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# A future-proof tax structure

Scenarios up to 2035



FORESIGHT  
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An independent think tank at the Riigikogu



# A future-proof tax structure

Scenarios up to 2035

Report

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- › [CentAR: The use of stimulus in the tax system to affect behaviour](#)
- › [CentAR: Development trends in the tax systems of Estonia and other countries](#)
- › [Magnus Piirits: Methodology for future-proof tax structure calculations \(in Estonian\)](#)

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# Foreword

Estonia has been placed top of the league table for tax competitiveness drawn up by the US think tank Tax Foundation for eight years now. This recognises that the Estonian tax system is simpler than those of other countries, more supportive of economic growth, and favourable to investment. The administrative burden of taxes is very low in Estonia because the system is simple with few exemptions, and it operates digitally.

Although the tax system built at the start of the 2000s has served Estonia well and there is no need to rush to make changes to it, it is still wise to keep an eye on trends and developments in digitalisation, inequality and climate change. The trend towards a smaller tax base and smaller revenues affects several of these developments, while the ageing population will put upwards pressure on social spending.

Global discussions about the future of tax systems and tax payments revolve around three topics. The first is the need for a better balance between how labour, capital and consumption are taxed.

The role of labour taxes in tax revenues cannot in future be as large as it has been, as the working age population is shrinking and self-employment is becoming more common. Many countries are looking for ways to make the taxation of employees and the self-employed more equal. There is also consideration of taxing different types of income more equally, whether that is income from work, income from business, financial income or rental income.

The second trend in the debate about the future of taxation focuses on the search for new tax bases. One of these that has recently been identified and introduced is carbon dioxide emissions, but could data perhaps be taxed in the future?

The third topic in the global discussions about tax concerns new digital solutions that can help improve the quality of tax administration, saving large amounts of money and time for taxpayers and for states. Could taxation in real time provide a new digital success for Estonia by eliminating the need for tax declarations and audits? There are many interesting opportunities in the balance of taxes and benefits, as the income tax owed by people could be reduced by the amount due to them in benefits. This would allow two separate bureaucracies to be combined into one.

Estonian society, like societies in other democracies, has public debates about taxes from time to time. It is sensible for these debates to be based on systematic information and if possible on calculations of what one or another tax change would mean for the state and for taxpayers. All this information can be found within this report.



I hope you will find this report inspiring!

Tea Danilov  
Head of the Foresight Centre





# Summary

The tax systems of developed countries are as a rule very stable and larger changes are made over a long time. However, the world does not stand still. Several trends are undermining

tax bases and tax receipts, while an ageing population will need more to be spent on social security.

#### The following trends affect tax revenues in European countries including Estonia:



The popularity of **self-employment is increasing**, and this is reducing receipts of labour taxes, especially social tax.



Labour taxes are becoming less able to fill the state coffers as the **working age population diminishes** and **automation increases**.



**Widening inequality of assets** is increasing dissatisfaction in society, which is increasingly expressed in obstruction of economic reforms and of major projects, holding back long-term economic growth and tax receipts.



**The climate crisis and the European Union's green transition** are increasing the role of environmental taxes in tax receipts, but the revenue received from them will decline as emissions decline.



New digital solutions in tax administration through **real-time taxation** are reducing the administrative burden and the need for auditing. **Offsetting taxation against benefits**, by reducing individual income tax liabilities by the amount due in state benefits for example, could substantially cut the administrative expenses of the state.

These trends lead to several questions about tax policy:

- Is it reasonable in the longer perspective to tax income from work differently to other sources of income?
- Should property taxes be a more important source of tax revenue than previously, given new ways of accounting for assets such as blockchain technology, and international efforts to promote information exchange and increase the transparency of taxation?

■ How can the negative effects of high environmental taxes on people's livelihoods and the competitiveness of businesses be mitigated?

■ How can new, more future-proof tax bases be found? Will data be taxed in future, as they are one of the main resources in the economy of the future and using them can have harmful side effects? Or should robots and artificial intelligence solutions be taxed, given that they will create the value in the economy of the future that was previously created by human labour?

## Comparison of the Estonian tax structure and those of other European Union countries:

- Consumption taxes play a larger role in the Estonian tax revenues than they do on average in Europe, providing 42% of tax revenues in Estonia in 2019 and 28% in the European Union on average.
- The tax burden on labour in Estonia is similar to the European Union average.
- Taxes on capital are a much smaller share of tax revenues in Estonia. Estonia taxes capital at one third of the average level of the European Union.

Following from these trends and key questions, this report lays out three different future scenarios for the tax system in Estonia:



### A digital world



### An equal start



### Environmental crisis

Each scenario focuses on one major challenge facing the tax system, these being adapting the tax system for the digital age, alleviating inequality, and supporting the green transition. In the real world the state will face all these three challenges at once, not each individually, and the different scenarios will need to be combined.

### A digital world

The digital world scenario asks how the tax system can adapt to the digital age. The outcomes sought from tax changes are a more equal distribution of the tax burden between those earning income from work and those earning it from capital, given the spread of self-employment, and finding sources of funds that can cover the increasing social costs of an ageing population in a digital age.

These goals suggest the following changes:

- Setting a rate of 30% for traditional corporate income tax.
- Raising the personal income tax rate to 30%.

- Raising the tax-free threshold to 1.25 times the minimum wage.
- Cutting the social tax rate to 13%.
- Introducing a real estate tax.

**These tax changes would bring the state additional income of more than 490 million euros in 2023, and 807 million euros in 2035. The tax burden would be larger by around 1.4% of GDP by 2035 than if the tax system of 2021 were maintained, at 37.0% rather than 35.6%.**

### An equal start

The equal start scenario asks how the tax system should react to deepening inequality in wealth. The outcomes sought from the tax changes are a reduction in inequality and the productive use of idle real estate. The additional income from property taxes could be used to fund a deepening deficit in the social system and to invest in meeting climate goals.

These goals suggest the following changes:

- Introducing a property tax.
- Making income tax progressive.
- Setting a ceiling for social tax.

**These tax changes would bring the state additional income of more than 430 million euros in 2023, and 600 million euros in 2035. The tax burden would be larger by 1% of GDP by 2035 than if the tax system of 2021 were maintained, at 36.6% rather than 35.6%.**

## Environmental crisis

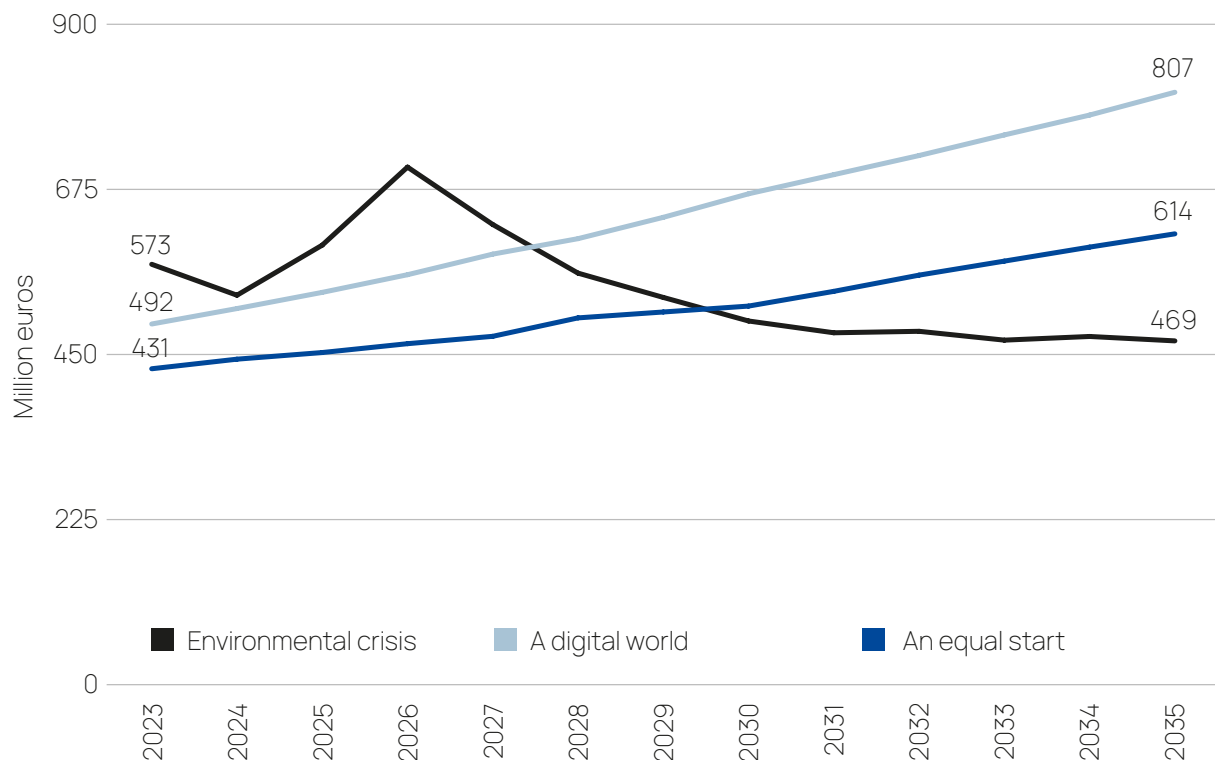
The environmental crisis scenario asks how the tax system could be made appropriate for the green transition. The outcomes sought from the tax changes are powerful encouragement for both businesses and households to make environmentally conscious choices, while at the same time encouraging the development

and export of green technologies and avoiding threats to livelihoods.

These goals suggest the following changes:

- Introducing a car tax.
- Extending the Emissions Trading Scheme to transport and to construction and housing.
- Setting a traditional corporate income tax of 15% and granting tax credits for research and development work.
- Linking the tax-free threshold for personal income tax to the minimum wage.

**These tax changes would bring the state additional income of more than 570 million euros in 2023, and 460 million euros in 2035. The tax burden would be larger by 0.8% of GDP by 2035 than if the tax system of 2021 were maintained, at 36.4% rather than 35.6%.**



Additional tax receipts under different scenarios above those from the current system, 2023-2035

Source: Calculations of the Foresight Centre





Trends that  
will affect the  
tax system of  
the future

## An ageing population will put pressure on social security

An ageing population in the Western world, and also in Asia, will pose a range of challenges:

- how to finance the welfare of those who are retired without putting too great a burden on those of working age;
- how to use the tax system to make work attractive for the elderly.

A key factor is how successfully society can integrate its older members into constantly changing forms of work. The fall in the number of people of working age will reduce the revenue received from labour taxes.

This can be partially compensated for by a rise in the retirement age and by people working after reaching that age, which will mean the number of people in employment falls more slowly than the number of people of working age does. Work in old age is affected very much by healthy life years.

The working age population in Estonia is forecast to fall to 687,000–721,000 people by 2035 from its current 776,000 (Puur et al. 2018)<sup>1</sup>. The average life expectancy of residents of Estonia and the number of people aged over 65 will meanwhile both rise strongly, so that there will be 16% more people in that age group in 2035 than in 2021.

As average life expectancy increases, the healthcare costs of the elderly will be a lot larger in the future. The forecast by the Foresight Centre predicts a deficit of 900 million euros in the healthcare system by 2035, or about 1.6% of GDP<sup>2</sup>.

The need for long-term care services will also increase substantially. The rise in the number of people in all of the older age groups and the need to alleviate already the major burden of care that is causing people to stay out of the labour market and lowering their quality of life mean that the share of GDP spent on funding long-term care will need to rise from the current 0.7% to 2.2% (European Commission 2021<sup>3</sup>). This will mean spending 850 million euros more in 2035 than at present.

### The funding requirement for social security in Estonia will be around 2.5 billion euros more than it is at present by 2035.

Although there is no risk of the pension system falling into deficit, the sufficiency of pensions will become a major problem. The pension system will need a further billion euros by 2035 to ensure that the state pension is held at 40% of the average salary.

These trends will put pressure on the state budget as new sources of revenue will need to be found or spending will need to be reduced in some other areas.

<sup>1</sup> Puur et al. (2018). *Hõivatud hõivestsenaariumide ja EIA rahvastikuproгноosi taustal*. Foresight Centre.

<sup>2</sup> Foresight Centre (2020). *The Future of Healthcare in Estonia. Scenarios up to 2035. Summary*. Tallinn: Foresight Centre. [https://arenguseire.ee/wp-content/uploads/2021/06/2020\\_the\\_future\\_healthcare\\_in\\_estonia\\_summary.pdf](https://arenguseire.ee/wp-content/uploads/2021/06/2020_the_future_healthcare_in_estonia_summary.pdf)

<sup>3</sup> The 2021 Ageing Report: Economic and Budgetary Projections for the EU Member States (2019–2070) (Institutional Paper 148) [Text]. Brussels. [https://ec.europa.eu/info/publications/2021-ageing-report-economic-and-budgetary-projections-eu-member-states-2019-2070\\_en](https://ec.europa.eu/info/publications/2021-ageing-report-economic-and-budgetary-projections-eu-member-states-2019-2070_en)

## New forms of work and automation will reduce the labour tax base

New forms of work such as **platform work** blur the boundary between employment relations and self-employment. In platform work, people provide their labour and the value created from it directly to the end consumer through an intermediating platform. As the provider of labour in this situation has the characteristics of being both self-employed and an employee, it is unclear whether the platform is an employer, and so liable for tax, or not. Self-evidently the answer to this greatly affects the size of the tax base for labour taxes, as income and social tax from wages for work in Estonia are substantially larger than income tax from business earnings<sup>4</sup>.

**The replacement of employment under employment contracts with service contracts will most affect social tax by substantially reducing the tax base and so also revenues.**

**Cross-border remote work** will sharpen international competition for labour taxes, as companies can pay their programming teams, say, in a country with lower labour costs and taxes, meaning they also pay labour taxes in that country without the workers needing to move there or the company needing to make large investments to set itself up in that country.

Tax revenue not being received has also become a problem for Estonian society through small businesses avoiding paying wages and labour taxes; income that is essentially received for work is taken out as dividend income with low tax rates, while personal expenses

not connected to the business are classed as business expenses, avoiding VAT and labour taxes.

The development of **automation and artificial intelligence** will increasingly narrow the set of jobs where human labour is needed. How these processes will affect labour taxes is not always directly clear, as in some cases automation may augment human labour, meaning it will result in fewer jobs in production, but the productivity of the remaining jobs will increase substantially and the purchasing power afforded by them will indirectly support the employment in some other area of those who have lost their jobs. In cases where automation does not augment jobs but replaces them entirely, the outcome for total employment and for labour tax receipts is less good<sup>5</sup>.

**Collecting taxes in the digital economy will prove harder, but there will also be new opportunities**

The digital economy already accounts for more than 15% of the global economy and it is growing faster than the rest of the economy. There are however no international borders in the digital world in the way they are understood in the physical world. For taxation purposes this means that where the production and consumption of goods and services happens needs to be defined, together with which country has the right to tax the resulting turnover.

Digital administration means that it is easier than ever before to move the establishment of companies and other bodies together with intellectual property to jurisdictions with more favourable tax systems.

<sup>4</sup> Masso et al. (2018). Resilience of Estonian social protection system to future of work scenarios.

<sup>5</sup> Acemoglu and Restrepo (2020). Robots and jobs: Evidence from US labor markets. *Journal of Political Economy*, 128(6), pp 2188-2244.

The **spread of cryptocurrency** opens new opportunities for hiding cash flows from countries and tax authorities, and for paying undeclared wages electronically without the hassle of needing cash. All this allows companies to optimise their tax liabilities and makes tax collecting harder and harder for states.

At the same time, the digitalisation offers new opportunities for making tax collection more efficient. An important trend in corporate taxation is the move towards **real-time reporting of taxes**, so that instead of companies filling in declarations and sending information in them to tax authorities, the tax authorities start to hoover up the data they need automatically in real time<sup>6</sup>.

Offsetting **taxes and benefits** will in future allow

states to make substantial savings in operating costs, as they will not need to maintain separate state institutions for handling benefits and taxes. The income tax somebody is liable for could for example be offset against the state benefits due to them.

The technologies needed for real-time administration of taxes could in future open up new opportunities for **better targeting of tax policy**. It could be possible for VAT reductions to be aimed at particular target groups for example so that data on their purchases from shops and the VAT paid by them would go directly to the tax authorities, which would identify them as falling within a target group and return the amount of the tax break directly to their bank account. This could be used for example to compensate vulnerable groups in society for price rises.

The OECD/G20 project Base Erosion and Profit Shifting (BEPS), which 137 countries have joined, is attempting to eliminate tax evasion through national tax legislation and double taxation agreements between countries, which have been used by multinational businesses to reduce their tax liabilities substantially. The tax revenues lost through this are estimated at 86–210 billion euros a year (OECD 2017)<sup>7</sup>.

## Inequality in wealth is increasing

Long-term trends can be identified in several countries that have led to calls for property to be taxed more than it has been until now. One of these trends is **the decline in income from work and the increase in income from capital** in the total income of advanced economies. This trend started in the 1980s, and has been increasing in the past couple of decades. Increasing wealth inequality has been partially driven by **rising real estate prices** in the larger towns and cities. An important factor in the past five years has been the **large-scale issuing of money by central banks**, which has increased the value of financial and non-financial assets, and widened the gap between the haves and have-nots.

## The issue of currency by central banks and the rise in the prices of assets have caused the gap to widen between the haves and the have-nots

Although inequality between incomes has declined in recent years in Estonia, it remains greater than in the Nordic countries, with which people in Estonia like to compare themselves. The distribution of incomes in Estonia before taxes and social benefits is similar to that in Sweden, but a much smaller share of income is redistributed from the wealthier members of society to the poorer.

<sup>6</sup> Deloitte (2020). Real-Time VAT Reporting – It's Not Near, It's Here. <https://www2.deloitte.com/ie/en/pages/tax/articles/real-time-vat-reporting-its-not-near-its-here.html>

<sup>7</sup> OECD (2017). Background Brief: Inclusive Framework on BEPS. <https://www.oecd.org/tax/beps/background-brief-inclusiveframework-for-bepsimplementation.pdf>



Inequality in wealth has increased over time, and the most recent data from 2017 show that the net assets of the wealthiest 10% of households accounted for 58.1% of the net assets of all households.

### **The climate crisis will argue for environmental taxes to be raised, but the income received from them will decline as emissions decline**

Emissions causing climate change are an external cost that is not covered by prices in the free market. Tax policy can be one instrument for adjusting prices so that they reflect the damage caused by climate change. The consequence will be that goods that cause emissions will become more expensive than those with no emissions, pushing consumption and investment decisions towards more environmentally-friendly choices.

In estimating the potential of environmental taxes as a source of tax revenue, it is necessary to distinguish between the short-term and long-term outlooks. In the short term, environmental taxes will trend upwards. As their aim though is to change behaviour, by replacing fossil fuel combustion with more environmentally-friendly sources of energy, the long-term outlook is for the tax base of current environmental taxes to shrink. It is possible that this will cause taxes on fossil fuels and CO<sub>2</sub> emissions to be replaced by energy taxes with a more broadly defined tax base.

**Environmental taxes that make consumption more expensive are regressive, as they will hit families with lower incomes harder.**

### **These trends lead to several questions about tax policy:**

- Is it reasonable in the longer perspective to tax income from work differently to other sources of income?
- Should property taxes be a more important source of tax revenue than previously, given new ways of accounting for assets such as blockchain technology, and international efforts to promote information exchange and increase the transparency of taxation?
- How can the negative effects of high environmental taxes on people's livelihoods and the competitiveness of businesses be mitigated?
- How can new, more future-proof tax bases be found? Will data be taxed in future, as they are one of the main resources in the economy of the future and using them can have harmful side effects? Or should robots and artificial intelligence solutions be taxed, given that they will create the value in the economy of the future that was previously created by human labour?

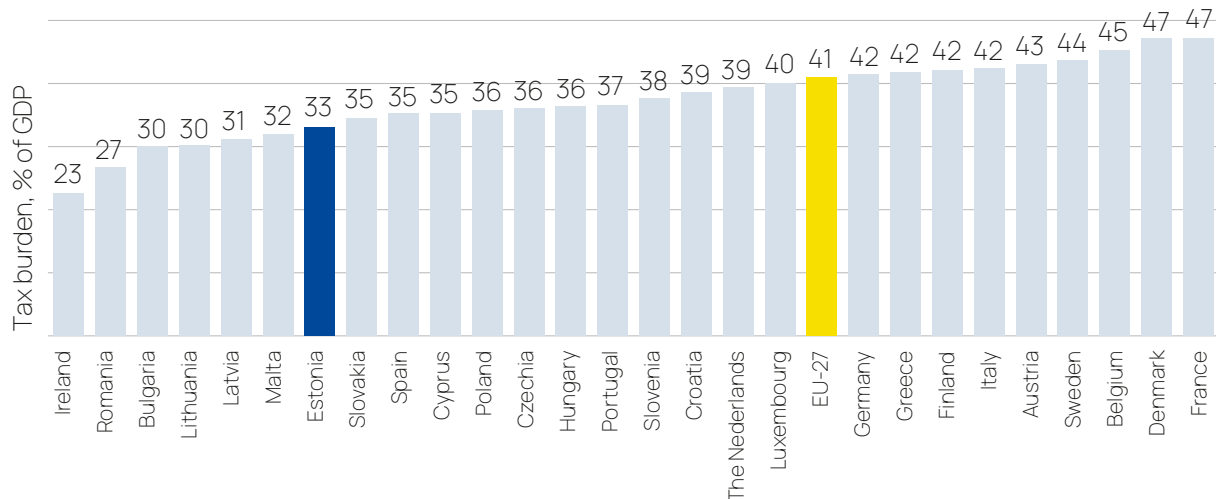


# The tax burden and the tax structure in Europe and Estonia

Estonia's simple and growth-oriented tax system was created in 1994. There are fewer exemptions in the Estonian tax system than in other countries (Eesti Pank 2017)<sup>8</sup>, and the revenue forgone is only 1% of GDP (see Figure 4).

The tax burden in Estonia, which is tax revenues as a share of GDP, has increased a little over

the past two decades from 31.1% in 2000 to 33.1% in 2019 (see Figure 1). This is still one of the lowest in the European Union, and similar to the OECD average of 34%. The level of benefits and services provided is also reflected by the tax burden, and should also be considered in a comparison of the tax burden.



**Figure 1.** Tax revenues as a share of gross domestic product, 2019  
Source: Eurostat

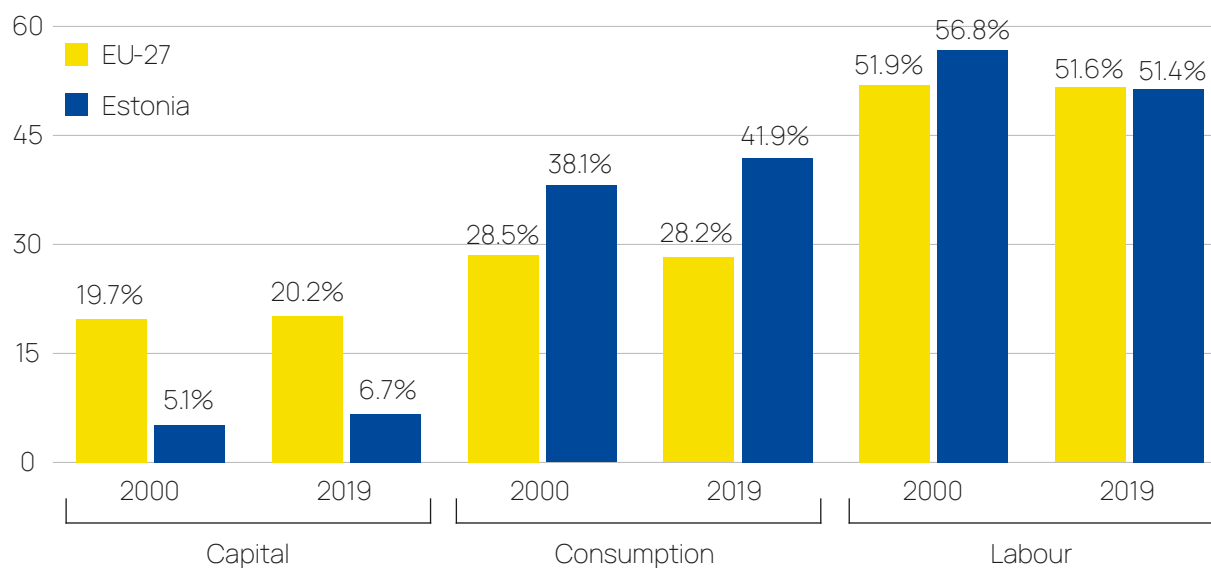
The structure of tax revenues in the European Union has remained very stable for the past two decades. The tax structure in Estonia meanwhile has shifted in recent decades from taxation of labour to taxation of consumption. The share of Estonian labour taxes is currently similar to the average level in the EU, but consumption taxes, primarily VAT and excises, play a much larger role in the Estonian tax structure than they do on average in Europe (see Figures 2 and 3).

Estonia stands out for its efficiency in collecting VAT, as a much larger share of potential tax liabilities are collected than in other countries, and the losses from tax evasion, tax fraud and tax arbitrage are small.

The share of capital in taxes collected has fallen in the European Union on average and in Estonia, but it is notable that Estonia taxes capital at one third of the average level of the European Union.

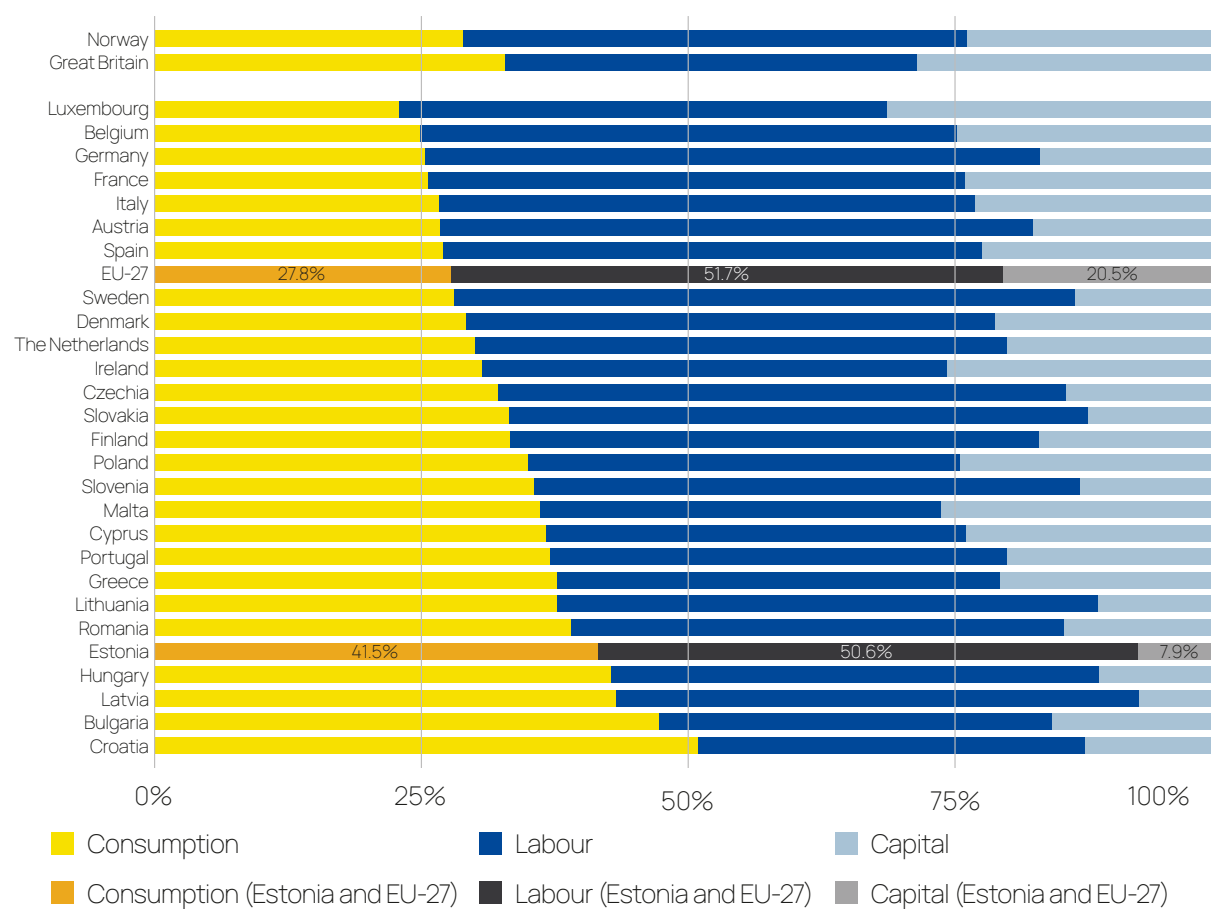
**Taxes on consumption play a much larger role in tax revenues in Estonia than they do in other European countries, while taxes on capital play a much smaller part. Capital taxes include taxes on property, which is land tax in Estonia, corporate income tax, and taxes on dividends and rental income.**

<sup>8</sup> Eesti Pank (2017). *Estonian Economy and Monetary Policy*. No 2/2017.



**Figure 2.** Distribution of tax revenue between consumption, labour and capital in 2000 and 2019

Source: Anspal et al. 2021



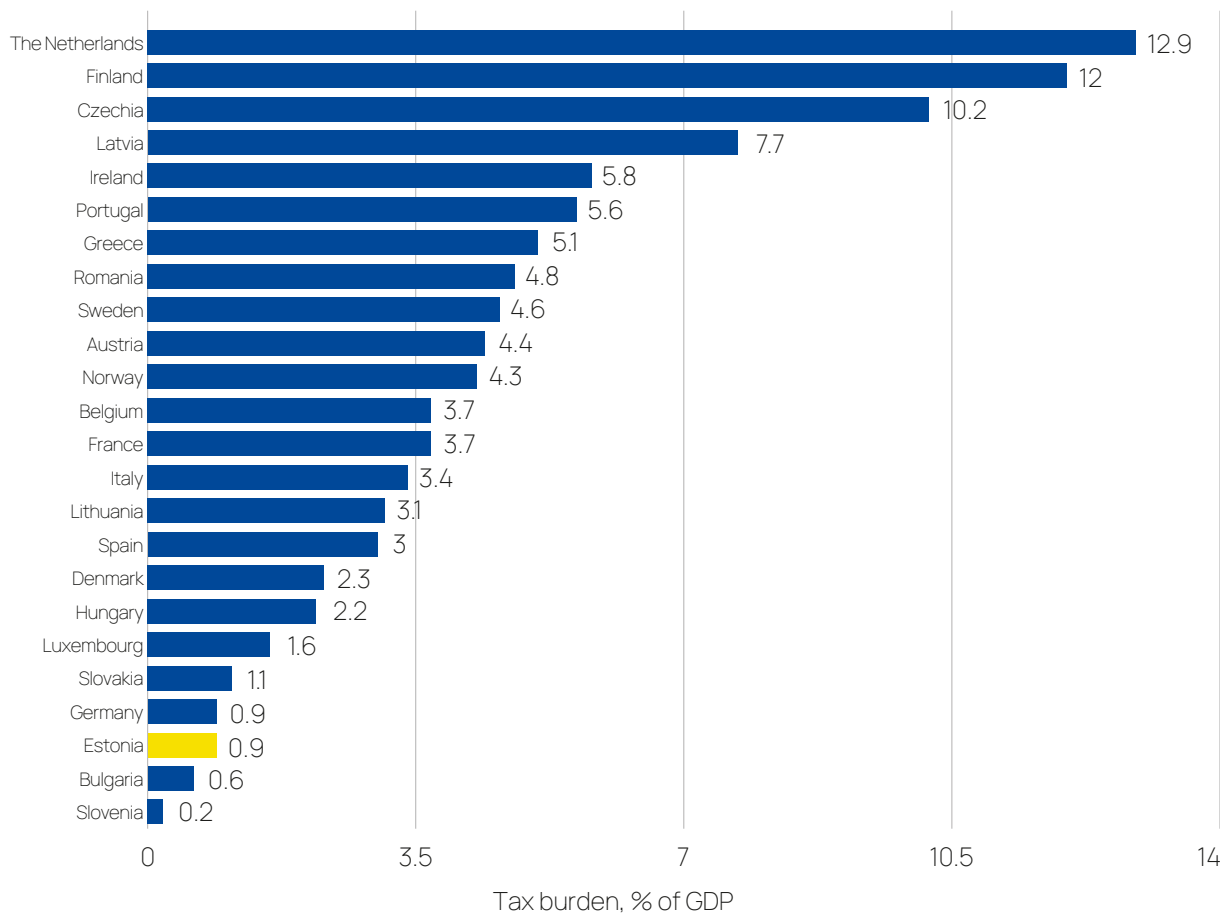
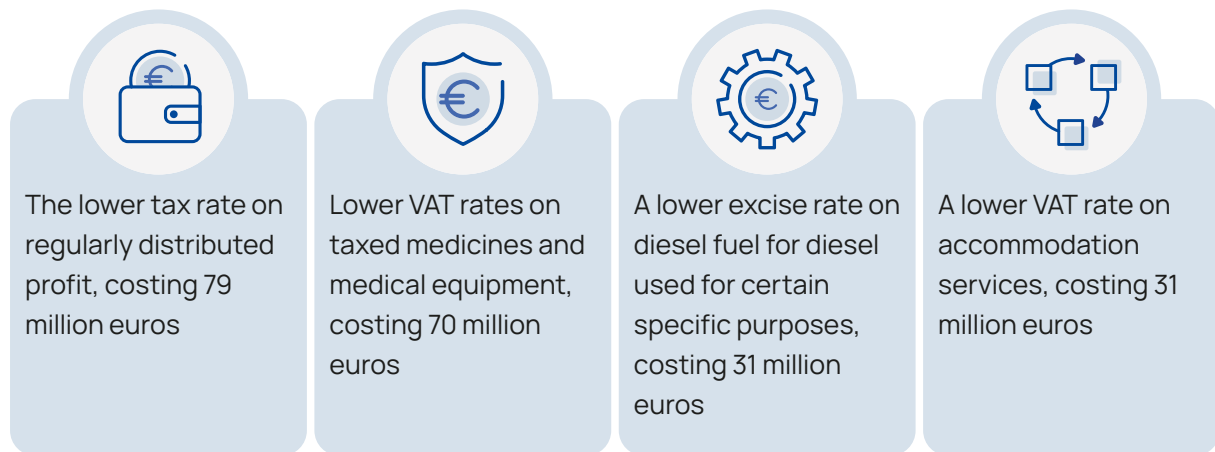
**Figure 3.** Distribution of tax revenues across tax bases by type, 2019 (% of tax revenues)

Source: European Commission, Eurostat

Tax revenues are reduced by various tax benefits and exemptions, which are referred to as forgone revenues. Revenues forgone in the Estonian state budget in 2021 were 301.9 million euros, which was 1.1% of GDP, up from 0.9% in

2019, and 3.7% of tax revenues. Estonia was one of the three countries in the European Union with the smallest revenue forgone as a share of GDP in 2019.

#### The largest forgone revenues in Estonia are:



**Figure 4.** Revenue forgone as a share of GDP in selected European countries, 2019

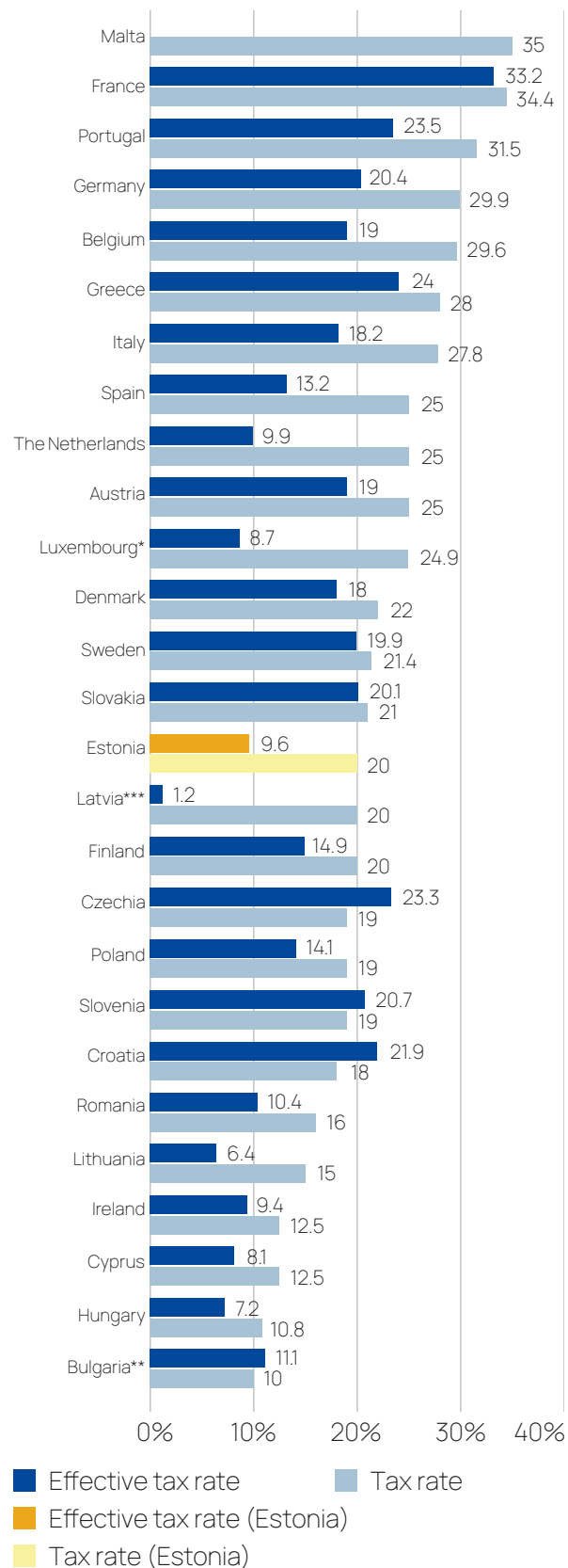
Source: Global Tax Expenditures Database



The estimate of forgone revenues is imputed and does not necessarily express income that the state would certainly receive if the tax benefits or exemptions were removed. Eliminating tax exemptions could cause changes in behaviour and distribution, so higher diesel excise may reduce consumption for example, while raising VAT on medicines could put them out of some people's reach, especially elderly people on low incomes.

The calculation of tax exemptions uses the concept of the effective tax rate, which shows how much of the tax base is actually taken in taxes. Exemptions from corporate income tax are widespread for example, meaning the effective tax rate in many countries is substantially lower than the rate in the legislation (see Figure 5).

The corporate income tax rate in Estonia of 20% is close to the European Union average of 22%, but undistributed profit is exempt from tax, so the actual tax collected is 9.6% of corporate profits, and this is the effective tax rate. This means the Estonian effective tax rate is one of the six lowest in the European Union. The Estonian corporate income tax system can be considered relatively efficient, as a similar system in Latvia with a 20% tax rate and a tax exemption for undistributed profit gives a much lower effective rate of only 1.2% of corporate profit.



**Figure 5.** Tax rate on corporate profits and effective tax rate, 2019

\* – data for 2018; \*\* – data for 2017;

\*\*\* – the system was changed in 2018

Source: Global Tax Expenditures Database

# Reactions of other countries to trends



Like Estonia, other countries are trying to modernise their tax systems to resolve one problem or another. There follows a description of the main changes by tax type to the tax systems in European Union countries that are similar to that of Estonia.

## Labour taxes

The changes made to personal income tax in the countries of the European Union in recent

years have notably moved towards a more even distribution of taxation of income and to reforms intended to support employment, meaning a smaller tax burden for those earning income. Equally, the tax rates in the higher tax bands have been lowered so that people in them will have less incentive to hide their income and so tax revenues will rise.

### EXAMPLES OF CHANGES TO MAKE THE DISTRIBUTION OF TAXATION OF INCOME MORE EVEN AND SUPPORT EMPLOYMENT

**Lithuania** (2019): transition from a system with a single personal income tax rate of 15% to a two-band income tax.

- Up to 7 times the average wage: 20%
- Above 7 times the average wage: 32%

**Latvia** (2019): transition from a system with a single personal income tax rate of 15% to a three-band income tax.

- Up to 1.4 times the average wage: 20%
- Up to 6.5 times the average wage: 23%
- Above 6.5 times the average wage: 31.4%

**Poland** (2019): a solidarity fee of 4% was created on incomes above 223,000 euros a year.

**The Netherlands, Ireland, Finland, Belgium, Spain, Sweden:** increases in the tax-free threshold for **people earning low incomes**, increases in tax credits for income from work, and shifts in tax bands towards higher income levels.

**Austria:** a social tax rebate for **workers on low wages**.

**Hungary:** social tax paid by the employer was cut by 2% from 19.5% to 17.5%.



**Poland, Lithuania, Slovakia, Ireland, Austria, Germany, Estonia:** additional tax-free income allowance and tax credits for **families with children**.

**The Netherlands, France, Finland, Sweden, Latvia, Hungary:** higher tax-free thresholds for **older people**.

**Greece, Poland, Slovenia, Denmark:** tax benefits for **young workers** such as a cut in the tax rate on the starting tax band.

**Sweden:** a lower social tax rate for **new entrants to the labour market and young workers**.

**Slovakia, Italy:** a cut in the income tax rate on the **self-employed earning less than 100,000 euros a year**.

## EXAMPLES OF REDUCTIONS IN THE TAX BURDENS FOR GROUPS EARNING HIGHER INCOMES

### Personal income tax:

- **The Netherlands:** transition from a three-band system to two bands.
- **Sweden:** abolition of the highest band.
- **Greece:** a cut in the tax rate on the three highest tax bands.

### Social tax:

- A **social tax ceiling** was set in **Lithuania** at seven times the average annual salary and a tax-free threshold at 1.6 times the minimum wage. At the same time social tax in Lithuania became entirely an employee tax from 2019. The social tax rate was cut as part of the reform that increased the share of income tax in tax revenues, and changed the bands, and reduced the share of social tax.
- A tax-free threshold of 30% of salary over five years was applied in the **Netherlands** for **highly qualified foreign specialists**.

## Capital taxes

The **personal capital income** taxation levels have not changed very much in OECD countries as a whole, but examples of changes to the tax parameters can still be found in certain

countries. A lot of the variation comes in how different countries treat various types of capital income such as interest income, rental income, dividends, and income from the disposal of real estate.

### EXAMPLES OF MOVES TO HARMONISE THE TAXATION OF INCOME FROM WORK AND INCOME FROM CAPITAL

**Slovenia** raised the tax on rental income from 25% to 27.5%.

**Lithuania** applied the new progressive income tax to interest income and income from the disposal of real estate as well.

**Poland's** new solidarity fee, which is a tax of 4% on income above 1 million zlotys, or about 223,000 euros a year, is also applied to capital income.

### EXAMPLES OF CUTS IN THE TAXATION OF CAPITAL INCOME

**Greece** cut its tax rate on dividend income from 10% to 5% to encourage investment.

**Portugal** cut the income tax on rental income from 28% to 10%.

**Corporate income tax** rates have been **rending downwards** in OECD countries, especially in those countries where they were earlier high. The tax rate was above 30% in 23 countries in 2000, but in 2020 it was this high only in two countries.

Although tax rates have come down, corporate income tax has contributed a stable share of tax revenues. The cuts in rates have been partly offset by a broadening of the tax base and the fight against tax evasion.

Lower tax rates for small and medium-sized businesses are common in the OECD, as are tax breaks to encourage investment and innovation.

**The global downward trend in corporate income taxes is probably on the turn, given international efforts to close tax loopholes and the need to reduce the role of labour taxes in funding government spending.**

## EXAMPLES OF BENEFITS FOR SMALL BUSINESSES AND FOR INNOVATION

**The Netherlands** cut the corporate income tax rate on businesses with taxable income of up to 200,000 euros from 19% to 16.5%.

**Slovakia** cut the corporate income tax rate on businesses with turnover of up to 100,000 euros from 21% to 15%.

**Hungary** cut the corporate tax for small businesses from 13% to 12%.

**Portugal** and **Poland** raised the income criteria for defining businesses as small businesses.

**Finland** introduced a temporary accelerated depreciation for purchases of new machinery and equipment.

**Germany** introduced a new 25% tax credit for R&D investments of up to 2 million euros.

**Ireland** and Slovakia increased their R&D tax credits, while Italy broadened the set of activities for which tax credits are available.

In **Italy**, the range of activities to which the tax credit applies was expanded.

The most important change in **property taxes** in several countries has been a recent rise in real estate tax. Taxation of real estate can be increased in various ways, as the tax-free limit for non-commercial real estate was lowered in Lithuania from 220,000 euros to 150,000 euros, and the tax rate on commercial real estate was raised from 0.3% to 0.5%.

Property taxes in France were reorganised to fall more heavily on real estate, when the net asset tax, known as the solidarity tax on those with assets of over 1.3 million euros, was abolished in 2018 and replaced with a real estate tax.

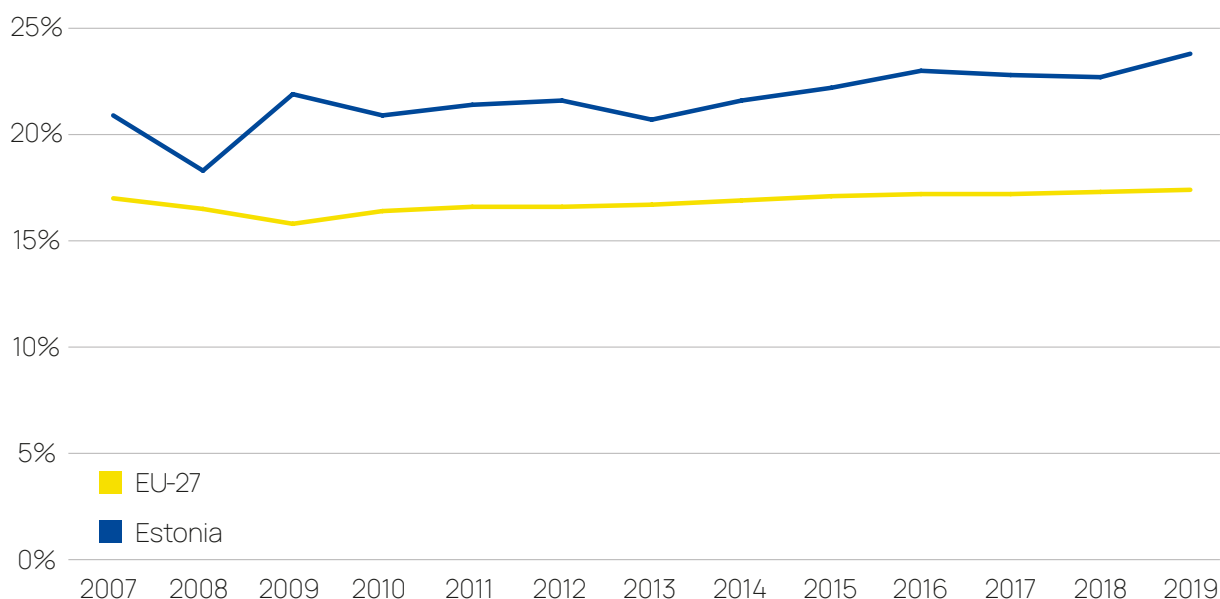
Several countries raised taxes and fees on real estate transactions, as the Netherlands lifted them from 6% to 7%, and Ireland raised them from 6% to 7.5%.

## Consumption taxes

The effective rate of consumption taxes in European Union countries has been trending upwards over the past decade, from 15.7% in 2009 to 17.4% in 2018 (see Figure 6). Several countries in Europe have raised their VAT rates from where they were before the economic crisis of 2009. The biggest rises have been in Hungary from 20% to 27%, in Greece from 19% to 24%, and in Spain from 16% to 21%.

Not all changes have led to an equivalent increase in actual tax receipts, as the average effective rate of consumption taxes in the European Union remains well below that in Estonia.

**The average VAT rate in the countries of the European Union rose from 2009 to 2015, but after that it has been stable at 21.5%.**



**Figure 6.** Effective consumption tax rates in Estonia and the EU-27 countries, 2007–2019

Source: European Commission, DG TAXUD

The most eye-catching trend in VAT in recent years has been the increasing growth in environmental taxes on the consumption of energy, fuels and other products with a serious environmental impact, and this trend has also raised the levels of consumption taxes in the European Union.

**Estonia has a higher tax rate than the European Union average on energy, fuels, pollution and resource use, and a lower tax rate than the EU average on transport.**

## EXAMPLES OF RISING ENVIRONMENTAL TAXES

Fuel excise was raised in 2020 in six OECD countries, among them **Finland**, **Latvia** and **Lithuania**.

Higher taxes for electricity consumption by corporate clients were introduced in the **Netherlands** and **Ireland**, while **Latvia** set a new network fee.

**The Netherlands** set a floor for the price of a tonne of CO<sub>2</sub>, so that when the price in the EU Emissions Trading Scheme falls below a certain level, the gap between the price and the floor is taken as a domestic carbon tax.

**Germany** launched a new domestic emissions trading scheme for transport and heating in 2021, with the revenues from it used to fund climate and social programmes. A broader package of environmental measures has also been passed, with higher taxes on flights, lower VAT for long-distance rail transport, and tax benefits for heating buildings and improving energy efficiency.



# Future scenarios for the tax system



This report presents three separate future scenarios for the tax system that are derived from the trends covered in the first part of it.

The scenario analysis asks:

- How the tax system can be adapted to the digital age
- How the tax system should react to deepening inequality
- How the tax system could be made appropriate for the green transition

In the real world the state will face all these three challenges at once, not each individually, and the different scenarios will need to be combined. However delineating the scenarios

into pure form gives a better picture of the advantages and shortcomings of each one and of the tensions between the different choices for development.

All of the scenarios estimate separately how future-proof the changes they propose are, meaning their ability to bring in funds to the state budget over the long term. It should certainly be noted that the calculations presented depend on the assumptions about how one or other tax would be designed. In the actual process of designing policy, it may become necessary to change or extend the assumptions, in which case the results could also change.





Scenario:  
A digital world





## Scenario: A digital world

Digital platforms have caused a revolution in the economy and the labour market as workers have become service providers, or independent contract partners. As they are legally treated as businesses though, these workers have weak social security provision, as they do not for example automatically have medical insurance and their social tax contributions are substantially reduced. The steady decline in income from work within the structure of people's income and the rise in other income from business, financial assets, property rent and similar has led to a long-term goal for 2050 of abandoning social tax completely and funding social security from sources that better reflect the increasingly varied nature of incomes.

Digital and start-up businesses, whose main asset is highly qualified people, benefit greatly from a reduced social tax burden, but they need to take on an increased income tax burden so that the state can meet its social budget. Estonia has replaced the traditional corporate income tax under the international minimum income tax agreement, and so a major part of the additional income tax burden falls exclusively onto those companies that make a profit. For this reason the new tax system is considered to be fairer than before, at least in those sectors.

The steep cuts in social tax, and its disappearance over the long term, also mean that the right to social security is divorced from the requirement to make monthly minimum payments of social tax. This is good news for the increasing number of platform workers and other independent service providers with irregular income, including creative workers.

This change does not however resolve several other concerns about the development of the

digital economy, such as the reduction in the tax base through cross-border remote work, or the way that international digital companies operating in the Estonian market do not pay income tax to the Estonian state. As the digital businesses are global and Estonia is small though, there is no domestic solution such as a local digital tax, as this would simply lead businesses to stop operating in the Estonian market. Estonia works hard in international organisations to argue that solutions worked out between countries should be best suited for Estonia.

Estonia tries to see cross-border remote work as an opportunity rather than a problem. Someone working for an Estonian company in, say, Belarus or India could become an Estonian e-resident and then find it easier to set up a business in Estonia and invoice Estonian clients than to provide services from their own home country.

A serious problem for the government is the rise in social costs as the population ages, and in preparation for this they are looking not only at reorganising social tax, but also at finding additional sources of revenues. Attention falls on real estate tax, which is considered the most secure tax base, given how easy digital business and changed lifestyles have made it to hide financial assets.

From all this, the changes made in 2023 are the following:

- Setting a rate of 30% for traditional corporate income tax.
- Raising the personal income tax rate to 30%, while raising the tax-free threshold at the same time.
- Introducing a real estate tax.
- Cutting the social tax rate to 13%.

The outcomes sought from the tax changes are a more equal distribution of the tax burden between those earning income from work and those earning it from capital, given the spread of self-employment, and finding sources of funds that could cover the increasing social costs of an ageing population in a digital age.

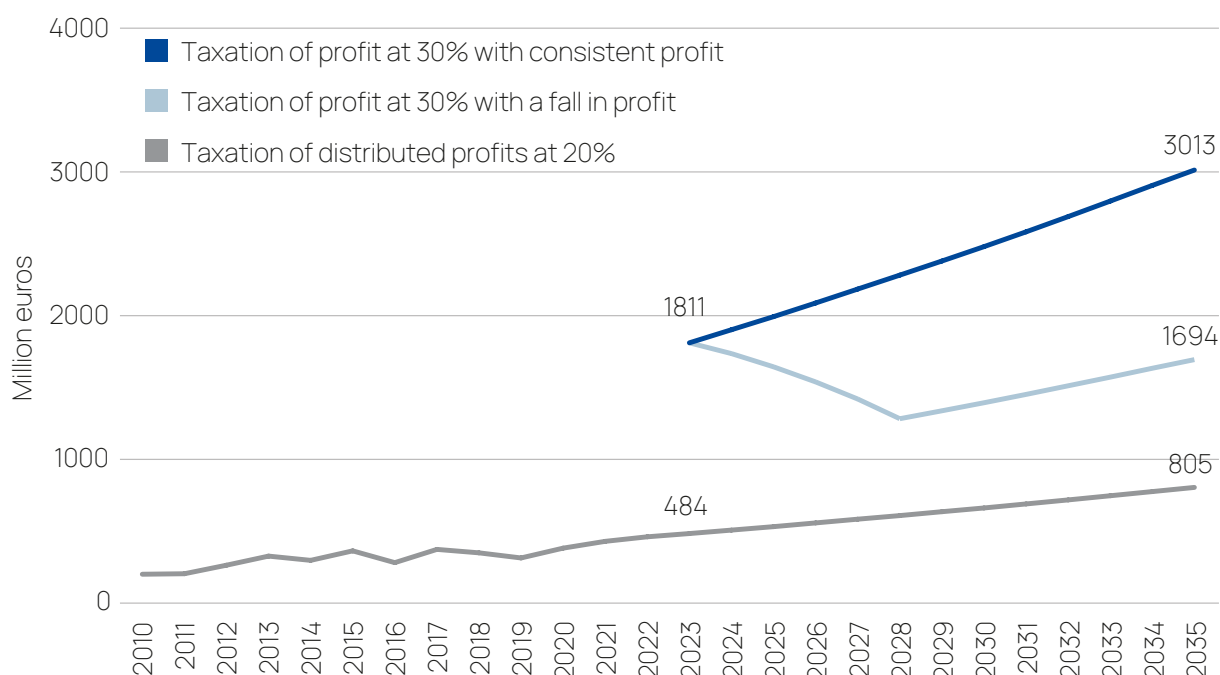
### **A traditional corporate income tax of 30%**

There is a transition from 2023 to a traditional corporate income tax that taxes not only profit, but also undistributed profit. The change increases the tax burden for companies and receipts of income tax, as the tax burden is shifted from labour to businesses.

Although Estonia has been forced to take this step under international agreements on harmonising the tax base and the introduction of global minimum corporate income tax levels, the internationally harmonised rules are still useful in helping maintain the revenue base and stopping capital being transferred to countries with more favourable tax regimes.

The tax changes see profits taxed at 30% from 2023, with a sharp cut at the same time in the social tax rate. Not only does this change the tax burden on labour, but it also seriously reduces the incentive for people to become companies and pay their salaries as dividends.

Taxation of total corporate profits at 30% increases the receipts of corporate income tax in 2023 almost fourfold, adding more than 1.3 billion euros in revenues. If profits do not start to fall, more than 2.2 billion euros a year will be received in additional revenue in 2035. It is realistic to assume though that the taxation of total profit will lead to a fall in declared profits. Assuming that profit falls as a share of GDP from 20% in 2019 to, say, 10%, tax revenues from corporate income tax would double by 2035 to around 900 million euros (see Figure 7).



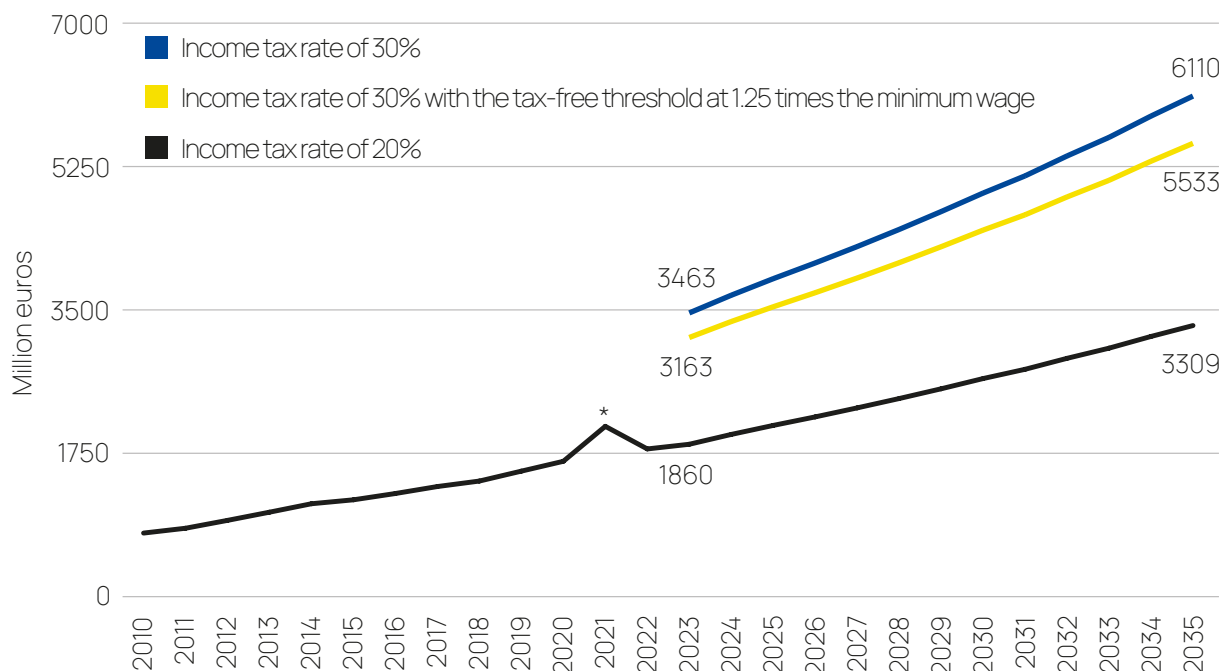
**Figure 7.** Fiscal impact of income tax for legal entities, 2010-2035

Source: Calculations of the Foresight Centre

## Personal income tax at 30% and a rise in the tax-free threshold

The personal income tax rate is raised to 30% to create the fiscal space for a steep cut in social tax. As personal income tax has a wider tax base than social tax, it accounts better for all forms of income, not just income from work. To make life easier for the low-paid, the tax-free threshold is linked to the lowest wages so that the threshold is always equal to 1.25 times the minimum wage. This stops net incomes from falling. It is assumed that net incomes do not fall for people on higher incomes either.

Raising the personal income tax rate from 20% to 30% would increase state revenues by 1.6 billion euros in 2023. At the same time, raising the tax-free threshold to 1.25 times the minimum wage, which was 730 euros in 2021, would reduce revenues by 300 million euros. This means the total additional income would be 1.3 billion euros in 2023 and 2.2 billion euros in 2035.



**Figure 8.** Fiscal impact of personal income tax, 2010-2035

\* – The larger tax receipts in 2021 come from the extraordinary income tax paid on withdrawals from the mandatory funded scheme.

Source: Calculations of the Foresight Centre

## A large cut in social tax

Raising the personal and corporate income tax rates to 30% would increase state revenues by a total of 2.6 billion euros in 2023. Receipts from social tax in 2023 are forecast at 3.7 billion euros. This is a difference of **1.1 billion euros**, and so social tax would need to continue to cover that amount at first. Receipts of 1 billion euros need a social tax rate of 10%.

It should be remembered that if corporate profits decline as a share of GDP in the coming years because of changes to the income tax system, the deficit will be larger, and so social tax of 10% would remain insufficient. If profits fall by somewhere between the maximum and minimum variants shown in Figure 7, meaning a fall of around a quarter by 2035, the deficit would be covered by a social tax rate of 13%. This means that the social tax rate can be cut to 13% from 2023.

## EXAMPLES

The employer of someone with a gross wage of 1000 euros pays 330 euros in social tax with a social tax rate of 33%, and 130 euros with a tax rate of 13%.

The employer of someone with a gross wage of 1750 euros, which is the forecast average wage in 2023, pays 578 euros in social tax with a social tax rate of 33%, and 228 euros with a tax rate of 13%.

The employer of someone with a gross wage of 3000 euros pays 990 euros in social tax with a social tax rate of 33%, and 390 euros with a tax rate of 13%; for the net income to remain the same the gross wage would have to be 3429 euros, meaning the total monthly labour costs would be 115 euros less ( $990 - (3429 - 3000) - 3429 \times 13\%$ ).

## Real estate tax

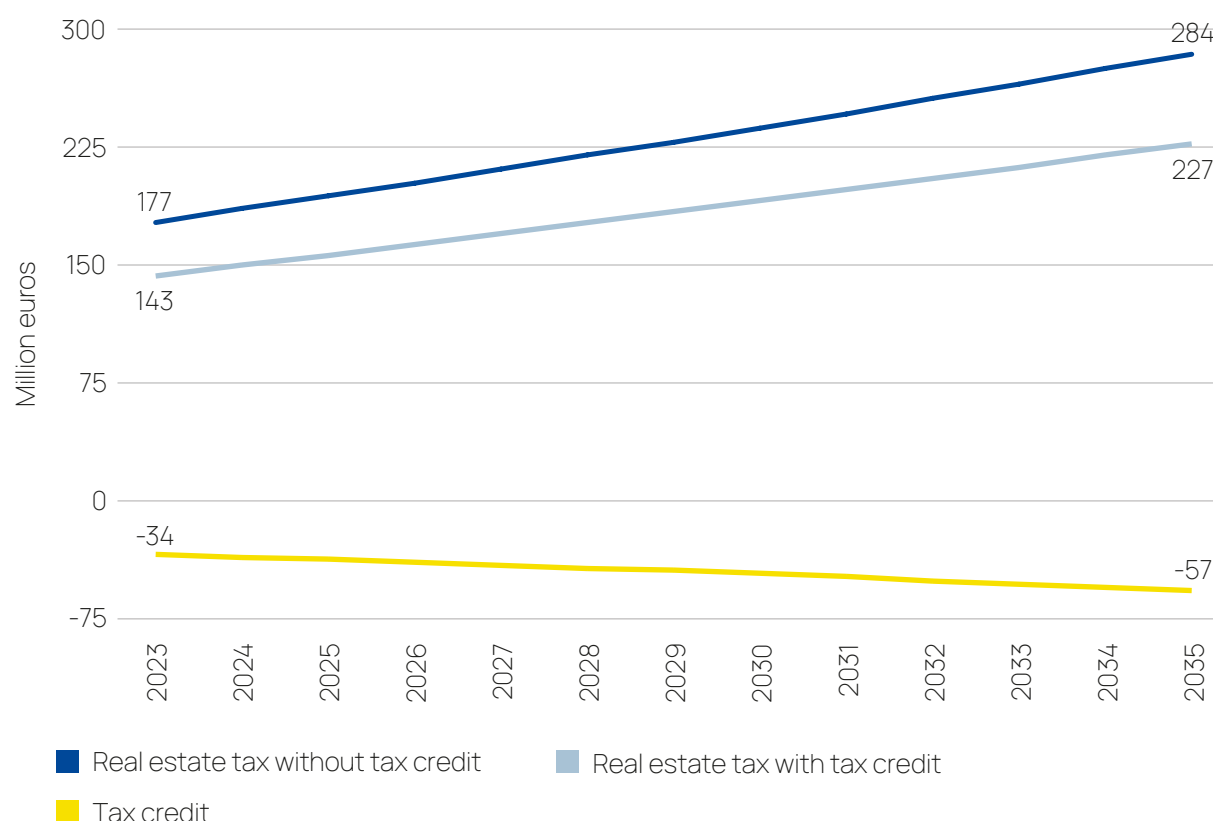
The only form of property tax in Estonia in 2021 is land tax, from which residential land is exempt whatever the amount of the land tax. Land tax is replaced in 2023 by a real estate tax that taxes land and other real estate at a **rate of 0.1%**<sup>9</sup>. The tax exemption for residential land is replaced with a floor for the value of real estate, and there is no tax on real estate or the part of real estate that is less than this in value.

The floor is the median value of real estate in Estonia, which is 81,000 euros at 2023 prices.

If all families who own property benefit from this tax exemption, the real estate tax would bring the state revenues of 143 million euros at 2023 prices. Given that 75 million euros of this would previously have been received as land tax, the additional income in 2023 is 68 million euros (see Figure 9).

### EXAMPLE

Real estate with a value of 200,000 euros would attract tax of 119 euros a year in 2023, from 200 euros in real estate tax minus 81 euros in tax exemption, which is less than 10 euros a month.



**Figure 9.** Fiscal impact of real estate tax, 2023-2035

Source: Calculations of the Foresight Centre

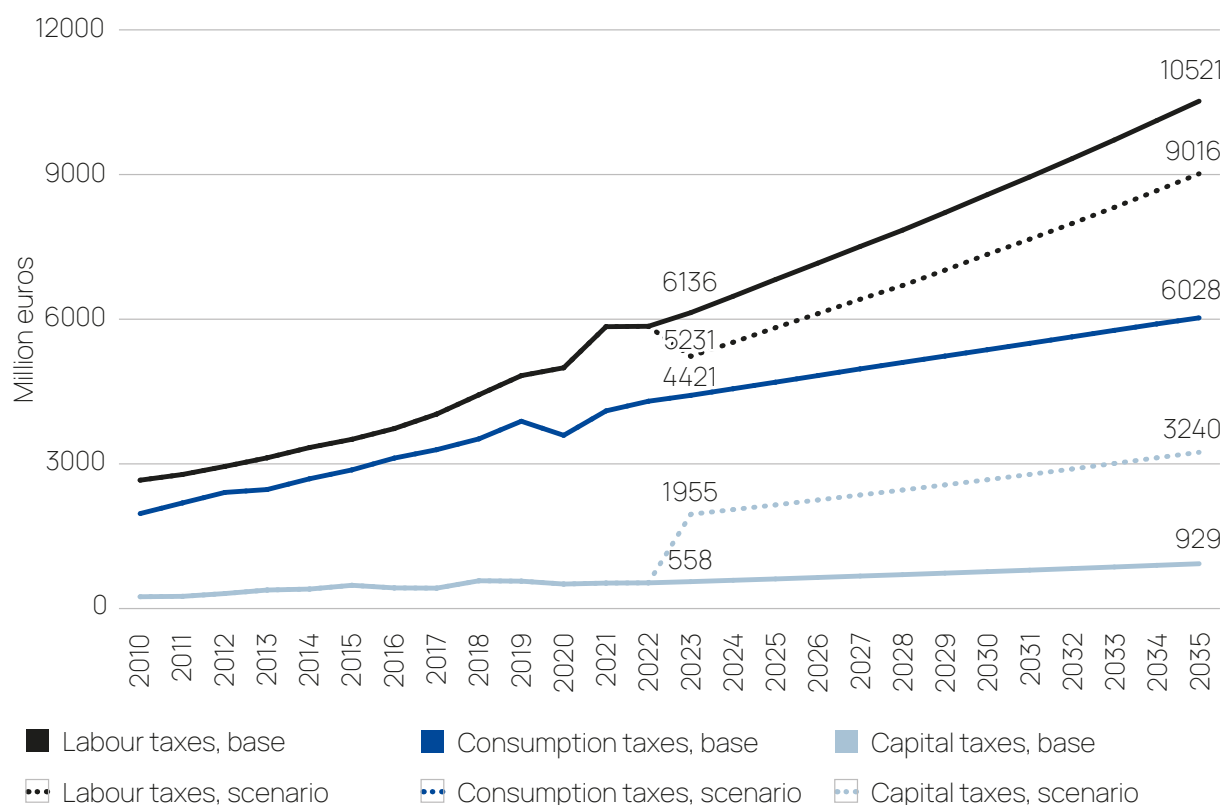
<sup>9</sup> The tax rate proposed is relatively low at the lower limit of land tax rate that applies in 2021 of 0.1-2.5% of the taxable value of land a year. Most local authorities apply a higher tax rate than the minimum.

The large-scale re-positioning of the fiscal revenues from a shrinking tax base for social tax and an expanding tax base for income tax together with taxation of corporate profits splits the tax burden more evenly between those earning income from work and those earning it from capital. The result of the changes is that labour taxes fall in 2023 as a share of tax revenues from 55% to 45%, while the share of capital taxes rises from 5% to 17%.

These tax changes would bring the state additional income of more than 490 million euros in 2023. If profit continues to be the same as a share of GDP as it was on average in 2010-

2019, the additional revenue received in the state budget in 2035 would be 807 million euros. As noted earlier though, a fall in future in the profit of the corporate sector as a share of GDP would reduce receipts of corporate income tax. At the same time, additional revenues could come from international agreements on taxing multinational digital companies, if they grant for example the right to tax part of the profit in the country of consumption.

The tax burden would be larger by more than 1.4% of GDP by 2035 than if the tax system of 2021 were maintained, at 37.0% rather than 35.6%.



**Figure 10.** Fiscal impacts of the digital world scenario, 2010-2035

Source: Calculations of the Foresight Centre

## Summary of the changes

Tax type	Direction of change
Environmental taxes	—
Property taxes	↗
Labour taxes	↘
Taxation of capital income	↗
VAT	—
Corporate income tax	↗
Other taxes	



Scenario:  
An equal start





## Scenario: An equal start

Various events in the economic environment, such as rising asset prices and the rapid development of the digital economy have over a long time benefited particularly owners of real estate and financial assets, widening inequality in wealth. The same trend is being accelerated by the issuance of currency and negative interest rates. Deepening inequality feeds dissatisfaction and protests that block reforms and projects aimed at economic development, hurting economic growth.

Society becomes much less accepting of inequality, and inequality becomes the main issue in public debate that demands resolution.

Comparing the Estonian tax system with those of the other countries in Europe highlights several issues that are problematic in terms of inequality:

- Consumption taxes are a large share of tax revenues, but they are regressive, as people on lower incomes consume a larger part of what they earn and save less than those on higher incomes.

- Income tax is only proportional in its rate, as the graduated tax-free threshold means that it is in reality a progressive income tax with bands as income rises of 0%, 20%, 31.3%, and 20% again. In other words, **it is not those on the highest incomes that pay the largest part of each additional euro earned in tax, but those in the middle of the income distribution.**

- **Wealthier people are able to take their income as dividends as well as wages,** and dividends are taxed less than wages.

- **The share of property taxes in tax revenues is the lowest in Europe.** There is a land tax, but tax revenues are limited by various factors, including the tax exemption for residential land and the outdated estimated values for land.

- Redistribution does not of course mean just the parameters of the tax system, but also the level of social benefits; benefits are quite generous for some target groups, but in general social benefits are no longer as effective at reducing poverty and the social safety net is weak<sup>10</sup>.

Given this, the state changes course on inequality and sets out for more determined redistribution:

- Introducing a **property tax.**
- Making **income tax progressive.**

A larger tax burden for people on higher incomes makes the economy less competitive, as it makes highly qualified labour more expensive. To alleviate this problem, a **ceiling is set for social tax.**

<sup>10</sup> Recommendation of the Council of the European Union on Estonia's national reform programme 2019 and delivering a council opinion on Estonia's stability programme 2019.

The outcomes sought from the tax changes are a reduction in inequality and better use of property that encourages the productive use of idle assets. The additional income from property taxes could be used to fund a deepening deficit in the social system caused by demographic changes and to invest in meeting climate goals.

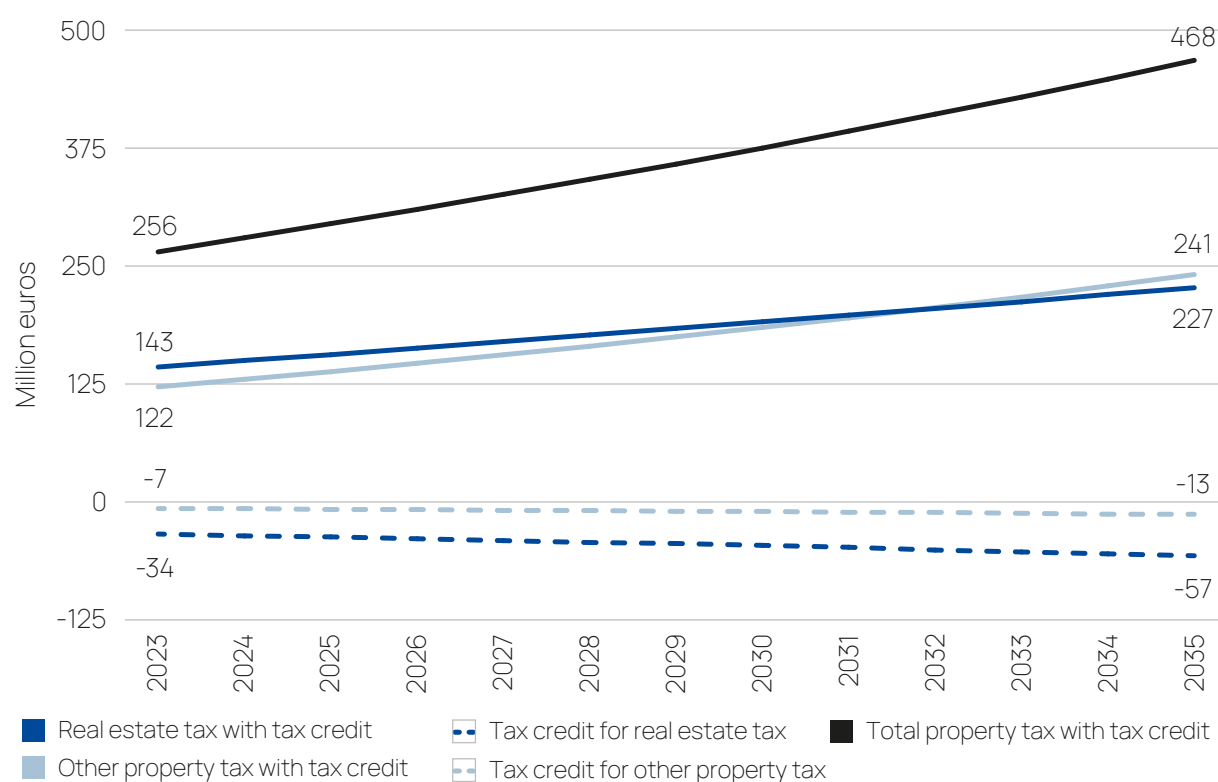
## Property tax

The property tax has two parts, with a real estate tax and a tax on other property. The parameters and outcomes of the real estate tax are the same as in the digital world scenario. Other property starts to be taxed from 2023 as well as real estate, to avoid inequality between different types of asset. The tax on other property is applied to assets that do not come under the real estate tax. The tax rate is set at 0.3% a year of the value of the asset.

The other assets of residents of Estonia, covering vehicles, valuables and jewellery, business assets, and deposits and financial assets, are valued at 43 billion euros at 2023 prices (Eesti

Pank)<sup>11</sup>, which would produce property tax in 2023 of 122 million euros. The average family had other property of 68,000 euros at 2023 prices, giving an annual property tax of 203 euros. If the tax-free threshold for real estate tax, or a part of it, is not used, it could be applied instead for the other property tax. In this case the tax exemption would cost the state 7 million euros in 2023.

Receipts from the tax on other property in 2023 would be 265 million euros, of which 190 million euros would be on top of the earlier land tax. The state would receive 468 million euros in property tax by 2035, which would be 346 million euros more than with the earlier land tax.



**Figure 11.** Fiscal impact of property tax, 2023-2035

Source: Calculations of the Foresight Centre

<sup>11</sup> Eesti Pank. Research into the financial behaviour and consumption habits of Estonian households.

<https://www.eestipank.ee/en/statistics/research-financial-behaviour-and-consumption-habits-estonian-households>

## Progressive income tax

A progressive income tax, which is applied from 2023, is expected to make a major contribution to reducing inequality of incomes. It is understood that the tax bands in a progressive income tax and the tax rates in those bands need to be designed so that the tax would actually reduce inequality and bring in tax revenues, and not have the opposite effect.

Two different sets of tax bands are considered, one that is revenue neutral so that the total revenue in the budget from personal income tax remains the same as under the current income tax system, and one that generates income so that the budget receives more revenues than under the current system.

Progressive income tax	Tax rate in the bands (revenue neutral)	Tax rate in the bands (revenue generating)
<b>Band 1:</b> up to the minimum wage	<b>Band 1:</b> 0%	<b>Band 1:</b> 0%
<b>Band 2:</b> up to three times the minimum wage (roughly the average wage)	<b>Band 2:</b> 15%	<b>Band 2:</b> 20%
<b>Band 3:</b> up to six times the minimum wage (roughly double the average wage)	<b>Band 3:</b> 25%	<b>Band 3:</b> 30%
<b>Band 4:</b> more than six times the minimum wage	<b>Band 4:</b> 35%	<b>Band 4:</b> 35%

### EXAMPLE

Someone who earns seven times the minimum wage in 2021, where the minimum wage is 584 euros a month and so seven times it is 4088 euros a month, would pay the following monthly income tax, with higher rates in brackets:

**Band 1:** 0

**Band 2:**  $584 * (3-1) * 15\%$  (20%) = 175.2 (233.6) euros

**Band 3:**  $584 * (6-3) * 25\%$  (30%) = 438 (525.6) euros

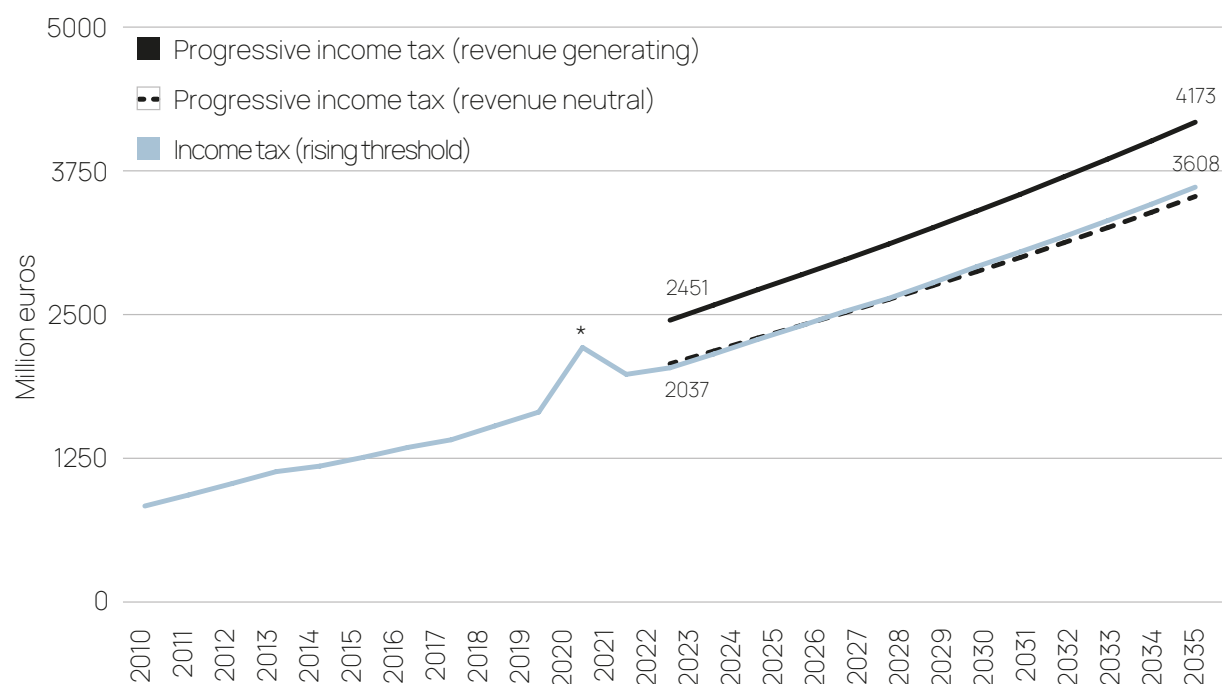
**Band 4:**  $(584 * (7-6) - 4088 * (0.02 + 0.016)) * 35\%$  = 152.9 euros

**Total income tax to pay:**  $175.2$  (233.6) +  $438$  (525.6) +  $152.9$  = 766.1 (912.1) euros a month.

Under the system current in 2021, someone earning seven times the minimum wage would pay 788.2 euros a month in income tax.

The total income brought to the state by a revenue neutral progressive income tax would be similar to that under the income tax system of 2021, but there would be a major redistribution within the system. The tax-free threshold would rise at the same rate as the minimum wage<sup>12</sup> and would increase by more than the tax burden on people earning 7.5 times the minimum wage.

Under the revenue generating system, where the tax rates on the two middle bands are 5% higher than in the revenue neutral version, 400 million euros more are received in tax revenue in 2023. This difference exceeds 550 million euros by 2035 (see Figure 12).



**Figure 12.** Fiscal impact of progressive income tax, 2023-2035

\* - The larger tax receipts in 2021 come from the extraordinary income tax paid on withdrawals from the mandatory funded pillar.

Source: Calculations of the Foresight Centre

<sup>12</sup> The calculations assume that the minimum wage rises in future at the same rate as the average wage.

## POSSIBLE PROBLEMS WITH A PROGRESSIVE INCOME TAX

- Mistakes in setting the income tax rates and bands could prove costly. In Latvia for example the transition to a progressive income tax in 2018 is estimated to have reduced the local tax revenues by 0.8% of GDP, of which 60% went to the richest 30% of taxpayers (Ivaškaitė-Tamošiūnė et al. 2018)<sup>13</sup>. This makes it important to model carefully the impacts on tax revenues and on redistribution before the reform is enacted.
- If the income bands that the different tax rates apply to are fixed as absolute amounts, rising incomes will gradually bring increasing numbers of people into higher tax bands unless the bands are regularly reassessed. This can be solved by defining the bands in relation to the average or minimum wage, so that the bands would be corrected automatically each year.
- Alongside the effects on tax revenues and distribution, the incentives that the tax system creates to earn income from work need to be monitored. The danger arises that if the tax burden of an individual rises sharply because they pay more in tax and lose social benefits when they start work or when their earned income rises above a certain level, they may become discouraged from working hard.

<sup>13</sup> Ivaškaitė-Tamošiūnė et al. (2018). The Effect of Taxes & Benefits Reforms on Poverty & Inequality in Latvia. [https://ec.europa.eu/info/sites/default/files/economy-finance/eb039\\_en\\_0.pdf](https://ec.europa.eu/info/sites/default/files/economy-finance/eb039_en_0.pdf)

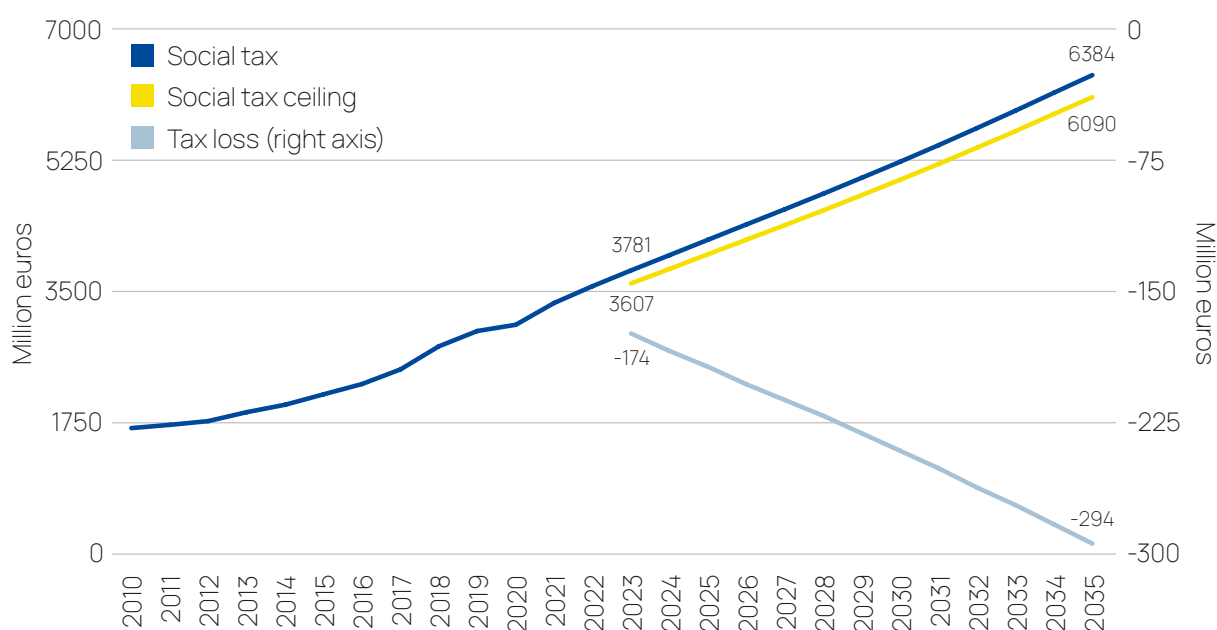
## The social tax ceiling

As the tax burden for higher earners rises under the progressive income tax, it will make Estonia less competitive for jobs paying higher wages. The impact on higher earners of the higher labour taxes is eased by a social tax ceiling introduced in 2023.

The top band for the progressive income tax starts at six times the minimum wage, and so the social tax ceiling is set at the same level. The tax loss from the social tax ceiling in 2023 is 174 million euros, and in 2035 it is 294 million euros (see Figure 13). This is 4.6% of social tax.

### EXAMPLE

The social tax burden for someone earning seven times the minimum wage, at 4088 euros of monthly income in 2021, falls 193 euros from 1349 euros a month to 1156 euros a month.

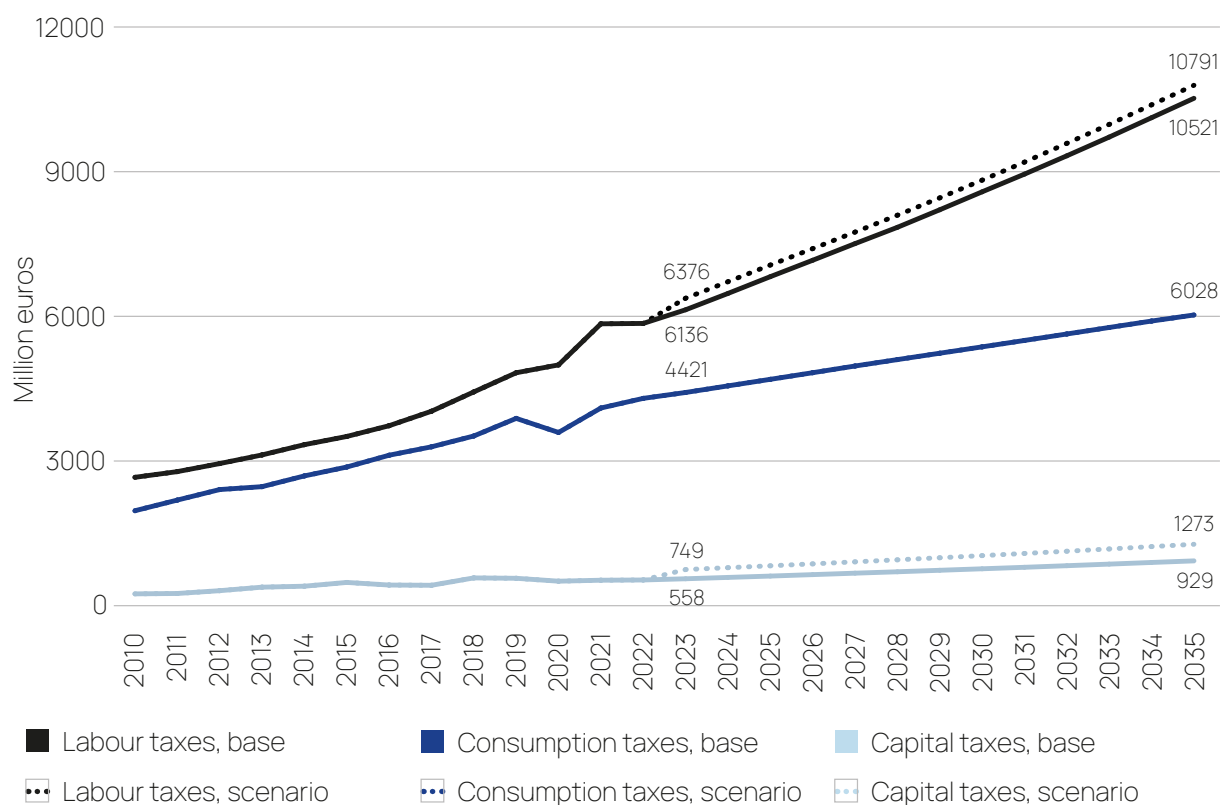


**Figure 13.** Fiscal impact of the social tax ceiling, 2023-2035

Source: Calculations of the Foresight Centre

All these tax changes together increase labour taxation by around 250 million euros in 2023 and property taxation by around 200 million euros from receipts under the tax system of 2021. Consumption taxes remain the same.

The additional revenues exceed 600 million euros by 2035. This means the tax burden would be larger by more than 1.0% of GDP by 2035 than if the tax system of 2021 were maintained, at 36.6% rather than 35.6%.










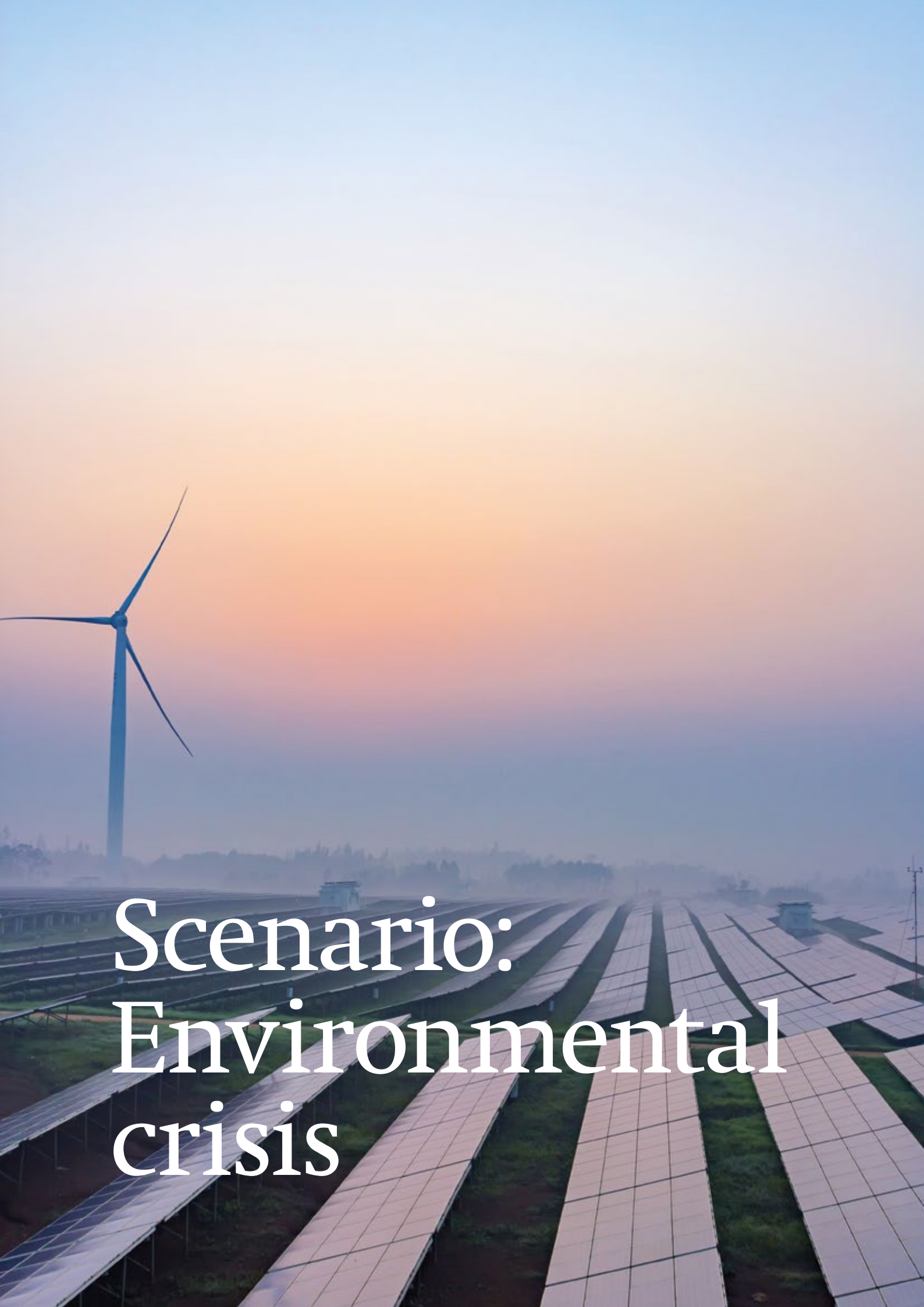
**Figure 14.** Fiscal impact of the equal start scenario, 2010-2035

Source: Calculations of the Foresight Centre



## Summary of the changes

Tax type	Direction of change
Environmental taxes	
Property taxes	
Labour taxes	 (the tax wedge declines for those earning low incomes and increases for those on high incomes)
Taxation of capital income	
VAT	
Corporate income tax	
Other taxes	



# Scenario: Environmental crisis



## Scenario: Environmental crisis

In this set of choices, society considers the fight against climate warming to be the greatest challenge facing Estonia. The Estonian state has committed to reaching carbon neutrality by 2050 by bringing emissions of greenhouse gases and the natural removal of carbon dioxide into balance. This is a broad overarching target that affects many policy areas. An inventory is made of tax policy to assess how effective current approaches to taxation are at achieving climate goals, and from this deciding tax solutions that would help to reduce Estonian greenhouse gas emissions as much as possible.

Around three quarters of Estonia's greenhouse gas emissions come from burning fuels, with 50% coming from burning fuel to generate electricity and heat, and 22% from fuel use in transport. The Estonian natural environment is able to bind some of the emissions and the greenhouse gas inventory in 2019 found that emissions were reduced by around 0.7 million tonnes of CO<sub>2</sub> equivalent in this way.

**It should be remembered that environmental taxes cannot be a long-term source of tax revenue. If the environmentally harmful activity is curbed, so the fiscal revenues also fall quickly.**

The following points stand out from an environmental comparison of the Estonian tax system with those in other countries in Europe:

- Estonia takes more than the European Union average in fuel excises, which provided 6.1% of Estonia's total tax receipts in 2019 and 3.0% in

the European Union on average, and in resource and pollution fees, which provided 0.6% of Estonia's total tax receipts in 2019 and 0.2% in the European Union on average.

- Estonia is the only country in the European Union that does not have a car tax designed to steer the transport choices of residents. Taxation of transport in Estonia is one eleventh of the average for member states, as transport taxes provided 1.1% of total tax receipts in the European Union in 2019, and only 0.1% in Estonia, which came from the state fee for vehicle registrations and the heavy goods vehicle tax.

The solution used in the European Union to achieve climate goals has three important components, which are the Emissions Trading Scheme (ETS), the effort sharing regulation, and zero balance for land use, land use change and forestry.

The ETS covered around half of total emissions in 2021, primarily the emissions from burning fuel to produce energy. The European Commission has proposed extending the ETS to cover transport, and construction and housing

The price of a tonne of CO<sub>2</sub> equivalent rose about ten-fold in 2019–2021. It is unclear whether this price level will be maintained in the future, but in any case it gives a strong signal to participants in the ETS about the need to reorganise their activities and it substantially reduces the room for manoeuvre in raising the domestic taxation on the fuel used by the sectors that fall under the ETS.

<sup>14</sup> Agora Energiewende and Ecologic Institute (2021). A "Fit for 55" Package Based on Environmental Integrity and Solidarity: Designing an EU Climate Policy Architecture for ETS and Effort Sharing to Deliver 55% Lower GHG Emissions by 2030. [https://static.agora-energiewende.de/fileadmin/Projekte/2021/2021\\_03\\_Silver\\_Buckshot/A-EW\\_206\\_Fit-for-55-Package\\_WEB.pdf](https://static.agora-energiewende.de/fileadmin/Projekte/2021/2021_03_Silver_Buckshot/A-EW_206_Fit-for-55-Package_WEB.pdf)

Higher energy taxes need to consider that a rapid rise in prices for energy and fuel will leave people much worse off and make them and businesses less able to make the investments that are needed in saving energy. Higher prices for inputs, assuming that they cannot be passed on to consumers, will consume the funds of businesses that could otherwise have been used for reorganising activities and introducing new technologies.

Alongside tax tools that can reduce polluting activities, the search is on for ways that taxation can encourage investment in the green transition, and more broadly raise productivity, and make it easier for people to cope with the difficulties caused. The global agreement on minimum taxation reached by the countries

of the OECD and the G20 has led Estonia to reintroduce a traditional corporate income tax, meaning that research and development activities by companies can be boosted through tax credits for investment.

The result of all this is that the following changes are made in the Estonian tax system as common European efforts and as domestic measures:

- Introducing a **car tax**.
- **Extending the Emissions Trading Scheme** to transport and to construction and housing.
- **Setting a traditional corporate income tax** and tax credits for research and development.
- Linking the **tax-free threshold for personal income tax to the minimum wage**.

The main outcome from the tax changes is powerful encouragement for both businesses and households to make environmentally conscious choices, while at the same time encouraging the development and export of green technologies and avoiding threats to livelihoods. The encouragement will help achieve the climate goals faster and will help improve the urban living environment by reducing car use.

## Car tax

The car tax that is introduced has three parts with separate goals.

**1. A car registration tax from 2023<sup>15</sup>.** It applies when the car is first registered in Estonia. The tax has a base amount, set at 158 euros in 2023<sup>16</sup>, an amount for the CO<sub>2</sub> band, and a diesel component. The aim of the base amount is to reduce car use, the CO<sub>2</sub> component is intended to steer drivers towards cars with lower carbon emissions, and the diesel component is designed to encourage drivers to favour cars that pollute the air less with fine particles.

**Example:** The most popular model in 2020 was the petrol-powered Toyota RAV4, which had a CO<sub>2</sub> figure of 128 grams per kilometre. The registration tax for this vehicle at 2023 prices is 2216 euros. A diesel car with the same CO<sub>2</sub> figure would cost a further 1938 euros.

<sup>15</sup> The registration tax is based on that of the Netherlands and adapted for Estonian conditions.

<sup>16</sup> The base amount in the Netherlands in 2020 was 366 euros, and adjusted for the differences in GDP per capita between Estonia and the Netherlands, this is set in Estonia at 140 euros. The base amount rises with forecast growth in Estonian GDP and so by 2023 it will be 158 euros.

**2. An annual car tax from 2023.** This applies to all cars and depends directly on the CO<sub>2</sub> emissions figure, or the fuel use. The CO<sub>2</sub> figure is multiplied by a fuel factor<sup>17</sup> of 0.9 for diesel, 0.6 for petrol or 0.4 for gas, and a CO<sub>2</sub> factor of 0.5 for emissions of up to 90 grams per kilometre, rising by 0.01 with every additional gram per kilometre.

**Example:** The CO<sub>2</sub> figure for the petrol-powered Toyota RAV4 is 128 grams per kilometre. The yearly tax for this vehicle at 2023 prices is 68 euros ( $128 \times 0.6 \times 0.88$ ).

**3. A car tax based on distance travelled, from 2025.** As the revenues from the yearly tax and registration tax will fall over time as cars with ever lower CO<sub>2</sub> figures and electric cars become available, it is decided to extend the tax base to mileage in order to control car use and ensure budget revenue. A 100 kilometre fee is introduced in 2025 at 1.35 euros<sup>18</sup>, with an urban coefficient of 1.5 and an out-of-town coefficient of 0.5. A rush-hour coefficient of 15, or traffic jam tax, is added to this.

**Example:** Driving 20,000 kilometres in a year, of which 6000 kilometres are in Tallinn and 1000 of them in rush hour, and 14,000 outside of towns, brings an annual mileage tax of 398 euros.

If the 20,000 kilometres are all in rural areas, the annual tax is 136 euros.

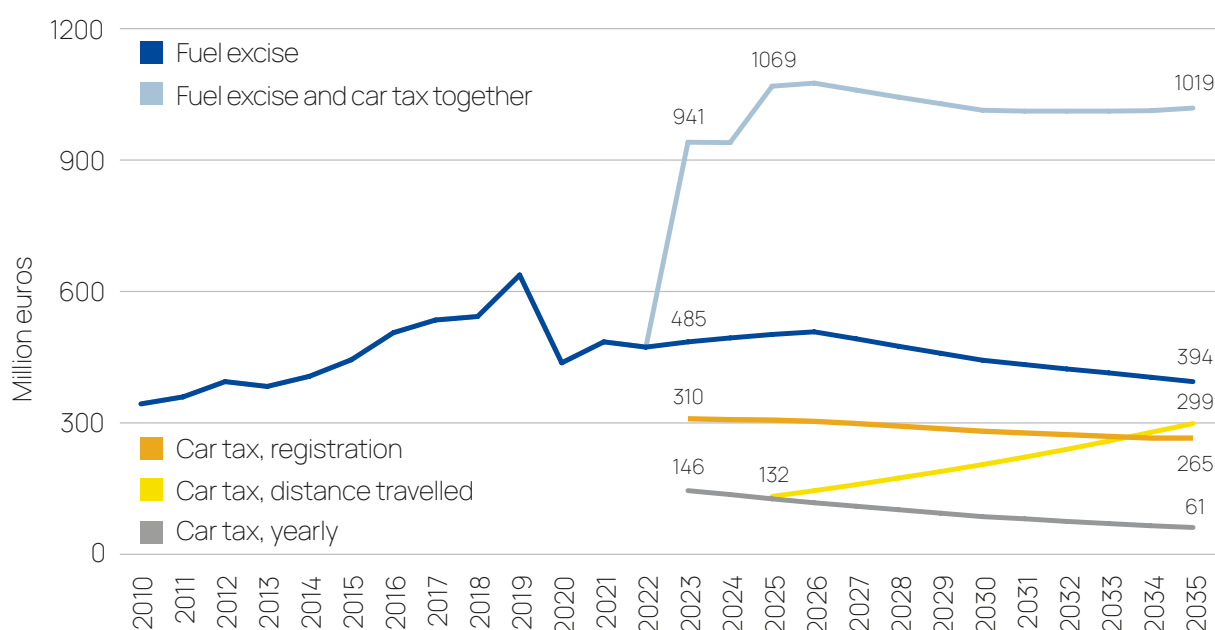
The two components of the car tax introduced in 2023 bring the state revenues of 457 million euros, of which 310 million comes from car registrations and 147 million euros from the annual car tax. The additional revenues in 2025 are 566 million euros, with 307 million euros from the registration tax, 127 million from the annual car tax, and 132 million from the mileage tax.

Car tax brings the state revenues of 625 million euros in 2035.

Tax revenues from transport, which is the car tax combined with fuel excises, peak in 2026. They start to fall after that as revenues from fuel excises decline (see Figure 17).

<sup>17</sup> The annual tax is based on that in Luxembourg.

<sup>18</sup> The 100 kilometre fee in 2019 was one euro, as this covers the costs of maintaining the road network given the vehicle-kilometres driven in Estonia. The 100 kilometre price rises with forecast growth in Estonian GDP and so by 2023 it will be 1.35 euros.



**Figure 15.** Fiscal impact of car tax, 2010–2035

Source: Calculations of the Foresight Centre

## Extension of the Emissions Trading Scheme

A new emissions trading scheme running in parallel to the current one is launched in 2026 as part of the *Fit for 55* package of proposals prepared by the European Commission in 2021, and it targets emissions from transport, and construction and housing.

Analysis of the plan before its launch estimated that achieving the goal of reducing emissions in those sectors will need the price of a tonne of carbon dioxide to rise to 170 euros<sup>19</sup>. If burning a litre of petrol produces 2.39 kg of carbon dioxide, the price of fuel would rise by 40.6 cents with such a carbon price.

Estimating the revenue brought to the state by an extension of the ETS in Estonia could equally consider that the price of CO<sub>2</sub> equivalent will rise more moderately and reach 100 euros by 2035.

The advantage of introducing the new ETS rather than raising domestic fuel excises is that it

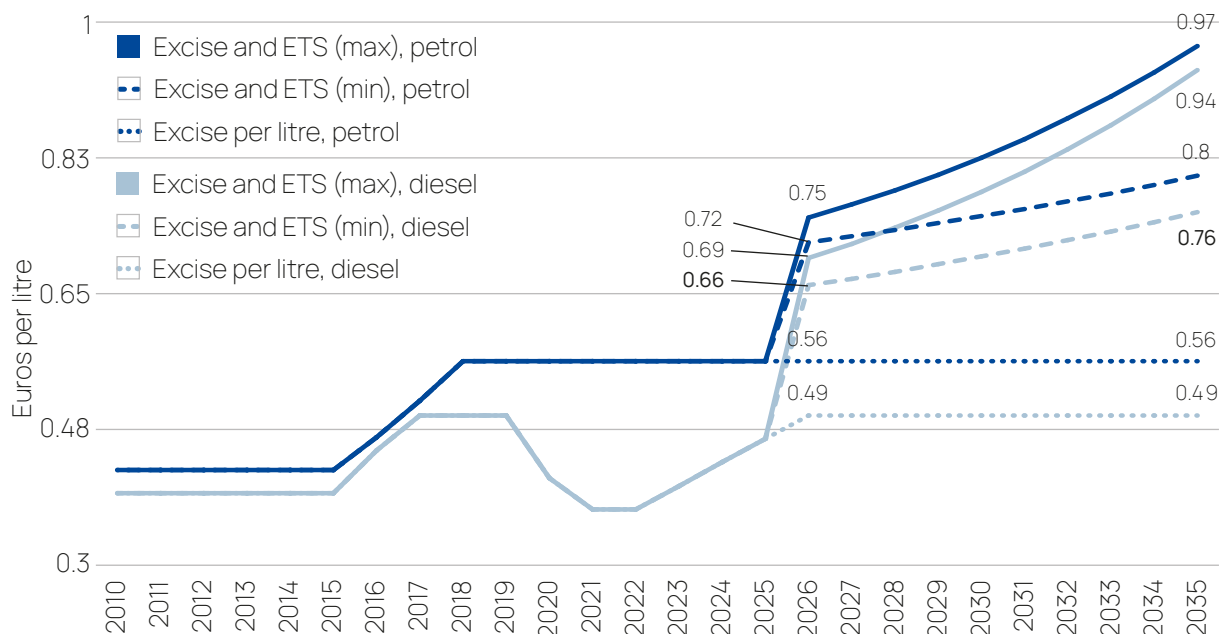
reduces the problem of carbon and tax revenue leaks, as the ETS applies equally in Estonia and Latvia. The state receives the additional income not as tax revenues but as income from the sale of emissions quotas.

**Separate trading systems for quotas are set up for the transport sector and for construction, and the price of the CO<sub>2</sub> equivalent tonne in this system is not necessarily the same as that in the current system.**

By the time the ETS is introduced in 2026, diesel excise in Estonia will have fallen to its earlier level of 0.493 euros a litre. Depending on the price of CO<sub>2</sub>, the additional cost of a litre of diesel in 2026 will be 16.8 to 20.2 cents, and the additional cost of petrol will be 15.3 to 18.5 cents a litre. By 2035 the additional cost from the ETS will be 26.2 to 44.5 cents a litre for diesel and 23.9 to 40.6 cents a litre for petrol.

<sup>19</sup> Maj, M. et al. (2021). Impact on Households of the Inclusion of Transport and Residential Buildings in the EU ETS. Polish Economic Institute, Warsaw.



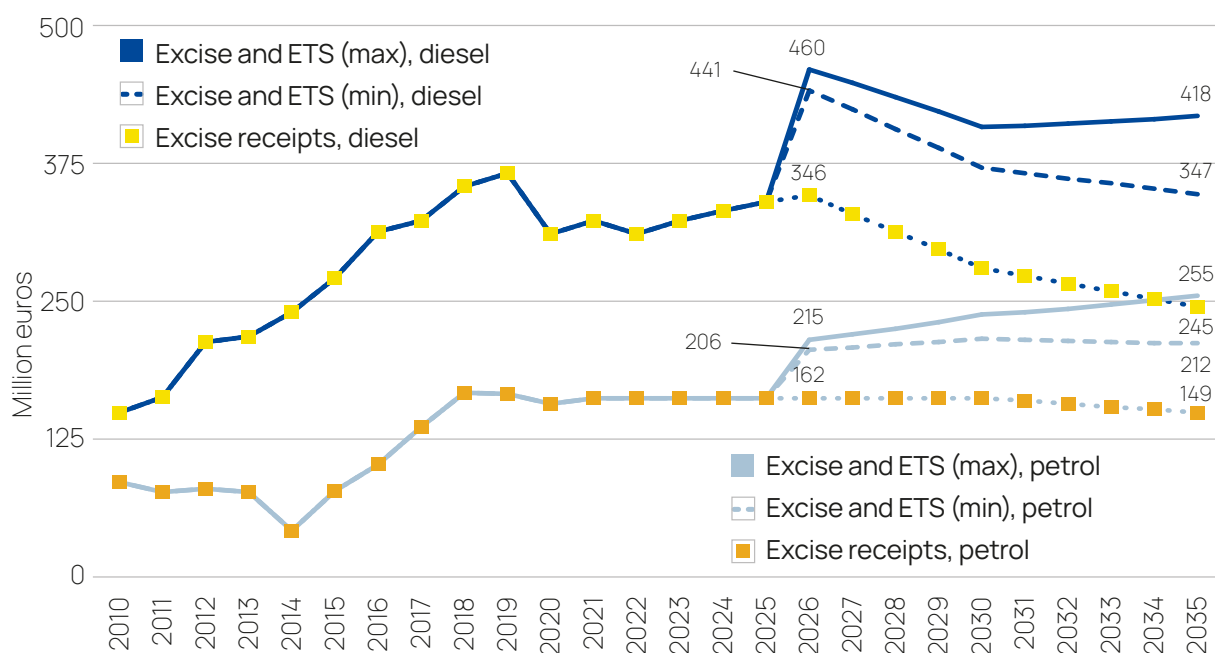


**Figure 16.** Fuel excises and the additional cost per litre from the Emissions Trading Scheme (ETS), 2010-2035

Source: Calculations of the Foresight Centre

Extending the ETS will add 115 to 139 million euros to state revenues in 2026, and 164 to 279 million euros in 2035<sup>20</sup>. The ETS will help to limit the fall

in the taxes received from diesel from 2030 if the price of a tonne of CO<sub>2</sub> rises to 170 euros by 2035.



**Figure 17.** The fiscal impact of fuel excises and the ETS for transport, 2010-2035

Source: Calculations of the Foresight Centre

<sup>20</sup> On top of the revenue created by extending ETS, revenues from selling quotas under the current ETS that covers energy-intensive companies will rise if the price of quotas rises. If the price of a quota rises to 170 euros rather than 100, the budget receipts will be more than 200 million euros higher. This is not considered in the revenues of this scenario, as no change to the current system is assumed.

The ETS will extend not only to transport, but also to construction and housing, which essentially means that household consumers will have to start paying a higher price for natural gas. Natural gas consumed by households will bring in 8 to 10 million euros more in 2026 with the ETS, and by 2035 this will rise to 13 to 22 million euros.

### A traditional corporate income tax and a tax credit for research and development

As rising energy prices make many businesses less competitive, investment in more energy-efficient technologies and in developing green solutions that can lay the foundations for new export success becomes critical. It is worrying that the state support for private sector research and development in the OECD countries is 0.2% of GDP, but **in Estonia it is a fifth lower than that**. This does not meet the need to increase green investment and the related development work rapidly.

The global agreement on income tax of the OECD and G20 countries has left Estonia with no option but to reinstate the traditional corporate income tax with a tax rate of 15% on total profit. At the same time the new circumstances create better opportunities than before for supporting research and development through tax breaks. A tax credit for research and development is introduced to encourage development work by reducing the income tax liability on current

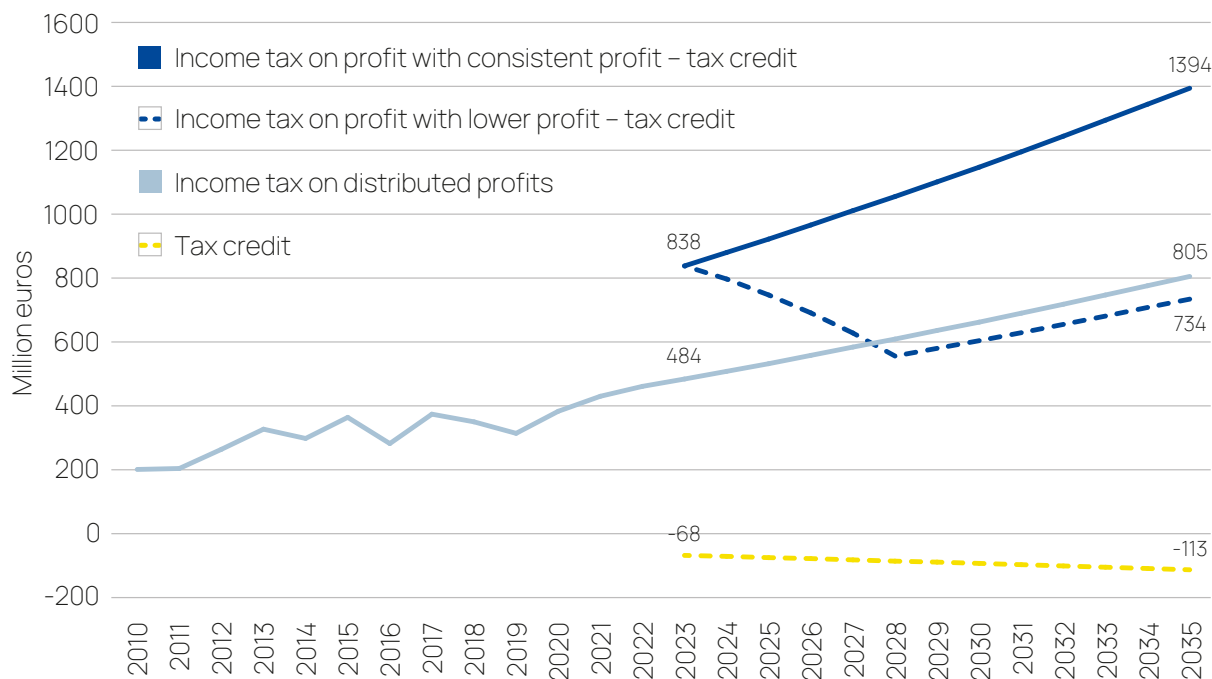
profit by the amount invested in research and development.

The size of the tax credit is set at 0.2% of GDP, which is comparable to the average tax break as a share of GDP in other developed countries like Australia, Canada, France, Ireland, Japan, the Netherlands and the USA in 2010-2018.

It is considered though that the transition to taxing total profits will probably cause a reduction in profits. Profits in recent decades have averaged 17.8% as a share of GDP. Assessment of the changes must consider two different cases, one where profits remain the same, and one where they fall to 10% of GDP.

Taxing total corporate profits at a tax rate of 15% will bring in corporate income tax revenues of 838 million euros in 2023. If profits fall to 10% of GDP and the tax credit is applied to research and development activities, the receipts of corporate income tax would be 734 million euros in 2035, while if profits remain the same they would be 1394 million euros. The contribution to research and development work would on average be five times larger.

If the decline in profits is moderate, the new system would bring the state more income than it would receive under the current corporate income tax system of 2021, where only distributed profit is taxed at a rate of 20% (see Figure 18).



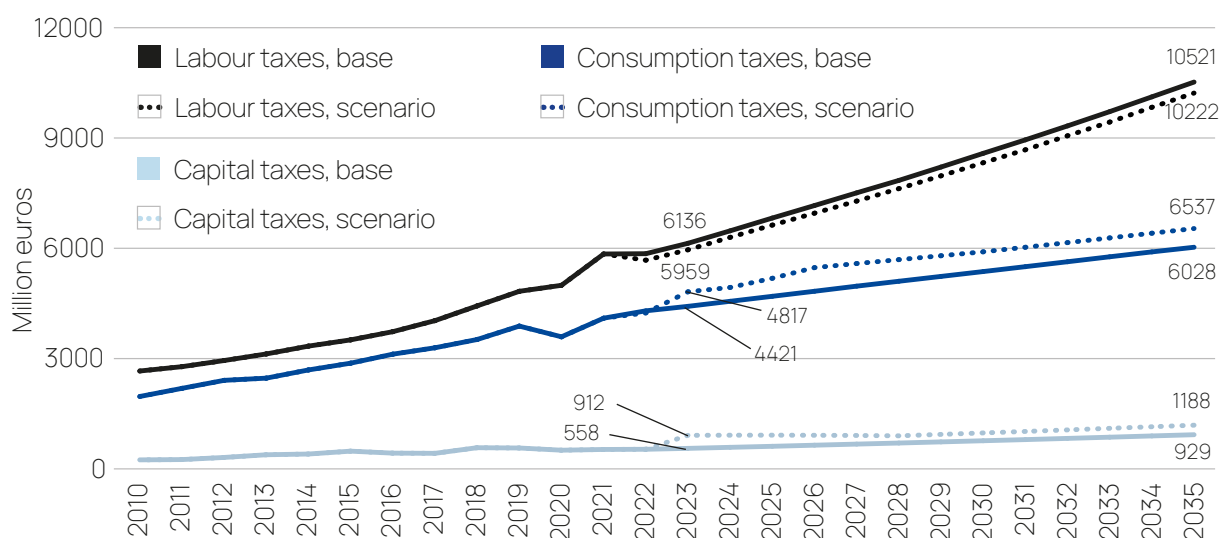
**Figure 18.** Fiscal impacts of traditional taxation of corporate profit and benefits for research and development, 2010-2035

Source: Calculations of the Foresight Centre

All the tax changes in this scenario together increase taxation of consumption by around 400 million euros in 2023 and property taxation by around 350 million euros from receipts under the tax system of 2021. Labour taxes fall by 180 million euros as the tax-free threshold is linked to the minimum wage.

The additional income by 2035 exceeds 750







million euros without the reduction in labour taxes and assuming that the income from corporate income tax remains between the maximum and minimum variants calculated, and it is 570 million euros with the reduction in labour taxes. The tax burden is larger by more than 0.8% of GDP by 2035 than if the tax system of 2021 were maintained, at 36.4% rather than 35.6%.



**Figure 19.** Fiscal impacts of the environmental crisis scenario, 2010-2035



Source: Calculations of the Foresight Centre

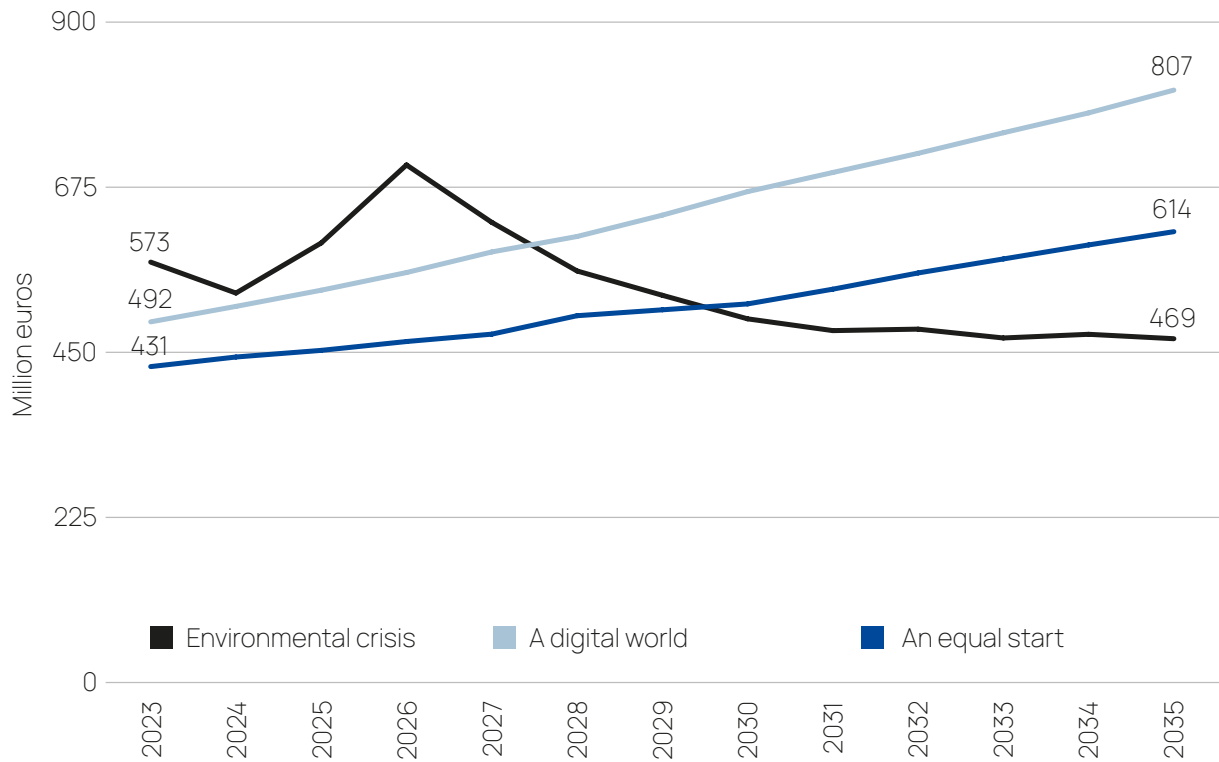
## Summary of the changes

Tax type	Direction of change
Extension of ETS to transport and construction and housing	
Property tax on cars	
Labour taxes	
VAT	
Corporate income tax	
Other taxes (traffic jam tax, mileage tax)	

## Comparison of the scenarios

### Tax changes in the scenarios




 <b>A digital world</b>	 <b>An equal start</b>	 <b>Environmental crisis</b>
Personal income tax rises to 30%	Property tax	Car tax
Tax-free threshold is 1.25 times the minimum wage	Progressive income tax	Extension of the Emissions Trading Scheme
Corporate income tax rises to 30% and total profit is taxed	Social tax ceiling	Cut in corporate income tax to 15% but total profit is taxed
The social tax rate falls to 13%	—	Tax credit for research and development
Real estate tax	—	Tax-free threshold for personal income tax linked to the minimum wage



Additional tax receipts under different scenarios above those from the current system, 2023-2035

Source: Calculations of the Foresight Centre



	 <b>A digital world</b>	 <b>An equal start</b>	 <b>Environmental crisis</b>
<b>Budget impact 2023</b>	+ 490 million euros	+ 430 million euros	+ 570 million euros
<b>Budget impact 2035</b>	+ 810 million euros	+ 610 million euros	+ 470 million euros
<b>Increase in the tax burden over the system of 2021</b>	1.5% of GDP	1.3% of GDP	1.7% of GDP
<b>Increase in the tax burden over the system of 2035</b>	1.4% of GDP	1% of GDP	0.8% of GDP
<b>Impact on consumers</b>	—	Purchasing power of people on low incomes increases.	Consumption becomes more expensive.
<b>Impact on businesses</b>	Cheaper for starting a business and for labour-intensive businesses, more expensive for capital-intensive and profitable businesses.	Taxation of commercial real estate increases the corporate tax burden. Tax costs fall for workers earning up to seven times the minimum wage.	Transport and energy are more expensive, research and development are cheaper.

### The impact on economic growth

Cheaper for starting a business and for labour-intensive businesses, more expensive for capital-intensive and profitable businesses.

Property taxes encourage the productive use of real estate and the reduction in the tax burden on labour in the lower tax bands promotes growth in employment.

Over the long term, economic growth supports a faster transition to a more environmentally sustainable economy and increasing research and development. In the short term, higher energy costs restrain economic growth, particularly by making exports less competitive.

### Inequality

The rapid growth in wealth inequality is slowed as the tax burden is divided more equally between income from work and income from capital. Inequality of incomes is reduced as the net incomes of the first nine income deciles grow and the income of people in the top decile, or 10%, stay the same.

The rapid growth in wealth inequality is slowed as there is much more redistribution from the wealthiest to the rest of society. Income inequality declines as the net incomes of people earning up to the average wage increase, and those of people earning more than the average wage decline.

Inflation hits the poorer parts of society more than the wealthier, and it may worsen inequality if the rise in the tax-free income threshold does not sufficiently compensate for higher prices.

### Future-proofing

The shrinking tax base reduces the role of social tax, while the broader tax base increases the role of income tax. Real estate is a tax base that cannot be taken out of the country.

The tax base becomes more stable and additional revenues rise over time.

Environmental taxes only bring tax revenues in the short term. As environmentally harmful activities are curtailed, so tax revenues decline.

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