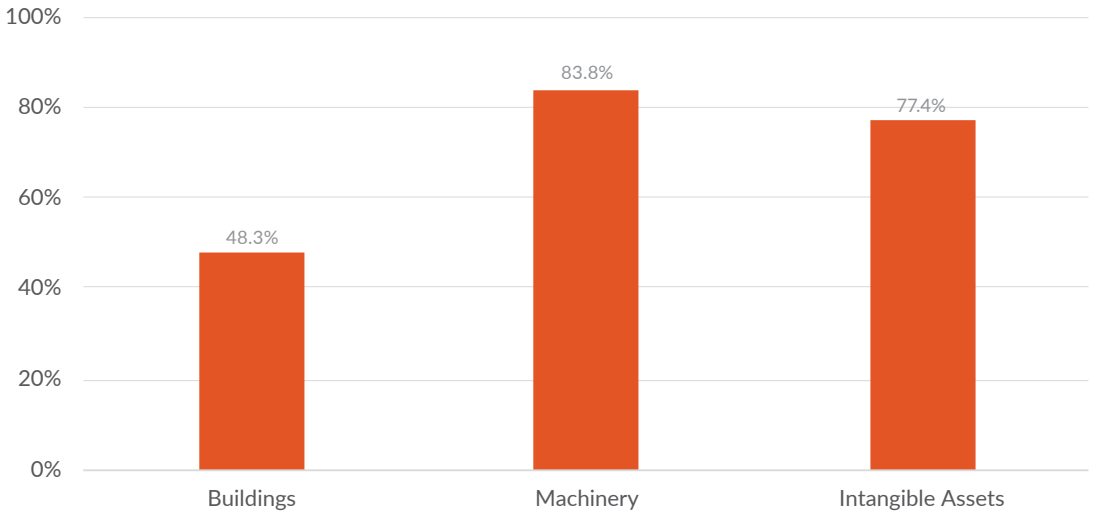
Intangible assets tend to also have relatively short depreciation schedules. Businesses in the OECD are able to recover on average 77.4 percent of their investments in intangible assets in real terms, while the recovery rate is only 48.3 percent for buildings (83.8 percent for machinery).

Targeted Expenditure-Based R&D Tax Incentives

To attract and foster R&D investments, many countries not only provide direct government grants for R&D but also increasingly make use of targeted tax incentives—such as R&D tax credits and enhanced allowances. Such expenditure-based tax incentives increase the amount of costs that can be deducted from the tax base, decreasing the effective tax rate and thus incentivizing such R&D investments.

Digital Businesses Benefit from Higher Capital Allowances for Intangible Assets

OECD Average Net Present Value of Capital Allowances by Asset Type, 2019



Note: To calculate the net present values, a fixed discount rate of 7.5 percent is assumed (fixed inflation rate of 2 percent and fixed real discount rate of 5.5 percent).
Source: Spengel, et al., "Effective Tax Levels Using the Devereux/Griffith Methodology;" EY, "Worldwide Capital and Fixed Assets Guide;" EY, "Worldwide Corporate Tax Guide;" and PwC, "Worldwide Tax Summaries." Calculations as in Tax Foundation, "Capital Cost Recovery across the OECD."

61 Elke Asen, "Capital Cost Recovery across the OECD," Tax Foundation, Apr. 8, 2020, https://taxfoundation.org/publications/capital-cost-recovery-across-the-oecd/.

62 Christoph Spengel et al., "Steuerliche Standortattraktivität digitaler Geschäftsmodelle."

63 The study covers all 27 EU countries, plus Canada, Japan, Norway, Switzerland, the United Kingdom, and the United States.

64 Christoph Spengel et al., "Steuerliche Standortattraktivität digitaler Geschäftsmodelle."

Estonia, Finland, Luxembourg, and Switzerland are the only OECD countries that did not report any R&D-related tax expenditures in 2017 (most recent data available).[65] Germany introduced its first R&D tax credit in 2020.[66]

In the OECD, R&D tax incentives increased from 36 percent of total public R&D support in 2006 to 50 percent by 2017. In 2017, total R&D tax relief in the OECD amounted to USD $45 billion,[67] or 0.08 percent of OECD countries' GDP.

Among OECD countries, Belgium, France, and the United Kingdom had the highest shares of expenditure-based R&D tax incentives in 2017, at 0.30 percent, 0.28 percent, and 0.21 percent of GDP—or 7.32 percent, 12.11 percent, and 7.51 percent of corporate tax revenues. Of the OECD countries that provided R&D tax relief in 2017, it was lowest in Mexico (0.003 percent of GDP or 0.07 percent of corporate revenues), Latvia (0.003 percent of GDP or 0.16 percent of corporate revenues), and Poland (0.005 percent of GDP or 0.27 percent of corporate revenues).[68]

Patent Boxes[69]

Patent boxes—also referred to as intellectual property, or IP, regimes—provide tax rates on income derived from IP that are below statutory corporate tax rates. This means that patent boxes are an *income-based* rather than an *expenditure-based* tax incentive, limiting its benefits to successful R&D projects that have produced IP rights rather than decreasing the ex ante risks of R&D through cost reductions.

Eligible types of IP are most commonly patents and software copyrights. Depending on the patent box, income derived from IP can include royalties, licensing fees, gains on the sale of IP, sales of goods and services incorporating IP, and patent infringement damage awards.[70]

Patent boxes are particularly prevalent in Europe. Currently, 14 of the 27 EU member states have a patent box regime in place: Belgium, Cyprus, France, Hungary, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovakia, and Spain (federal, Basque Country, and Navarre). Several non-EU countries—such as Switzerland and the United Kingdom—have also implemented patent box regimes. The tax rates on qualifying income range from 0 percent in Hungary and San Marino to 13.95 percent in Italy.

Several countries outside of Europe—including China, India, Israel, and Korea—have also implemented patent boxes.

Patent boxes came under scrutiny during the OECD/G20 Base Erosion and Profit Shifting (BEPS) project as many existing regimes did not require local R&D investment, making it relatively easy to shift IP rights without the underlying R&D activities and thus making them a tool for tax avoidance. In 2015, OECD countries agreed on a so-called Modified Nexus Approach for patent boxes as part of Action 5 of the BEPS project.[71]

This Modified Nexus Approach limits the scope of qualifying IP assets and requires a link among R&D expenditures, IP assets, and IP income. In other words, a business can only

65 OECD, "R&D Tax Incentive Indicators: R&D Tax Expenditure and Direct Government Funding of BERD," Apr. 17, 2020, https://stats.oecd.org/Index.aspx?DataSetCode=RDTAX.

66 Bundesministerium der Finanzen, "Gesetz zur steuerlichen Förderung von Forschung und Entwicklung," Dec. 12, 2020, https://www.bundesfinanzministerium.de/Content/DE/Gesetzestexte/Gesetze_Gesetzesvorhaben/Abteilungen/Abteilung_IV/19_Legislaturperiode/Gesetze_Verordnungen/2019-12-20-Forschungszulagengesetz-FZulG/0-Gesetz.html.

67 Silvia Appelt, "OECD Time-Series Estimates of Government Tax Relief for Business R&D."

68 OECD, "R&D Tax Incentive Indicators: R&D Tax Expenditure and Direct Government Funding of BERD;" and OECD, "Global Revenue Statistics Database," accessed Apr. 27, 2020, https://stats.oecd.org/Index.aspx?DataSetCode=RS_GBL.

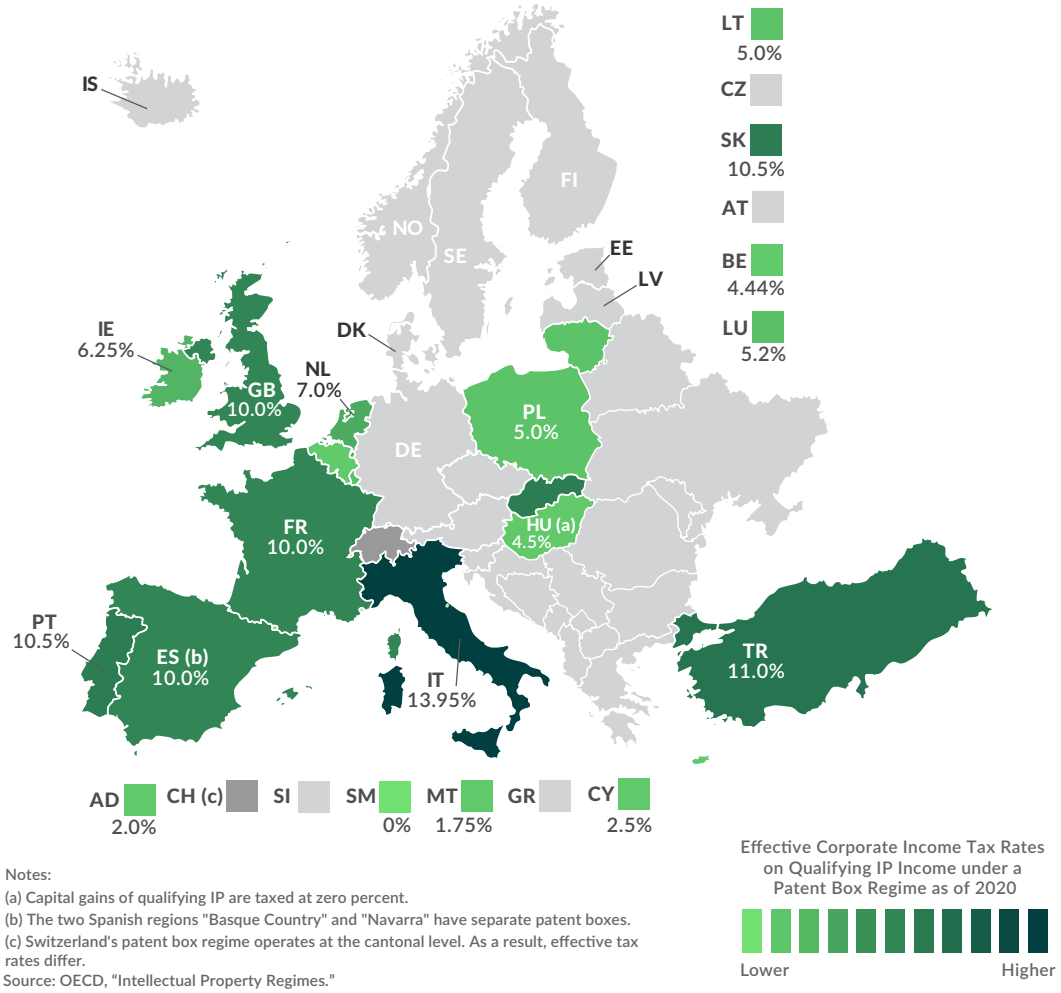
69 See Table 2 in the Appendix for an overview of all European and OECD countries' patent box regimes.

70 Gary Guenther, "Patent Boxes: A Primer" Congressional Research Service, May 1, 2017, https://fas.org/sgp/crs/misc/R44829.pdf.

71 OECD, "Action 5: Agreement on Modified Nexus Approach for IP Regimes," 2015, https://www.oecd.org/ctp/beps-action-5-agreement-on-modified-nexus-approach-for-ip-regimes.pdf.

How Do Patent Box Regimes Compare across Europe?

Effective Corporate Income Tax Rates on Qualifying IP Income under a Patent Box Regime as of 2020



Notes:
(a) Capital gains of qualifying IP are taxed at zero percent.
(b) The two Spanish regions "Basque Country" and "Navarra" have separate patent boxes.
(c) Switzerland's patent box regime operates at the cantonal level. As a result, effective tax rates differ.
Source: OECD, "Intellectual Property Regimes."

take advantage of the reduced tax rate if it undertook the R&D underlying the IP-derived income. Marketing-related IP assets such as trademarks do not qualify for tax benefits under the nexus standard, however. To be in line with this approach, previously noncompliant countries have either abolished or amended their patent box regimes within the last few years.[72] Grandfathering rights were put in place.

A 2014 study by Griffith, Miller, and O'Connell models the location and revenue impact of recently introduced patent boxes. Their findings suggest that patent boxes are likely to attract new income derived from patents, implying that businesses reduce their corporate tax liability by shifting IP-related income. Tax revenues, however, are likely to decline substantially, as the negative revenue effects of the lower statutory rate on patent income can be only partially offset by revenues from newly attracted patent income.[73, 74]

72 OECD, "Harmful Tax Practices - 2018 Progress Report on Preferential Regimes," 2019, https://read.oecd-ilibrary.org/taxation/harmful-tax-practices-2018-progress-report-on-preferential-regimes_9789264311480-en#page19.

73 Rachel Griffith, Helen Miller, and Martin O'Connell, "Ownership of Intellectual Property and Corporate Taxation," *Journal of Public Economics* 112 (April 2014): 12–23, https://www.sciencedirect.com/science/article/pii/S0047272714000103.

74 While there is no multi-country database showing the tax revenue costs of patent boxes as there is for expenditure-based R&D tax incentives, the UK provides cost estimates for its patent box (10 percent tax rate on patent income compared to the statutory rate of 19 percent). The estimate shows the IP regime cost £1.16 billion ($1.48 billion) in tax year 2019/20, or 1.89 percent of total corporate tax revenues. See HM Revenue & Customs, "Estimated Costs of Tax Reliefs," Oct. 10, 2019, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/837766/191009_Bulletin_FINAL.pdf.

U.S. Regimes: Foreign Derived Intangible Income (FDII) and Global Intangible Low Tax Income (GILTI)

As part of the 2017 Tax Cuts and Jobs Act (TCJA), the United States introduced two new regimes related to the taxation of intangible income, namely Foreign Derived Intangible Income (FDII) and Global Intangible Low Tax Income (GILTI).[75]

FDII constitutes a regime that reduces the effective tax rate on income derived from the use of intellectual property in the United States to create exports of goods and services. The effective tax rate on such income stands at 13.125 percent, compared to the statutory corporate income tax rate of 21 percent. In other words, it indirectly provides an export-subsidy for goods and services created using IP.

GILTI provides a 10.5 to 13.125 percent tax rate on earnings that exceed a 10 percent return on a business's invested foreign assets.[76] Any profits exceeding that ordinary 10 percent return are assumed to be connected to the returns to IP or profit shifting.

Under the taxation of GILTI and FDII, U.S.-based multinational companies face approximately the same corporate tax rate on intangible assets used in serving foreign markets—regardless of where those intangibles are located. If intellectual property is located in a foreign market and is used to sell products to foreign customers, it faces a minimum tax rate of between 10.5 percent and 13.125 percent through GILTI. If that same intellectual property is located in the United States and is used to sell products to those same foreign customers, it faces a tax rate of 13.125 percent through FDII.

FDII and GILTI combined act as both a disincentive to shift IP and its associated corporate profits out of the United States and an indirect tax subsidy for IP-related exports.

Innovation Impacts of Expenditure- and Income-Based R&D Tax Preferences

The main objective governments usually state when implementing R&D tax incentives is to foster innovation. Whether this goal can be achieved significantly depends on the design of the incentive, with evidence for expenditure- and income-based incentives pointing in different directions.

Expenditure-Based Tax Incentives

The effect of expenditure-based R&D tax incentives is commonly studied by estimating their impact on R&D investments. A 2007 paper by Parsons and Phillips reviews a broad range of studies estimating the relationship between the cost of R&D and R&D investment. Their review suggests that on average a 10 percent reduction in the cost of R&D—for example through R&D tax incentives—leads to a 10.9 percent increase in R&D investment in the long run, making it an effective measure in terms of "bang-for-the-buck."[77]

While it is difficult to measure the effect of R&D tax incentives on actual innovative outputs rather than only R&D investments, evidence generally suggests a positive effect on innovative sales and the number of new products.[78]

Income-Based Tax Incentives

Partly due to their novelty, the literature around the impact of income-based tax incentives—

75 Kyle Pomerleau, "A Hybrid Approach: The Treatment of Foreign Profits under the Tax Cuts and Jobs Act," Tax Foundation, May 3, 2018, https://taxfoundation.org/treatment-foreign-profits-tax-cuts-jobs-act/.

76 Due to interactions with other parts of U.S. tax law, businesses can face an effective tax rate that is in excess of 13.125 percent. See Kyle Pomerleau, "What's up with Being GILTI?" Tax Foundation, Mar. 14, 2019, https://taxfoundation.org/gilti-2019/.

77 Mark Parsons and Nicholas Phillips, "An Evaluation of the Federal Tax Credit for Scientific Research and Experimental Development," Canadian Department of Finance, September 2007, http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.456.8766&rep=rep1&type=pdf.

78 Silvia Appelt et al., "R&D Tax Incentives: Evidence on Design, Incidence and Impacts."

such as patent boxes—on innovation is less well developed so far. While evidence suggests that patent boxes have a significant impact on where patents and other qualifying IP are located,[79] there is less evidence that patent boxes incentivize innovation. A 2016 IMF analysis finds positive R&D spending effects of patent boxes in Belgium and the Netherlands but finds no effect in France and Spain—with the cause for this difference being unclear.[80]

Conclusion

Positive spillover effects and its vital impact on long-term economic growth make high levels of innovation a desirable objective. The innovation-related tax incentives outlined above reflect governments' efforts to incentivize such innovative activities.

However, certain sectors and businesses disproportionately benefit from tax preferences, creating an unlevel playing field. In particular, the case for patent boxes seems weak: evidence suggests that such regimes allow for profit shifting, can have negative revenue effects, and their impact on innovation is either unclear or relatively weak. While the new nexus standards might change these effects, grandfathering rules will likely slow the transition.

79 Rachel Griffith, Helen Miller, and Martin O'Connell, "Ownership of Intellectual Property and Corporate Taxation;" and Annette Alstadsæter et al., "Patent Boxes Design, Patents Location, and Local R&D," *Economic Policy* 33:93 (Jan. 2, 2018): 131–177, https://doi.org/10.1093/epolic/eix021.

80 IMF, "IMF Fiscal Monitor - Acting Now, Acting Together, " April 2016, https://www.imf.org/en/Publications/FM/Issues/2016/12/31/Acting-Now-Acting-Together.

CORPORATE TAXATION AND THE DIGITAL ECONOMY

Corporate tax systems have been evolving to respond to the digitalization of the economy. Some countries have changed their corporate tax rules to require digital businesses that do not have employees or operations in their country to pay taxes on the sales or other activities that take place there via the internet.

Multinational business models of digital companies interact with tax systems all over the globe. Because of this, corporate tax changes aimed at digital businesses can change not only taxes paid by the businesses but also the tax bases in other countries.

The rationale behind many proposals to tax digital businesses is to eliminate inequities that arise from businesses that do not have operations within a country's borders but earn income from services provided there.

Attempts to address these issues come from individual countries and multilateral forums. Unilateral policies to change where a business pays tax directly impact whether that business is paying tax twice or whether another country's tax base is infringed upon. Multilateral efforts have the potential to change the rules for digital companies without resulting in double taxation.

As with Digital Services Taxes, some approaches on corporate taxation apply to gross income rather than net income. These policies are more distortive in nature than income taxes and can create high marginal tax rates.

Significant Economic Presence and Digital Nexus Standards

One key feature of corporate tax systems around the world is the legal identification of a local entity that is liable to pay taxes.

Businesses and workers are generally required to pay taxes where they earn their income. The common standard for determining when a business is liable to pay tax in a country depends on whether that business has a permanent establishment there.

The permanent establishment could be identified by ongoing operations in the country with employees, sales representatives, or other activities.

For digital business models, some countries have been expanding their permanent establishment definitions to not only include businesses with physical operations in a jurisdiction but also those with sustained economic activity there through digital means.

This could include a company that has dedicated digital marketing and digital storefronts targeting customers in a country, or a business that passes certain thresholds for the level of sales or contracts in a country.

Proposals in Europe, Africa, and Asia have outlined multiple approaches for determining when a company that is providing digital goods or services into a country could be liable for paying corporate income tax.

However, when a country expands its tax base by redefining what constitutes a permanent establishment, this can result in double taxation or a redistribution of taxing rights. If countries worked together to redefine permanent establishment definitions, double taxation could be avoided.

Moving Alone Can Create Double Taxation

Consider a streaming business that has $100 million in taxable profits. The business has its headquarters and all its operations in Country A and millions of subscribers and users around the world. In this example, it does not matter whether the business earns its revenue from

paid subscriptions or through other means.

Country B accounts for 20 percent of global users. Both countries have a 20 percent corporate income tax rate.

Under standard permanent establishment definitions, the company would owe $20 million in taxes to Country A.

However, if Country B adopts a digital permanent establishment definition without conferring with Country A, double taxation can occur. Country B could adopt a rule that requires businesses to pay income taxes based on the share of global users in the country. In that case, 20 percent of taxable profits would be taxed in Country B. However, Country A would continue taxing the business and ultimately 120 percent of the business's income would be taxed.

To provide some relief from double taxation, Country A could offer a tax credit for taxes paid in Country B, but that would reduce Country A's tax base.[81] If the countries are unable to resolve a dispute over the taxing rights, the business would be caught in the middle paying tax twice on the same income.

Moving Together to Avoid Double Taxation

The previous example shows how simple it can be for one country to change a policy that either erodes the tax base of another country or leaves a business paying tax twice. One way to solve this issue is to have multiple countries rewrite international tax rules together.

For example, a group of countries could work together to rewrite their tax treaties and domestic tax legislation to have additional digital permanent establishment rules alongside rules that ensure that double taxation does not occur.

If instead of Country B from the example being the only country taxing the streaming business based on its share of global users, imagine that a group of five countries (A, B, C, D, and E) all with 20 percent corporate income tax rates agrees that taxation based on users is appropriate. To avoid double taxation, Country A provides a tax credit for taxes paid in the other countries; any amount paid in the other four countries reduces the amount paid in Country A.

The business now pays tax in five countries. In four countries, its tax liability is based on its share of users in those countries, and in Country A the business is taxed on its profits as usual minus a tax credit for those taxes paid in the other countries. Country A's tax share, by formula, also reflects its share of global users.

TABLE 7.

A Unilateral Change to Permanent Establishment Rules Can Create Double Taxation

		Scenario 1: Country A Taxes Permanent Establishment (PE)		Scenario 2: Country A Taxes PE and Country B Taxes Digital PE	
		Taxable Income	Tax Liability	Attributed Taxable Income	Tax Liability
Country A	All assets and employees, 50% of global users	$100 million	$20 million	$100 million	$20 million
Country B	20% of global users	$0	$0	$20 million	$4 million
Total		$100 million	$20 million	$120 million	$24 million

Source: Tax Foundation calculations.

81 Most countries do offer some form of foreign tax credit for corporate taxes paid elsewhere. However, some new, unilateral approaches to taxing digital businesses have left open questions about whether foreign tax credits would apply.

TABLE 8.

Moving from Unilateralism to Multilateralism

		Scenario 2: Country A Taxes PE and Country B Taxes Digital PE		Scenario 3: Digital PE Rules and No Double Taxation	
		Attributed Taxable Income	Tax Liability	Attributed Taxable Income	Tax Liability
Country A	All assets and employees, 50% of global users	$100 million	$20 million	$50 million	$10 million
Country B	20% of global users	$20 million	$4 million	$20 million	$4 million
Country C	15% of global users	$0	$0	$15 million	$3 million
Country D	10% of global users	$0	$0	$10 million	$2 million
Country E	5% of global users	$0	$0	$5 million	$1 million
Total		$120 million	$24 million	$100 million	$20 million

Source: Tax Foundation calculations.

Such an approach has trade-offs, though. The exercise could be repeated in different ways, creating various winners and losers. Countries, like Country A, that give up some of their tax revenues under new rules might not choose to participate in the process, meaning countries like Country B (which stand to gain the most) would choose to act alone as in Scenario 2. This assumes that the streaming business would not stop providing services in Country B even in the context of double taxation.

However, if the economic risk of double taxation through unilateral action is high enough, both the countries that would gain tax revenues under the proposal and those that would lose might be willing to come to an agreement.

Another challenge that is not provided in the example is that countries B, C, D, and E may not agree that the share of global users is the right metric to use for changing tax liability. That disagreement could mean that the final formula includes various weights for users, employees, assets, sales, or other factors.

This sort of division of taxing rights is referred to as formulary apportionment and is used in some countries with sub-central corporate taxation, as in the United States and Canada.[82] However, even within those systems, particularly for the U.S., double taxation can still arise because of different apportionment factors and formulas used by different states.

How Are Countries Changing their Rules for Permanent Establishments?

Like Country B in Scenario 2 above, several countries around the world have explored (and sometimes implemented) rules that redefine how they tax digital businesses using new definitions of permanent establishments. These have been done outside of a negotiation with other countries and include Belgium, India, Israel, Kenya, Nigeria, Saudi Arabia, and Slovakia.

Each country has taken a slightly different approach to defining when a digital business with customers or users inside its borders will be liable to pay corporate tax on income connected to those users.

82 Joann Martens Weiner, "Formulary Apportionment and Group Taxation in the European Union: Insights from the United States and Canada," European Commission, March 2005, https://ideas.repec.org/p/tax/taxpap/0008.html.

A proposal in **Belgium** which stalled in 2019 closely reflects a broader European Union proposal on corporate taxation, with numeric and monetary thresholds defining when a business might be liable for corporate tax in Belgium even if it does not have physical operations there.[83]

India's approach represents one of the broader proposals to tax digital businesses using a significant economic presence standard. Although clear definitions and thresholds have not yet been published, the proposal would apply to revenues from data and software downloads in India. The policy is scheduled to go into effect in 2022.[84]

Indonesia has a proposal similar to India with respect to lack of detail on the actual thresholds but would also tax digital businesses based on local market activity through digital means.[85] Indonesia also has a fallback policy which applies to digital businesses even if the digital permanent establishment definition does not apply. That fallback policy is the one mentioned previously that taxes the gross revenues of electronic transactions.[86]

Israel's policy for establishing significant economic presence applies to businesses that are clearly trying to reach customers in Israel through a website. The policy was established in 2016 and includes criteria for content tailored to Israeli customers or users and a positive correlation between internet usage and Israeli users.[87]

Kenya has adopted a tax on income accruing from digital marketplaces; however, the details are still being developed and may, like the Indonesian proposal, go with a gross revenue tax on digital businesses.[88]

Nigeria will tax online business profits to the extent that there is profit that can be attributed to a significant economic presence in the country. The definition behind this is expected to be clarified in future regulations.[89]

Saudi Arabia has implemented a regime that deems a company to have a virtual service permanent establishment if it has contracts that last longer than 183 days (although the length of time can differ depending on the applicable tax treaty).[90]

Slovakia adopted a policy requiring lodging and transport digital platforms to register as a permanent establishment. If a business chooses not to register, a 5 percent withholding tax applies.[91]

Among these proposals, the Indian proposal has received significant attention by policymakers and businesses. In 2018, to alleviate potential concerns of double taxation that would be caused by the significant economic presence test for taxation, the joint secretary of tax planning and legislation at India's Department of Revenue made it clear that tax treaties will override the significant economic presence test.[92] India has double tax treaties with 45 countries, including all of the G7 countries.[93]

83 Bloomberg Tax, "Bloomberg Tax BEPS Tracker," BEPS Tracker, n.d., https://www.bloomberglaw.com/product/tax/aqb_chart/5200.

84 Ibid.

85 Ibid.

86 See section "Digital Services Taxes" on the Indonesian Electronic Transactions Tax.

87 Bloomberg Tax, "Bloomberg Tax BEPS Tracker."

88 KPMG, "Taxation of the Digitalized Economy," May 22, 2020, https://tax.kpmg.us/content/dam/tax/en/pdfs/2020/digitalized-economy-taxation-developments-summary.pdf.

89 Ibid.

90 EY, "Saudi Arabian Tax Authorities Introduce Virtual Service PE Concept," July 30, 2015, https://www.ey.com/Publication/vwLUAssets/Saudi_Arabian_tax_authorities_introduce_Virtual_Service_PE_concept/$FILE/2015G_CM5642_Saudi%20Arabian%20tax%20authorities%20introduce%20Virtual%20Service%20PE%20concept.pdf.

91 KPMG, "Taxation of the Digitalized Economy."

92 Isabel Gottlieb, "India's Taxable Presence Standards Won't Apply Under Treaties," Bloomberg Tax, May 9, 2020, https://www.bloomberglaw.com/product/tax/document/X7CNIKU4000000?jcsearch=BNA%252000000016a9e76dbeea57aff7ecf000000#jcite.

93 EY, "Worldwide Corporate Tax Guide 2019," accessed May 8, 2020, https://www.ey.com/en_gl/tax-guides/worldwide-corporate-tax-guide-2019.

TABLE 9.

Proposals for Digital Permanent Establishment Rules

Jurisdiction	Description	Threshold for Digital Permanent Establishment	Current Status
Belgium	Follows the EU Directive to include significant digital presence thresholds for determining corporate income tax liability	1) Revenues associated with digital services exceed €7 million (US $7.8 million) 2) Number of associated users exceeds 100,000 3) Number of business contracts exceeds 3,000	Rejected by Finance and Budget Committee in the Belgian Chamber of Representatives, March 2019
India	Deems a permanent establishment in India for businesses that otherwise would not be local providers of digital goods or services	1) Revenues arising from data or software downloads in India 2) Systematic and continuous activity soliciting business in India through digital means	Adopted, March 2020; would apply beginning April, 2022
Indonesia	Deems a permanent establishment based on significant presence in the e-commerce economy of Indonesia If the permanent establishment threshold is not met, then an electronic transactions tax would apply	1) Consolidated growth revenues 2) Sales amounts in Indonesia, and/or 3) The size of the active user base in Indonesia	Adopted, March 2020
Israel	Deems a permanent establishment in Israel for a nonresident company	1) Online services are provided to many Israeli customers 2) Substantial number of transactions with Israeli customers 3) Positive relationship between online earnings and level of internet usage of Israeli users 4) Tailored online services to Israeli users (Hebrew language website or pricing is in shekels)	Adopted, April 2016
Kenya	Charges tax on income accruing from a digital marketplace	Regulations forthcoming	Adopted, November 2019
Nigeria	Deemed permanent establishment for a broad range of digital transactions and services	Significant economic presence	Adopted, January 2020
Saudi Arabia	Virtual Service Permanent Establishment	1) A nonresident furnishes services to a person in connection to the latter's activity in the Kingdom 2) The services period exceeds a certain length (183 days is most common, although the specific length depends of the applicable tax treaty)	Implemented, July 2015
Slovakia	Digital Permanent Establishment	Digital platforms facilitating transport and lodging services and acting as a marketplace for such services must register as a permanent establishment Those that do not register are required to withhold tax at 5%	Implemented, January 2018

Source: Bloomberg Tax, "Bloomberg Tax BEPS Tracker"; KPMG, "Taxation of the Digitalized Economy," Apr. 24, 2020, https://tax.kpmg.us/content/dam/tax/en/pdfs/2020/digitalized-economy-taxation-developments-summary.pdf.

Proposals for Multilateral Coordination

As mentioned above, when countries unilaterally expand their thresholds for taxing corporate income, instances of double taxation can arise. Unless countries clarify, as an Indian policymaker has done with its significant economic presence proposal, that tax treaties will be used to avoid double taxation, coordination is necessary.[94]

There are several broad forums that work to negotiate changes to international corporate tax rules including the Organisation for Economic Co-operation and Development (OECD), the United Nations Tax Committee, and the European Union (EU). The Platform for Collaboration on Tax, which includes the UN, International Monetary Fund, OECD, and World Bank, was established in 2016 to foster collective action on tax matters around the world.

With respect to digital taxation, significant work has been done by the EU and the OECD. Model tax treaty discussions at the UN have also ventured into digital taxation in recent years. The G24, a group of developing countries, has also prepared a comprehensive reform to international corporate taxation that also accounts for digital business models.[95]

The EU Proposal on Significant Digital Presence

In 2018, the EU proposed an approach to unifying taxation of large businesses among EU member states that included rules for identifying a significant digital presence which would lead to taxable profits in a jurisdiction.[96] The threshold for establishing a significant digital presence in an EU member state includes three criteria which apply on an annual basis:

1. €700 million ($784 million) in revenues
2. 100,000 users
3. 3,000 contracts for digital services

A business that meets any one of these criteria would be liable to pay corporate income taxes within that EU country.

Attribution of taxable profits of digital businesses would account for "economically significant activities" including:

1. Collection, storage, processing, analysis, deployment, and sale of user-level data
2. Collection, storage, processing, and display of user-generated content
3. Sale of online advertising space
4. Making available third-party-created content on a digital marketplace
5. Supply of any digital service not listed in points 1 through 4

The proposal was paired with a temporary digital services tax as mentioned previously. Both proposals have stalled, although they have

94 Isabel Gottlieb, "India's Taxable Presence Standards Won't Apply Under Treaties."

95 G-24 Working Group on tax policy and international tax cooperation, "Proposal for Addressing Tax Challenges Arising from Digitalisation," Jan. 17, 2019, 24, https://www.g24.org/wp-content/uploads/2019/03/G-24_proposal_for_Taxation_of_Digital_Economy_Jan17_Special_Session_2.pdf.

96 European Commission, "Fair Taxation of the Digital Economy," Taxation and Customs Union - European Commission, Mar. 21, 2018, https://ec.europa.eu/taxation_customs/business/company-tax/fair-taxation-digital-economy_en.

influenced the efforts at the OECD discussed below.[97]

The G24 Proposal for Significant Economic Presence

Another proposal addressing corporate tax rules and permanent establishment thresholds for digital companies has come out of the G24.[98] The proposal was submitted to the OECD as part of the process that has resulted in a two-pillar approach, of which Amount A in Pillar 1 is discussed below.

The G24 proposal follows an option identified in the OECD's final report on Action 1 of the Base Erosion and Profit Shifting (BEPS) project for revising nexus rules using a significant economic presence test.[99]

Following the OECD option in the 2015 report, the proposal identifies that taxable nexus in a jurisdiction could be determined based on:

1. Revenue generated on a sustained basis
2. The user base and the associated data input
3. Volume of digital content
4. Tailored marketing or promotion activities

Using these factors, the proposal suggests that a digital business with no physical activity in a jurisdiction could be deemed to have significant economic presence and taxed based on that presence.

The G24 suggests allocating taxable profits among countries based on the location of sales, assets, employees, and users. Reallocating taxing rights based on factors such as these would significantly shift where multinationals pay taxes relative to current practices.

The OECD Pillar 1, Amount A

The G20 and OECD's BEPS project's first action item from 2013 was to address the tax challenges of the digital economy.[100] While the final 2015 report on Action 1 analyzed various options for direct taxation (i.e., changes in the context of corporate taxes) it made very few affirmative recommendations on that subject. Instead, the report suggested that policies designed to address profit shifting may be sufficient to also allay concerns about the ability of digital firms to minimize their tax burdens, and that targeted digital policies may not be required once profit shifting had been adequately addressed.[101]

The options for taxing digital companies were revisited in a 2018 Interim Report, again with few positive recommendations.[102] However, at that time several countries had adopted policies specifically aimed at the digitalization of the economy, including novel policies like those in India and Israel mentioned above.

97 Marcin Szczepański, "Digital Taxation: State of Play and Way Forward" European Parliament Research Service, March 2020, https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/649340/EPRS_BRI(2020)649340_EN.pdf.

98 G-24 Working Group on tax policy and international tax cooperation, "Proposal for Addressing Tax Challenges Arising from Digitalisation," Jan. 17, 2019, 24.

99 OECD, *Addressing the Tax Challenges of the Digital Economy, Action 1 - 2015 Final Report*, 2015, https://doi.org/10.1787/9789264241046-en.

100 OECD, *Action Plan on Base Erosion and Profit Shifting*, 2013, https://doi.org/10.1787/9789264202719-en.

101 OECD, *Addressing the Tax Challenges of the Digital Economy, Action 1 - 2015 Final Report*.

102 OECD, *Tax Challenges Arising from Digitalisation – Interim Report 2018: Inclusive Framework on BEPS*, 2018, https://doi.org/10.1787/9789264293083-en.

Since that report, the OECD has, at the direction of the G20, been working on a program of work to "Address the Tax Challenges Arising from the Digitalization of the Economy." The most recent policy document under this program outlines several policy levers, one which is significantly more targeted at digital business models than the others.[103]

Amount A under Pillar 1 is designed to establish a new taxing right for countries and apply to certain business models. It includes elements like those adopted in some countries mentioned previously, although it is more complex.

Amount A has six tests to determine whether a company would be required to pay tax in jurisdictions where they do not have a permanent establishment.[104]

First, a revenue threshold applies. Businesses with global revenues above a certain threshold (e.g., €750 million, or $840 million) would then move on to the next test.

The second test is based on a business's activities. The activities in scope are automated digital services and consumer-facing businesses. Automated digital services mentioned in the policy document include:

- Online search engines
- Social media platforms
- Online intermediation platforms, including the operation of online marketplaces, irrespective of whether used by businesses or consumers
- Digital content streaming
- Online gaming
- Cloud computing services
- Online advertising services

The third test is whether the business activities generate revenues over a threshold. Even if the business has global revenues that pass the first test, the in-scope revenue test provides an exit ramp if those targeted activities do not themselves generate sufficient revenue.

The fourth test is based on profitability. The profit margin of in-scope activities must meet a certain threshold for Amount A to apply. For instance, if the profit threshold is 10 percent and the in-scope activities generate a 15 percent profit margin, the business would meet the test. In its analysis of Amount A, the OECD used both a 10 percent profit margin and a 20 percent profit margin as examples.[105] Profits above the threshold are deemed "residual profits."

The fifth test relates to aggregate deemed residual profits. Even if the in-scope activities generate a high profit margin, this test identifies whether the amount of residual profits is sufficient to cross an aggregate monetary threshold.

The sixth and final test determines if the business has sufficient connection to a market country through digital means despite not having a local permanent establishment. If all prior tests are met, deemed residual profits are allocated to countries where a business's local revenue or other factors surpass a country-level threshold.

Although the six tests can be described easily, the challenge of implementation is expected to

103 OECD, "Statement by the OECD/G20 Inclusive Framework on BEPS on the Two-Pillar Approach to Address the Tax Challenges Arising from the Digitalisation of the Economy," 2020, https://www.oecd.org/tax/beps/statement-by-the-oecd-g20-inclusive-framework-on-beps-january-2020.pdf.

104 Ibid.

105 OECD, "Webcast: Update on Economic Analysis and Impact Assessment," Feb. 13, 2020, https://www.oecd.org/tax/beps/webcast-economic-analysis-impact-assessment-february-2020.htm.

Amount A Includes Six Tests to Determine Tax Liability

Test 1: Aggregate Revenue

Only businesses with global revenues over a set threshold are included for Amount A

Test 2: Business Activities

Only Automated Digital Services (ADS) and Consumer-facing activities are included in Amount A

Test 3: ADS and Consumer-facing Revenue Threshold

ADS and Consumer-facing revenues must exceed a set threshold for Amount A to apply

Test 4: ADS and Consumer-facing Profitability Threshold

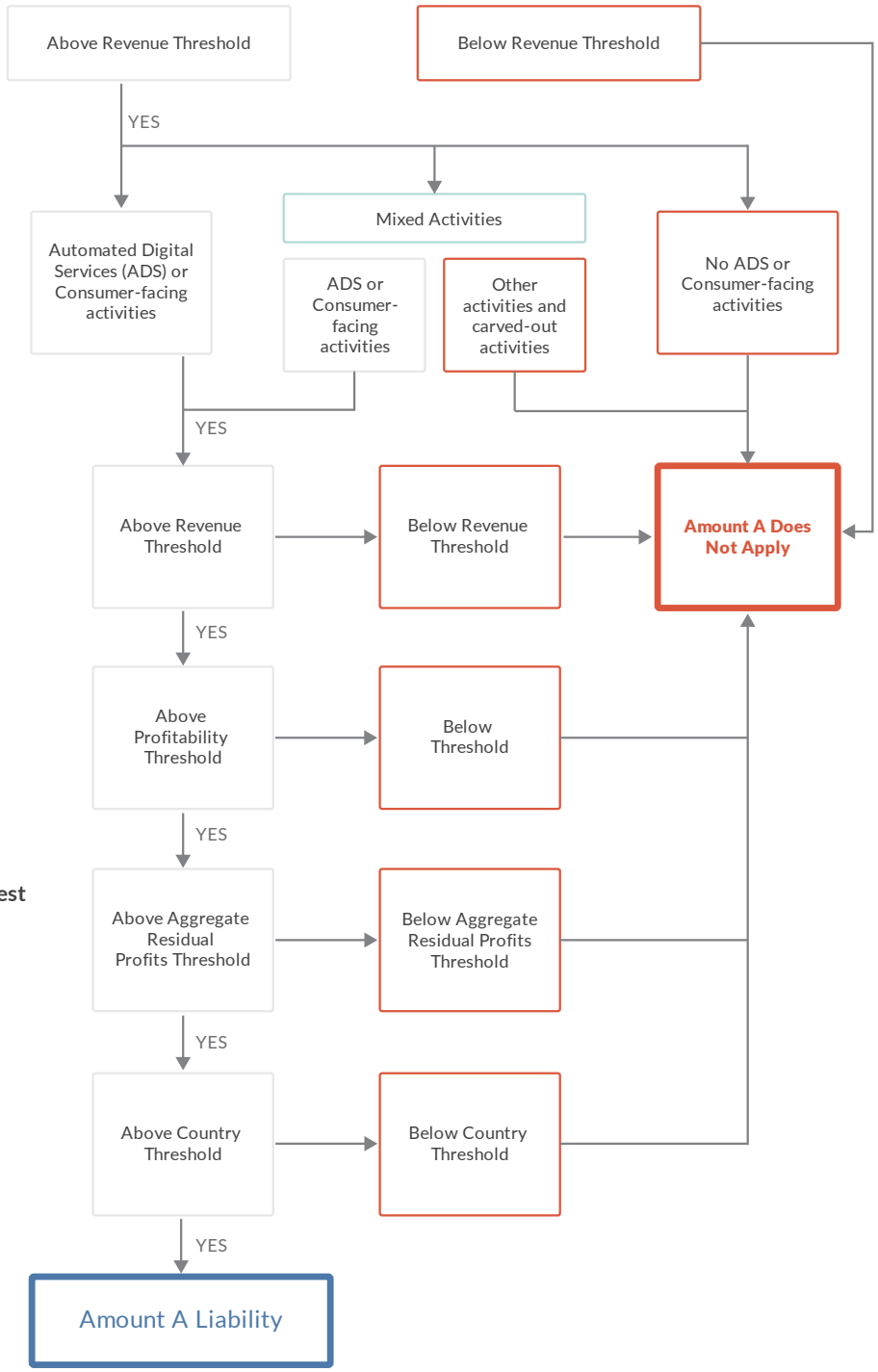
The profit margins of in-scope activities must exceed a set threshold for Amount A to apply; profits over this threshold are deemed "residual profits"

Test 5: Aggregate Residual Profits Test

Profits above the profitability threshold should be aggregated to determine if the amount of residual profits meets a monetary threshold for Amount A

Test 6: Nexus Test for New Country Liability

Deemed residual profits are allocated for taxation in countries where the business passes a local threshold—e.g., local revenue or other factors



Source: OECD, "Statement by the OECD/G20 Inclusive Framework on BEPS on the Two-Pillar Approach to Address the Tax Challenges Arising from the Digitalisation of the Economy," 2020, https://www.oecd.org/tax/beps/statement-by-the-oecd-g20-inclusive-framework-on-beps-january-2020.pdf.

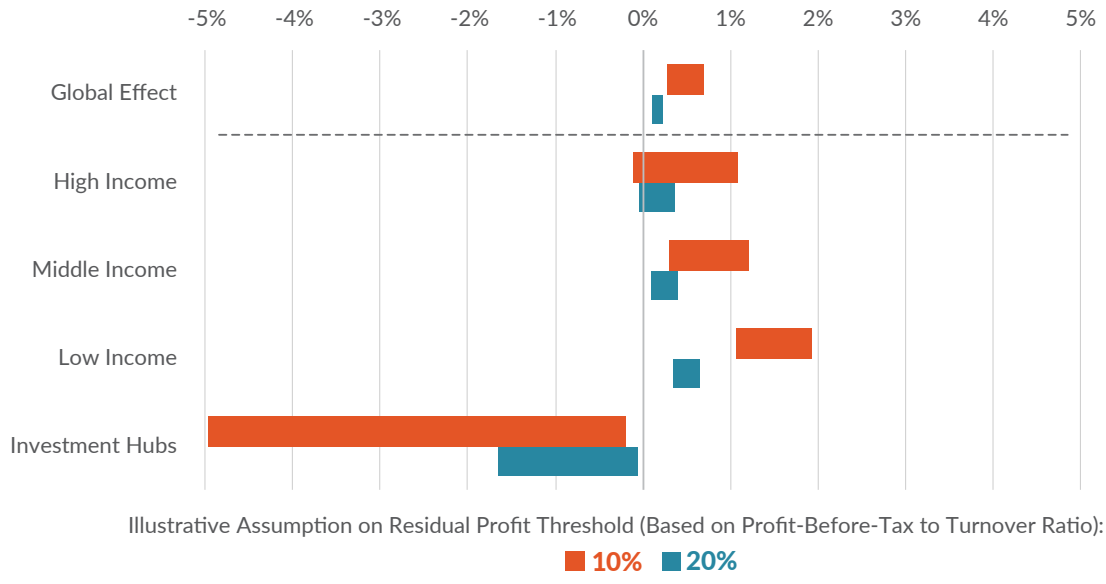
be immense. If implemented, Amount A would result in a tax on profits of digital companies even where there is not a local permanent establishment and require significant new coordination, and perhaps new institutions, to minimize tax disputes and ensure that no more than 100 percent of taxable profits are taxed for any given business.

Splitting the Pie for the Sake of Digital Taxation

Scenario 3 in the examples provided at the beginning of this section shows that changes in rules that impact where a business pays taxes have impacts for individual countries. In a similar vein, the OECD is studying which countries might gain or lose tax revenue under Amount A. In an initial analysis using 2016 data, the OECD explores potential scenarios that would lead to gains in high-, middle-, and low-income countries, while investment hubs (those countries with inward Foreign Direct Investment of more than 150% of GDP) would lose revenues.[106]

Overall, the analysis shows that global tax revenues would increase slightly as more income is taxed in relatively higher tax jurisdictions.

Pillar 1, Amount A would decrease corporate tax revenues in Investment Hubs



Note: Illustrative scenarios of Pillar 1 (Amount A only), where residual profit is defined with a 10% or 20% threshold on profit-before-tax to turnover, assuming a 20% reallocation of residual profit to market jurisdictions, with commodities and financial sectors excluded from scope. High, middle and low income jurisdictions are defined based on the World Bank classification. Investment hubs are jurisdictions with inward FDI above 150% of GDP.
Source: OECD, "Webcast: Update on Economic Analysis and Impact Assessment."

106 Ibid.

Best Practices in Digital Corporate Taxation

Singling out the digital economy through specific means using corporate tax is fraught with challenges. Any rules change in this policy area should be done through a multilateral process to avoid creating different standards that result in double taxation. However, among the unilateral efforts, there are some key points that are valuable.

The Israeli approach clearly identifies links between a digital platform and the local economy and represents a reasonable attempt to identify a digital permanent establishment. Additionally, the policy communication from India that double-tax treaties would supersede the tax implications of a significant economic presence helps to mitigate some of the tax challenges of the Indian approach.

The proposals by multilateral forums generally suffer more from political challenges than policy challenges. However, Amount A in Pillar 1, which specifically targets automated digital services and consumer-facing businesses, would create an unlevel playing field in tax compliance costs for those targeted businesses relative to industries that are out of scope. While part of the motivation for the proposal is to remedy current tax policy imbalances, Amount A would create additional ones.

Both at the country level and at the international level, corporate tax policies should be designed without specific business models in mind, otherwise real distortions could arise. The extent to which adjusting nexus rules specifically requires new definitions for the digital era; countries should provide clear guidance about when a virtual permanent establishment arises.

Deeming virtual permanent establishments unilaterally can create both uncertainty and double taxation.

GROSS-BASED WITHHOLDING TAXES ON DIGITAL SERVICES

Another tax policy tool that has been customized for the digital economy is gross-based withholding taxes. Withholding taxes are often used to tax cross-border transactions, especially between countries that share taxing rights under a tax treaty. Cross-border interest payments, dividends, and royalties commonly have their own applicable withholding tax rates.

Recent activity (again both unilateral and multilateral) has increased the scope for royalties taxation to include digital services. This has been done by explicitly expanding the definition of royalties to, in some cases, include payments for software.

These policies require a business in Country A to pay taxes in Country B at a set rate based on the gross amount of a transaction. For example, a business in Country A provides a software service to a client in Country B. Country B applies a 5 percent withholding tax on payments for software services to foreign businesses. When the client in Country B makes a payment to the business in Country A, 5 percent of that payment is required to be withheld for tax purposes.

In many cases, bilateral tax treaties significantly reduce or eliminate cross-border withholding taxes. When a withholding tax does apply, businesses can file a tax return to reconcile the difference between taxes paid on a gross basis relative to actual income. However, if the withholding tax applies when there is no income attributable to the withholding country (under current practices), filing an income tax return is less useful.

In a way, some governments use gross-based withholding taxes on digital businesses to substitute for corporate or consumption taxes. Because digital businesses are less likely to have local permanent establishments in all countries where they have sales, the gross withholding tax is used in place of defining a virtual permanent establishment and requiring a foreign company to collect and remit VAT or pay corporate income tax.

However, taxing gross revenues leads to higher marginal tax rates on lower margin businesses or transactions. This makes gross-based withholding taxes clearly inferior, from an economic point of view, to taxing net income or final consumption.

Despite that, there are also administrative and enforcement challenges to defining virtual permanent establishments and applying VAT to remote sales. Some developing countries simply face a trade-off between gaining some revenue through a withholding tax regime (regardless of economic efficiency) and building policies for digital VAT or virtual permanent establishments. The more that countries opt for gross-based withholding taxes, however, the less efficient and transparent taxation of digital companies becomes.

Individual Country Approaches to Withholding Taxes on Digital Services

Gross-based withholding taxes on digital services have become more common in recent years with several small countries implementing policies that tax the gross amount of transactions in related digital services. These policies are like the digital services taxes mentioned previously, although the withholding taxes apply without regard to the size of a business and have a much broader scope.

Some examples include Pakistan, Peru, Thailand, Turkey, and Uruguay. The withholding tax rates range from 5 percent in Pakistan and Thailand to 30 percent in Peru.

TABLE 10.

Examples of Gross-Based Withholding Taxes on Digital Services

Jurisdiction	Policy	Current Status
Pakistan	5% withholding tax on offshore digital services including online advertising, designing, creating, hosting, or maintenance of websites, providing any facility or service for uploading, storing or distribution of digital content, online collection or processing of data related to users in Pakistan, any facility for online sale of goods or services, or any other online facility	Implemented, July 2018
Peru	30% withholding tax on digital services (services provided or accessed via the internet) provided by non-residents to Peruvian residents and used in Peru.	Implemented, March 2014
Thailand	5% withholding tax on e-commerce supplies of goods and services in the country, including online advertising, gaming, shopping, and others; the financial institution facilitating the transaction would be responsible to withhold and remit the tax	Proposed, May 2019
Turkey	15% withholding tax on digital advertising payments made to services providers and intermediaries	Implemented, January 2019
Uruguay	12% withholding tax levied on payments made for digital services supplied by nonresidents to customers located in Uruguay	Implemented, July 2018

Source: KPMG, "Taxation of the Digitalized Economy," May 15, 2020, https://tax.kpmg.us/content/dam/tax/en/pdfs/2020/digitalized-economy-taxation-developments-summary.pdf; Deloitte, "Uruguay Highlights 2019," 2019, https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-uruguayhighlights-2019.pdf; Orbitax, "Clarification on Digital Services Subject to Withholding Tax in Peru — Orbitax News," https://www.orbitax.com/news/archive.php/Clarification-on-Digital-Servi-5334.

UN Model Treaty and Software

A multilateral approach to gross-based withholding taxes on digital services has been occurring at the UN Tax Committee. In 2018, the committee released an amended model tax treaty to provide for withholding taxes on technical services income.[107] Technical services include those of a "managerial, technical, or consultancy nature."[108]

Prior to this change, the UN model treaty allowed for countries to share taxing rights over income from royalties (the rights to use a licensed product or service). For example, if a business in Country A licenses a product for use by a customer in Country B and the business does not have a permanent establishment in Country B, the UN model tax treaty would let both Country A and Country B tax some portion of the related royalty income. Individual bilateral treaties can differ from the UN model, but the model is influential on many countries' interpretation or drafting of tax treaties.[109] Other tax treaty models (e.g., the OECD model and the U.S. model) only allow for Country A to tax the income in that scenario.

The amended UN model treaty ushered in a new opportunity for countries to impose withholding taxes related to income generated from services in their jurisdiction in the absence of a local permanent establishment. The effort has been followed closely by discussions to treat software-related payments as royalties.[110]

107 Julie Martin, "UN Releases Updated Model Tax Treaty Adding New Technical Services Fees Article," MNE Tax, May 22, 2018, https://mnetax.com/un-releases-updated-model-tax-treaty-adding-new-technical-service-fees-article-27765.

108 "Model Treaties Full Text, UN Model Treaty (2017)," accessed May 14, 2020, https://www.bloomberglaw.com/product/tax/document/XM671APC#treaty-article-royalties.

109 Both the OECD and the UN have model tax treaties, but they differ specifically on the taxation of services. See Michael Lennard, "The UN Model Tax Convention as Compared with the OECD Model Tax Convention – Current Points of Difference and Recent Developments," n.d., 8.

110 UN Committee of Experts on International Cooperation in Tax Matters, "Taxation of Software Payments as Royalties," UN, Oct. 4, 2018, https://www.un.org/development/desa/financing/document/taxation-software-payments-royalties-ec182018crp9.

Both the technical services amendment and the proposal to incorporate software income into the definition of royalties would allow countries to apply gross-based taxes on software payments.[111]

Gross-based taxation is designed to ignore net income calculations and, because of this, can result in high marginal tax rates. Broadening the scope of gross-based withholding taxes increases the likelihood that digital businesses will get caught by taxes in countries where they do not have permanent establishments and with little opportunity to reconcile gross-based taxation with their net income.

CONCLUSION

In recent years, governments around the world have begun to adapt their tax systems to capture the digitalization of the economy. These efforts have led to changes in consumption taxes and corporate taxation. To ensure neutrality between digital and non-digital businesses, many countries have extended their VATs/GSTs to include digital services.

Most large digital businesses are multinational corporations, generating revenue streams from countries across the world. Concerns have been raised that the current international corporate tax system—with its traditional permanent establishment rules—does not properly capture these novel business models. This has led us to the ongoing OECD negotiations among more than 130 countries to adapt the existing international tax rules.

A significant number of countries has adopted unilateral tax measures targeted at digital businesses, including digital services taxes, gross-based withholding taxes, and digital permanent establishments. However, in the absence of a multilateral coordination, these targeted unilateral tax policies are likely to intersect or contradict one another, resulting in uncertainty and double taxation.

The outcome of the digital tax debate will likely shape domestic and international taxation for decades to come. Designing these policies based on sound principles—simplicity, transparency, neutrality, and stability—will be essential in ensuring they can withstand challenges arising in the rapidly changing economic and technological environment of the 21st century.

111 While some existing tax treaties, like the tax treaties between France and Canada and France and Japan, refer to software in the definitions of royalties, neither treaty provides for withholding taxes on software payments. In the case of the France-Canada treaty, software is exempt from the 10 percent withholding tax rate on royalties. In the case of the France-Japan treaty, the withholding tax rate for royalties is 0 percent. See Bloomberg Tax, "International Withholding Tax," accessed May 14, 2020, https://www.bloomberglaw.com/product/tax/bbna/chart/3/10092/aa4242cf6c76b9714d5d197d830ec00c.

APPENDIX TABLE 1.

Announced, Proposed, and Implemented Digital Services Taxes around the World, as of May 2020

Country	Tax Rate	Scope	Global Revenue Threshold	Domestic Revenue Threshold	Status
Austria (AT)	5%	Online advertising	€750 million (US $840 million)	€25 million ($28 million)	Implemented (Effective from January 2020)
Belgium (BE)	3%	Selling of user data	€750 million ($840 million)	€50 million in the EU ($56 million)	Belgium proposed a DST in January 2019. However, the proposal was rejected in March 2019.
Brazil (BR)	1%-5%	• Targeted online advertising • Use of digital interfaces • Transmission of user data generated from using a digital interface	R$3 billion ($760 million)	R$100 million ($25 million)	Proposed
Canada (CA)	3%	• Targeted online advertising • Digital intermediation services	C$1 billion ($754 million)	C$40 million ($30 million)	Announced/Shows Intentions (Prime Minister Justin Trudeau released a campaign proposal outlining a DST)
Czech Republic (CZ)	7%	• Targeted advertising • Use of multilateral digital interfaces • Provision of user data (additional thresholds apply)	€750 million ($840 million)	CZK 100 million ($4 million)	Proposed (Delayed until 2021 to wait for agreement at the OECD level; there have been discussions to lower the proposed tax rate)
France (FR)	3%	• Provision of a digital interface • Advertising services based on users' data	€750 million ($840 million)	€25 million ($28 million)	Implemented (Retroactively applicable as of January 1, 2019; France has agreed to suspend the collection of the DST until December 2020 in exchange for the U.S. agreeing to hold off on retaliatory tariffs on French goods)
Hungary (HU)	7.5%	Advertising revenue	HUF 100 million ($344,000)	N/A	Implemented (As a temporary measure, the advertisement tax rate has been reduced to 0%, effective from July 1, 2019 through December 31, 2022)
India (IN)	6% and 2%	• Online advertising services (6%) • E-commerce operators (2%)	-	Rs. 2 crores ($284,000)	Implemented (India introduced its "equalisation levy" in 2016, a 6 percent tax on gross revenues from online advertising services provided by nonresident businesses; as of April 2020, the equalisation levy expanded to apply a 2 percent tax on revenues of nonresident e-commerce operators that are not subject to the already existing 6 percent equalisation levy)
Indonesia (ID)	TBA	TBA	TBA	TBA	Implemented (So-called "Electronic Transaction Tax" effective from March 2020; imposed on e-commerce sales when the digital PE cannot be applied due to the provision of a tax treaty; details TBA)
Israel (IL)	3%-5%	TBA	TBA	TBA	Announced/Shows Intentions (Modeled after the French DST)

APPENDIX TABLE 1, *CONTINUED.*

Announced, Proposed, and Implemented Digital Services Taxes around the World, as of May 2020

Country	Tax Rate	Scope	Global Revenue Threshold	Domestic Revenue Threshold	Status
Italy (IT)	3%	• Advertising on a digital interface • Multilateral digital interface that allows users to buy/sell goods and services • Transmission of user data generated from using a digital interface	€750 million ($840 million)	€5.5 million ($6 million)	Implemented (Effective from January 2020)
Kenya (KE)	1.5%	• Digital marketplaces	TBA	TBA	Proposed (Expected implementation in 2021)
Latvia (LV)	-	-	-	-	Announced/Shows Intentions (The Latvian government commissioned a study to determine the increase of tax revenue based on the assumption that the country levies a 3% DST)
New Zealand (NZ)	2%-3%	• Intermediation platforms • Social media platforms • Content sharing sites • Search engines and the sale of user data	€750 million ($840 million)	NZ$3.5 million (US$2.3 million)	Announced/Shows Intentions (In June 2019, the New Zealand government released a discussion document on the design of a possible DST)
Norway (NO)	-	-	-	-	Announced/Shows Intentions (Norway plans to introduce a unilateral measure in 2021 if the OECD does not reach a consensus solution in 2020)
Poland (PL)	1.5%	Online streaming services	-	-	Proposed
Slovakia (SK)	-	-	-	-	Proposed (The Ministry of Finance opened a consultation on a proposal to introduce a DST on revenue of nonresidents from provision of services such as advertising, online platforms, and sale of user data; however, there were no further steps taken and none of the political parties have put forward digital tax as their priority agenda)
Slovenia (SI)	-	-	-	-	Announced/Shows Intentions (The Ministry of Finance announced a government proposal to submit a draft bill to the National Assembly introducing a digital services tax by April 1, 2020; however, there has been no development so far)
Spain (ES)	3%	• Online advertising services • Sale of online advertising • Sale of user data	€750 million ($840 million)	€3 million ($3 million)	Proposed (The Spanish Parliament rejected the government's proposed budget bill for 2019, which included the digital services tax; however, a new draft law for a DST was introduced this year)

APPENDIX TABLE 1, *CONTINUED.*

Announced, Proposed, and Implemented Digital Services Taxes around the World, as of May 2020

Country	Tax Rate	Scope	Global Revenue Threshold	Domestic Revenue Threshold	Status
Tunisia (TN)	3%	Sale of computer applications and digital services by nonresident companies	TBA	TBA	Implemented (Effective from January 2020; a decree to be issued will set out detailed requirements)
Turkey (TR)	7.5%	Online services including advertisements, sales of content, and paid services on social media websites	€750 million ($840 million)	TRY 20 million ($4 million)	Implemented (Effective from March 2020; the president can reduce the DST rate downward to 1% or increase it upward to 15%)
United Kingdom (GB)	2%	• Social media platforms • Internet search engine • Online marketplace	£500 million ($638 million)	£25 million ($32 million)	Implemented (The UK government stated in its Finance Bill 2020 that the DST would go into effect as of April 1, 2020; the Finance Bill is currently in the Parliament and is expected to be enacted this summer)

Source: KPMG, "Taxation of the Digitalized Economy," May 15, 2020, https://tax.kpmg.us/content/dam/tax/en/pdfs/2020/digitalized-economy-taxation-developments-summary.pdf.

APPENDIX TABLE 2.

Patent Box Regimes in Europe and in OECD Countries, 2020

	Qualifying IP Assets			Tax Rate Under Patent Box Regime	Statutory Corporate Income Tax Rate
	Patents	Software	Other (a.)		
Andorra	✓	✓		2%	10%
Belgium	✓	✓		4.44%	25%
Cyprus	✓	✓	✓	2.5%	12.5%
France	✓	✓		10%	32.02%
Hungary (b.)	✓	✓		0% or 4.5%	9%
Ireland	✓	✓	✓	6.25%	12.5%
Israel	✓	✓	✓	6% to 12%	23%
Italy (c.)	✓	✓		13.95%	27.81%
Korea	✓		✓	5% to 18.75%	25%
Lithuania	✓	✓		5%	15%
Luxembourg	✓	✓		5.2%	24.94%
Malta	✓	✓	✓	Minimum of 1.75% (deduction of up to 95% of net income)	35%
Netherlands	✓	✓	✓	7%	25%
Poland	✓	✓		5%	19%
Portugal	✓			10.5%	32%
San Marino (d.)	✓	✓		0% or 8.5%	17%
Slovakia	✓	✓		10.5%	21%
Spain - federal (e.)	✓	✓		10%	25%
Spain - Basque Country	✓	✓		7.2%	24%
Spain - Navarra	✓	✓		8.4%	28%
Switzerland (f.)	✓			Tax base reduction of up to 90% on patent income	14.45% (cantonal level)
Turkey (g.)	✓			11%	22%
United Kingdom	✓			10%	19%

(a.) "Other" refers to IP assets that are non-obvious, useful, and novel. These can only be applied to small and medium-size businesses.

(b.) Hungary's patent box regime applies a zero percent rate in the case of capital gains of reported qualifying IP and 4.5 percent in the case of benefits related to royalty income.

(c.) Italy has a federal corporate income tax (IRES) of 24 percent and a regional production tax (IRAP) of 3.9 percent, thus a combined statutory rate of 27.9 percent. Italy's patent box regime reduces both tax rates by 50 percent, leading to a tax rate of 13.95 percent on IP income.

(d.) San Marino has three IP regimes. The "New companies regime provided by art. 73, law no. 166/2013" grants a tax rate of 8.5 percent. The "Regime for high-tech start-up companies under law no. 71/2013 and delegated decree no. 116/2014" and the "IP regime" both grant tax rates of 0 percent. All three apply to patents and software.

(e.) The Spanish regions "Basque Country" and "Navarra" have separate IP regimes.

(f.) Switzerland introduced a patent box regime that went into effect in 2020 at the cantonal level. The regime will provide a maximum tax base reduction of 90 percent on income from patents and similar rights developed in Switzerland. It applies in all cantons, but cantons can opt for a lower reduction.

(g.) Turkey has a second IP regime which allows for a full tax deduction (0 percent effective tax rate) of qualified IP income resulting from R&D activities that were undertaken in Turkish Technology Development Zones.

Note: Liechtenstein has abolished its patent box regime because it did not comply with the OECD's Modified Nexus Approach.

Sources: OECD, "Dataset Intellectual Property Regimes"; Deloitte, "The Cyprus IP regime"; PwC, "French Finance Act for 2019"; Ireland's Office of the Revenue Commissioners, "Guidance Notes on the Knowledge Development Box"; EY, "New Israeli Innovation Box Regime: An update and review of key features"; and Baker McKenzie, "Swiss Voters Adopt Federal Act on Tax Reform and AVS Financing."

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