



INTERNATIONAL TAX COMPETITIVENESS INDEX 2020

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INTRODUCTION

The structure of a country's tax code is an important determinant of its economic performance. A well-structured tax code is easy for taxpayers to comply with and can promote economic development while raising sufficient revenue for a government's priorities. In contrast, poorly structured tax systems can be costly, distort economic decision-making, and harm domestic economies.

Many countries have recognized this and have reformed their tax codes. Over the past few decades, marginal tax rates on corporate and individual income have declined significantly across the Organisation for Economic Co-operation and Development (OECD). Now, most OECD nations raise a significant amount of revenue from broad-based taxes such as payroll taxes and value-added taxes (VAT).¹

Not all recent changes in tax policy among OECD countries have improved the structure of tax systems; some have made a negative impact. Though some countries like the United States and Belgium have reduced their corporate income tax rates by several percentage points, others, like Korea and Portugal, have increased them. Corporate tax base improvements have been put in place in the United States, United Kingdom, and Canada, while tax bases have been made less competitive in Chile and Korea.

The COVID-19 pandemic has led many countries to adopt temporary changes to their tax systems. Faced with revenue shortfalls from the downturn, countries will need to consider how to best structure their tax systems to foster both an economic recovery and raise revenue.

The variety of approaches to taxation among OECD countries creates a need for a way to evaluate these systems relative to each other. For that purpose, we have developed the *International Tax Competitiveness Index* to compare the ways that countries structure their tax systems.

The *International Tax Competitiveness Index*

The *International Tax Competitiveness Index* (ITCI) seeks to measure the extent to which a country's tax system adheres to two important aspects of tax policy: competitiveness and neutrality.

A competitive tax code is one that keeps marginal tax rates low. In today's globalized world, capital is highly mobile. Businesses can choose to invest in any number of countries throughout the world to find the highest rate of return. This means that businesses will look for countries with lower tax rates on investment to maximize their after-tax rate of return. If a country's tax rate is too high, it will drive investment elsewhere, leading to slower economic growth. In addition, high marginal tax rates can lead to tax avoidance.

According to research from the OECD, corporate taxes are most harmful for economic growth, with personal income taxes and consumption taxes being less harmful. Taxes on immovable property have the smallest impact on growth.²

Separately, a neutral tax code is simply one that seeks to raise the most revenue with the fewest economic distortions. This means that it doesn't favor consumption over saving, as happens with investment taxes and wealth taxes. This

1 Cristina Enache, "Sources of Government Revenue in the OECD," Tax Foundation, Feb. 19, 2020, <https://taxfoundation.org/publications/sources-of-government-revenue-in-the-oecd/>.

2 Organisation for Economic Co-operation and Development (OECD), "Tax and Economic Growth," Economics Department Working Paper No. 620, July 11, 2008.

also means few or no targeted tax breaks for specific activities carried out by businesses or individuals.

As tax laws become more complex, they also become less neutral. If, in theory, the same taxes apply to all businesses and individuals, but the rules are such that large businesses or wealthy individuals can change their behavior to gain a tax advantage, this undermines the neutrality of a tax system.

A tax code that is competitive and neutral promotes sustainable economic growth and investment while raising sufficient revenue for government priorities.

There are many factors unrelated to taxes which affect a country's economic performance. Nevertheless, taxes play an important role in the health of a country's economy.

To measure whether a country's tax system is neutral and competitive, the *ITCI* looks at more than 40 tax policy variables. These variables measure not only the level of tax rates, but also how taxes are structured. The *Index* looks at a country's corporate taxes, individual income taxes, consumption taxes, property taxes, and the treatment of profits earned overseas. The *ITCI* gives a comprehensive overview of how developed countries' tax codes compare, explains why certain tax codes stand out as good or bad models for reform, and provides important insight into how to think about tax policy.

Due to some data limitations, recent tax changes in some countries may not be reflected in this year's version of the *International Tax Competitiveness Index*.

2020 Rankings

For the seventh year in a row, **Estonia** has the best tax code in the OECD. Its top score is driven by four positive features of its tax system. First, it has a 20 percent tax rate on corporate income that is only applied to distributed profits. Second, it has a flat 20 percent tax on individual income that does not apply to personal dividend income. Third, its property tax applies only to the value of land, rather than to the value of real property or capital. Finally, it has a territorial tax system that exempts 100 percent of foreign profits earned by domestic corporations from domestic taxation, with few restrictions.

While Estonia's tax system is the most competitive in the OECD, the other top countries' tax systems receive high scores due to excellence in one or more of the major tax categories. **Latvia**, which recently adopted the Estonian system for corporate taxation, also has a relatively efficient system for taxing labor income. **New Zealand** has a relatively flat, low-rate individual income tax that also exempts capital gains (with a combined top rate of 33 percent), a well-structured property tax, and a broad-based value-added tax. **Switzerland** has a relatively low corporate tax rate (21.1 percent), a low, broad-based consumption tax, and a relatively flat individual income tax that exempts capital gains from taxation. **Luxembourg** has a broad-based consumption tax and a competitive international tax system.

Italy has the least competitive tax system in the OECD. It has a wealth tax, a financial transaction tax, and an estate tax. Italy also has a high compliance burden associated with its individual tax system. It takes businesses an estimated 169 hours to comply with the individual income tax. The Italian consumption tax system covers less than 40 percent of final consumption, revealing both policy and enforcement gaps.

TABLE 1.
2020 International Tax Competitiveness Index Rankings

Country	Overall Rank	Overall Score	Corporate Tax Rank	Individual Taxes Rank	Consumption Taxes Rank	Property Taxes Rank	International Tax Rules Rank
Estonia	1	100.0	2	1	9	1	16
Latvia	2	84.4	1	5	26	6	9
New Zealand	3	82.4	24	4	6	2	20
Switzerland	4	77.1	14	14	1	34	3
Luxembourg	5	76.0	26	20	3	14	6
Lithuania	6	75.8	3	7	23	7	23
Sweden	7	74.0	8	19	16	5	11
Czech Republic	8	73.1	7	3	34	9	10
Australia	9	71.4	30	17	7	3	25
Slovak Republic	10	69.9	18	2	33	4	31
Turkey	11	69.9	15	6	20	21	12
Austria	12	68.7	21	29	13	13	5
Norway	13	68.1	11	15	18	19	14
Hungary	14	67.9	4	9	35	24	4
Germany	15	67.9	29	25	12	11	7
Finland	16	65.7	6	28	14	16	22
Netherlands	17	65.5	25	21	15	27	2
Canada	18	65.3	23	27	8	22	13
Belgium	19	64.1	13	10	28	20	19
Ireland	20	63.1	5	32	24	17	17
United States	21	62.9	19	23	5	28	32
United Kingdom	22	61.6	17	24	22	33	1
Slovenia	23	61.4	12	12	30	23	18
Korea	24	59.9	33	22	2	30	33
Israel	25	59.2	20	30	10	10	34
Japan	26	59.1	36	18	4	26	29
Spain	27	58.5	28	16	11	35	15
Denmark	28	58.3	16	35	17	15	28
Greece	29	55.9	22	8	31	32	24
Iceland	30	55.4	10	34	19	25	30
Mexico	31	51.5	31	13	25	8	35
France	32	50.7	35	36	21	29	8
Portugal	33	46.9	34	31	32	18	26
Poland	34	46.6	9	11	36	31	27
Chile	35	46.3	32	26	27	12	36
Italy	36	44.3	27	33	29	36	21

In general, countries that rank poorly on the *ITCI* levy relatively high marginal tax rates on corporate income. The five countries at the bottom of the rankings all have higher than average corporate tax rates, except for Poland,

at 19 percent. In addition, all five countries have high consumption tax rates, with rates of 20 percent or higher, except for Chile, at 19 percent.

NOTABLE CHANGES FROM LAST YEAR³

Belgium

The corporate tax rate in Belgium fell from 29.58 percent to 25 percent, its wealth tax was abolished following a constitutional court decision, and CFC rules were enacted. Belgium's ranking rose from 23rd to 19th.

France

France is in the process of reducing its corporate income tax rate over several years, concluding in 2022. As part of this scheduled reduction, France reduced its combined corporate rate (including a surtax) from 34.43 percent to 32.02 percent. Its withholding tax rates on dividends and royalties levied on individuals from non-treaty countries were also reduced slightly. Its *Index* rank remained unchanged at 32.

Israel

Israel's ranking rose from 31st to 25th due to a reduction in required tax payments as measured by the PwC's "Paying Taxes" data.⁴ Labor tax payments fell from 12 to 1 and other tax payments fell from 14 to 3. Israel also concluded two new tax treaties, broadening its tax treaty network.

Japan

After multiple postponements, Japan increased its VAT rate from 8 percent to 10 percent. In addition, stricter interest deduction limitations were introduced. Japan's rank fell from 22nd to 26th.

New Zealand

New Zealand implemented a temporary 1-year loss carryback provision as part of its COVID-19 response. The government is currently discussing making this provision permanent. New Zealand's rank remained unchanged at 3.

Norway

As part of its COVID-19 response, Norway implemented a temporary 2-year loss carryback provision. Norway's rank improved from 14th to 13th.

Slovenia

Slovenia increased the limit on loss carryforward provisions from a 50 percent to a 63 percent limitation, narrowing its tax base and making it slightly more countercyclical. Slovenia's ranking rose from 24th to 23rd.

Switzerland

Switzerland implemented a patent box regime at the cantonal level. Previously, only one canton—Nidwalden—had a patent box. The dividends tax rate was slightly increased from 21.14 percent to 22.29 percent. Switzerland's rank remained unchanged at 4.

³ Last year's scores published in this report can differ from previously published rankings due to both methodological changes and corrections made to previous years' data.

⁴ PwC, "Paying Taxes 2020," <https://www.pwc.com/gx/en/services/tax/publications/paying-taxes-2020.html#tools>.

TABLE 2.
Changes from Last Year

Country	2018 Rank	2018 Score	2019 Rank	2019 Score	2020 Rank	2020 Score	Change in Rank from 2019 to 2020	Change in Score from 2019 to 2020
Australia	11	68.9	9	71.3	9	71.4	0	0.1
Austria	12	67.8	12	69.0	12	68.7	0	-0.4
Belgium	21	60.9	23	61.0	19	64.1	4	3.1
Canada	18	62.6	18	65.4	18	65.3	0	-0.1
Chile	34	45.1	34	46.9	35	46.3	-1	-0.7
Czech Republic	8	71.4	8	72.9	8	73.1	0	0.2
Denmark	26	58.3	26	58.2	28	58.3	-2	0.1
Estonia	1	100.0	1	100.0	1	100.0	0	0.0
Finland	17	64.4	17	65.8	16	65.7	1	0.0
France	36	43.1	32	49.2	32	50.7	0	1.5
Germany	15	65.8	13	68.1	15	67.9	-2	-0.2
Greece	31	48.1	29	53.4	29	55.9	0	2.5
Hungary	16	65.7	15	67.3	14	67.9	1	0.6
Iceland	28	55.3	28	56.7	30	55.4	-2	-1.3
Ireland	19	61.9	19	62.9	20	63.1	-1	0.2
Israel	32	48.0	31	49.9	25	59.2	6	9.3
Italy	35	44.6	36	44.7	36	44.3	0	-0.3
Japan	23	60.7	22	62.3	26	59.1	-4	-3.1
Korea	22	60.7	25	60.1	24	59.9	1	-0.2
Latvia	2	82.1	2	83.9	2	84.4	0	0.6
Lithuania	6	75.8	5	78.0	6	75.8	-1	-2.1
Luxembourg	4	76.7	6	76.1	5	76.0	1	-0.1
Mexico	29	51.7	30	52.9	31	51.5	-1	-1.4
Netherlands	9	69.8	16	67.2	17	65.5	-1	-1.7
New Zealand	3	79.9	3	83.2	3	82.4	0	-0.7
Norway	13	66.2	14	68.1	13	68.1	1	0.0
Poland	30	50.3	35	45.9	34	46.6	1	0.6
Portugal	33	45.2	33	47.0	33	46.9	0	0.0
Slovak Republic	10	69.8	11	69.5	10	69.9	1	0.4
Slovenia	25	59.9	24	60.3	23	61.4	1	1.0
Spain	27	56.3	27	58.1	27	58.5	0	0.4
Sweden	7	73.7	7	74.0	7	74.0	0	0.0
Switzerland	5	76.5	4	78.7	4	77.1	0	-1.7
Turkey	14	66.1	10	70.2	11	69.9	-1	-0.3
United Kingdom	24	60.5	21	62.4	22	61.6	-1	-0.9
United States	20	60.9	20	62.8	21	62.9	-1	0.1

METHODOLOGICAL CHANGES

Each year we review the data and methodology of the *Index* for ways that could improve how it measures both competitiveness and neutrality. This year we have incorporated several changes to the way the *Index* treats corporate taxes, consumption taxes, and international taxes. No changes were made to the individual or property tax categories other than routine updates to incorporate the most recent data.

We have applied each change to prior years to allow consistent comparison across years. Data for all years using the current methodology is accessible in the GitHub repository for the *Index*,⁵ and a description of how the *Index* is calculated is provided in the Appendix of this report. Prior editions of the *Index*, however, are not comparable to the results in this 2020 edition due to these methodological changes.

We also changed the data source for **R&D tax credits**. Previously we treated countries as having an R&D tax credit as a binary option: either a country had an R&D tax credit, or it did not. However, we are now using OECD data on the implied tax subsidy of R&D credits and similar expenditure-based R&D tax incentives.⁶ This measure captures the full extent of each country's expenditure-based R&D tax incentives, and thus more accurately captures how distortive a country's R&D tax subsidies are. The larger the implied tax subsidy, the lower a country will score on the Incentives/Complexity subcategory.

This change improves the rank of countries that have an R&D tax credit but a low implied tax subsidy rate and worsens the rank of countries that have a large implied tax subsidy rate.

Corporate Tax

The two changes in the corporate tax data were adding a new variable (Allowances for Corporate Equity) and changing the data source for R&D tax credits.

Allowances for Corporate Equity (ACEs) contribute to the neutrality of corporate tax systems by providing a deduction for equity comparable to deductions for interest costs. This reduces the debt bias in corporate tax systems by lowering the cost of capital for equity-financed investments relative to debt-financed investments.

The ACE variable is now included in the Cost Recovery subcategory. This change improves the rank of countries that have an ACE relative to those countries that do not.

Consumption Tax

While most countries in the OECD administer a value-added tax (VAT) at the national level, the U.S. is an exception as it instead levies retail sales taxes at the state level. For the *Index* this requires several calculations to compare the U.S. state retail sales taxes to national VATs. This year we are calculating the **U.S. consumption tax base** using the concept of the VAT revenue ratio (VRR) used by the OECD combined with a population-weighted average sales tax rate. The U.S. consumption tax revenue ratio was calculated using the following formula: $VRR(US) = \text{Sales Tax Revenue} / [(\text{Consumption} - \text{Sales Tax Revenue}) \times \text{Average Sales Tax Rate Weighted by Population}]$.

5 Tax Foundation, "International Tax Competitiveness Index," <https://github.com/TaxFoundation/international-tax-competitiveness-index>.

6 OECD, "R&D Tax Incentive Indicators: Implied tax subsidy rates on R&D expenditures," <https://stats.oecd.org/Index.aspx?DataSetCode=RDSUB>.

This change slightly worsens the U.S. rank on the Consumption Tax Base category relative to previous editions of the *Index*.

International Taxes

Prior editions of the *Index* included withholding tax rates and a country's **tax treaty network** in the same subcategory. This year we are separating the tax treaties variable from the withholding taxes variables, effectively giving the tax treaties variable more importance in the *Index* calculation.

This change reflects that most OECD countries' tax treaty networks include the other OECD countries while the withholding taxes more commonly apply to non-OECD countries. Splitting the variables into two categories provides an in-network rank (the new Tax Treaties subcategory) and an out-of-network rank (the Withholding Taxes subcategory) for a country's international tax policies.

This change benefits countries with large tax treaty networks.

CORPORATE INCOME TAX

The corporate income tax is a direct tax on the profits of a corporation. All OECD countries levy a tax on corporate profits, but the tax rates and bases vary significantly across countries. Corporate income taxes reduce the after-tax rate of return on corporate investment. This increases the cost of capital, which leads to lower levels of investment and economic output. Additionally, the corporate tax can lead to lower wages for workers, lower returns for investors, and higher prices for consumers.

Although the corporate income tax has a relatively significant impact on a country's economy, it raises a relatively low amount of tax revenue for most governments—the OECD average was 9.5 percent of total revenues in 2018.⁷

The *ITCI* breaks the corporate income tax category into three subcategories. Table 3 displays each country's Corporate Income Tax category rank and score along with the ranks and scores of the subcategories, namely, the corporate rate, cost recovery, and incentives and complexity.

Combined Top Marginal Corporate Income Tax Rate

The top marginal corporate income tax rate measures the rate at which each additional dollar of taxable profit is taxed. High marginal corporate tax rates tend to discourage capital formation and thus slow economic growth.⁸ Countries with higher top marginal corporate

income tax rates than the OECD average receive lower scores than those with lower, more competitive rates.

France levies the highest top combined corporate income tax rate, at 32 percent, followed by Portugal (31.5 percent) and Australia and Mexico (both at 30 percent). The lowest top marginal corporate income tax rate in the OECD is found in Hungary, at 9 percent. Six additional countries levy corporate tax rates below 20 percent: Ireland (12.5 percent), Lithuania (15 percent), and the Czech Republic, Poland, Slovenia, and the United Kingdom (all at 19 percent). The OECD average combined corporate income tax rate is 23.3 percent in 2020.⁹

Cost Recovery

Business profits are generally determined as revenue (what a business makes in sales) minus costs (the cost of doing business). The corporate income tax is intended to be a tax on these profits. Thus, it is important that a tax code properly defines what constitutes taxable income. If a tax code does not allow businesses to account for all the costs of doing business, it will inflate a business' taxable income and thus its tax bill. This increases the cost of capital, which reduces the demand for capital, leading to slower investment and economic growth.

⁷ Cristina Enache, "Sources of Government Revenue in the OECD."

⁸ OECD, "Tax Policy Reform and Economic Growth," OECD Tax Policy Studies, No. 20, Nov. 3, 2010, <https://www.oecd.org/ctp/tax-policy/tax-policy-reform-and-economic-growth-9789264091085-en.htm>.

⁹ OECD, "OECD Tax Database, Table II.1 – Statutory corporate income tax rate," updated April 2020, https://stats.oecd.org/index.aspx?DataSetCode=Table_II1.

TABLE 3.
Corporate Tax

Country	Overall Rank	Overall Score	Rate Rank	Rate Score	Cost Recovery Rank	Cost Recovery Score	Incentives/Complexity Rank	Incentives/Complexity Score
Australia	30	49.1	33	25.5	20	46.4	8	78.4
Austria	21	57.2	21	43.3	15	48.4	16	66.8
Belgium	13	65.9	21	43.3	3	71.2	20	60.8
Canada	23	55.4	27	38.0	24	43.9	9	78.0
Chile	32	46.4	21	43.3	36	24.2	14	67.8
Czech Republic	7	71.3	4	64.5	21	46.2	11	74.3
Denmark	16	62.7	15	53.9	27	42.4	12	73.0
Estonia	2	99.5	8	61.0	1	100.0	3	93.3
Finland	6	72.8	8	61.0	31	37.4	1	100.0
France	35	38.2	36	18.4	11	51.1	30	49.2
Germany	29	49.9	32	25.9	17	47.8	7	78.5
Greece	22	55.4	19	46.8	32	37.4	13	70.5
Hungary	4	80.6	1	100.0	33	36.3	31	48.7
Iceland	10	67.4	8	61.0	18	46.7	15	67.5
Ireland	5	78.6	2	87.6	29	41.1	22	59.8
Israel	20	57.9	18	50.3	13	50.0	28	52.1
Italy	27	50.6	29	33.3	5	62.1	32	43.5
Japan	36	33.3	31	26.4	34	35.6	35	39.9
Korea	33	44.4	28	34.4	9	51.2	36	37.4
Latvia	1	100.0	8	61.0	1	100.0	2	95.1
Lithuania	3	82.7	3	78.7	4	65.9	27	53.4
Luxembourg	26	51.7	20	43.5	10	51.1	33	43.3
Mexico	31	46.8	33	25.5	23	44.0	10	74.5
Netherlands	25	52.4	21	43.3	26	42.6	23	59.4
New Zealand	24	52.8	30	32.6	28	41.9	6	83.4
Norway	11	66.2	15	53.9	30	40.6	4	87.2
Poland	9	68.9	4	64.5	12	50.3	21	59.9
Portugal	34	38.3	35	20.2	7	53.4	34	42.3
Slovak Republic	18	61.2	12	57.4	19	46.6	26	54.1
Slovenia	12	66.1	4	64.5	22	45.9	25	57.2
Spain	28	50.1	21	43.3	25	42.8	29	51.3
Sweden	8	70.8	14	56.0	16	48.2	5	86.9
Switzerland	14	64.3	13	56.9	8	52.0	24	57.3
Turkey	15	63.9	15	53.9	14	49.3	17	66.0
United Kingdom	17	62.5	4	64.5	35	35.1	18	61.8
United States	19	58.1	26	40.5	6	57.0	19	61.7

Loss Offset Rules: Carryforwards and Carrybacks

Loss carryover provisions allow businesses to either deduct current year losses against future profits (carryforwards) or deduct current year losses against past profits (carrybacks). Many companies have investment projects with different risk profiles and operate in industries that fluctuate greatly with the business cycle. Carryover provisions help businesses “smooth” their risk and income, making the tax code more neutral across investments and over time.¹⁰

Ideally, a tax code allows businesses to carry over their losses for an unlimited number of years, ensuring that a business is taxed on its average profitability over time. While some countries do allow for indefinite loss carryovers, others have time—and deductibility—limits.

In 20 of the 36 OECD countries, corporations can carry forward losses indefinitely, though half of these limit the generosity of the provision by capping the percentage of losses that can be carried forward.¹¹ Of the countries with time limits, the average loss carryforward period is 8.4 years. Hungary, Poland, and Slovakia have the most restrictive loss carryforward provisions, at 50 percent of losses for five years (coded as 2.5 years).¹² The *ITCI* ranks countries better that allow losses to be carried forward indefinitely without limits than countries that impose time or deductibility restrictions on carryforwards.

Countries tend to be significantly more restrictive with loss carryback provisions than with carryforward provisions. Only the Estonian and Latvian systems allow unlimited carrybacks

of losses.¹³ Of the 11 countries that allow limited carrybacks, the average period is 1.7 years.¹⁴ The *ITCI* penalizes the 23 countries that do not allow any loss carrybacks.

Capital Cost Recovery: Machines, Buildings, and Intangibles

Businesses determine their profits by subtracting costs—such as wages and raw materials—from revenue. However, in most jurisdictions, capital investments—such as in buildings, machinery, and intangibles—are not treated like other regular costs that can be subtracted from revenue in the year the money is spent. Instead, businesses are required to write off these costs over several years or even decades, depending on the type of asset.

Depreciation schedules specify the amounts businesses are legally allowed to write off, as well as how long assets need to be written off. For instance, a government may require a business to deduct an equal percentage of the cost of a machine over a seven-year period. By the end of the depreciation period, the business would have deducted the total initial dollar cost of the asset. However, due to the time value of money (a normal real return plus inflation), write-offs in later years are not as valuable in real terms as write-offs in earlier years. As a result, businesses effectively lose the ability to deduct the full present value of their investment cost. This treatment of capital expenses understates true business costs and overstates taxable income in present value terms.¹⁵

10 Tibor Hanappi, “Loss carryover provisions: Measuring effects on tax symmetry and automatic stabilisation,” OECD Taxation Working Papers No. 35, Feb. 22, 2018, https://www.oecd-ilibrary.org/taxation/loss-carryover-provisions_bfbcd0db-en.

11 Countries with unlimited carryforward periods are coded as having periods of 100 years. Some countries restrict the amount of losses that can be deducted each year. For example, Slovenia only allows 63 percent of losses to be carried forward indefinitely. These restrictions are coded as the percentage of losses that can be carried forward or backward times the number of allowable years. Thus, Slovenia is coded as 63.

12 PwC, “Worldwide Tax Summaries: Corporate - Deductions,” <https://taxsummaries.pwc.com/australia/corporate/deductions>.

13 Estonia and Latvia do not have explicit loss carryover provisions. However, their cash-flow tax system implicitly allows for unlimited loss carryforwards and carrybacks.

14 PwC, “Worldwide Tax Summaries: Corporate - Deductions.”

15 Elke Asen, “Capital Cost Recovery across the OECD,” Tax Foundation, Apr. 8, 2020, <https://taxfoundation.org/publications/capital-cost-recovery-across-the-oecd/>.