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IN EU MEMBER STATES

*Taxation and
Customs Union*

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Foreword

The way we collect taxes profoundly shapes our societies and in particular their ability to deliver prosperity and social cohesion for its citizens. We need a lively debate in Europe about our tax mix to make sure that we can face future challenges.

The Annual Report on Taxation 2024 presents an **overview and in-depth analysis of the design and performance of Member States' tax systems**. It aims to inform stakeholders of recent developments, as well as provide policymakers with insights that can help them improve the functioning of tax systems in the EU. The present Report scrutinises the structure of tax revenues across the EU, according to their economic function and the type of tax, with a focus on the differences across countries and over time. In addition, this year the report focuses on the contribution of tax systems to a competitive and prosperous EU economy. This is very timely as a Prosperous and Competitive Europe is one of the strategic objectives agreed by the recent European Council for 2024-2029.

After five quarters of stagnation, the EU economy accelerated in the first quarter of 2024 accompanied by a continued deceleration of inflation and strong labour markets. Stronger consumption will likely be a key driver for the economic expansion in 2024-2025. However, **two ongoing wars** in our neighborhood and increasing geopolitical tensions generate uncertainty and need for increased expenditures on defense, while the **fiscal position of many Member States remains problematic**. In the short-term, budgets remain burdened by the legacy of the COVID-19 pandemic and the energy crisis. In the long-term, the so-called megatrends, notably population ageing and digitalisation, as well as the need to address climate change and reduce inequalities, will have an impact on the working age population and in the way we work, produce and consume. This in turn, may put a further strain on government budgets and challenge the ability of tax systems to obtain the revenues needed to support public spending and deliver social policies in an efficient, effective, sustainable, and fair manner. The Report shows that despite easing in half of the EU countries, in 2022 the tax burden in the EU aggregate (40.2% of GDP, including social contributions) was slightly above pre-pandemic levels.

Looking ahead, these challenges call for a **more balanced and future-proof tax mix**, with effective tools to fight aggressive tax planning strategies and ensure tax compliance, including by tapping into the benefits of digitalisation. In this context, the recent **2024 Communication of the European Semester Spring Package** recalls that tapping into *“underused sources of taxation and stepping up taxpayer compliance can help ensure sufficient tax revenues to support public investment as well as help achieve common policy objectives and safeguard fiscal sustainability. (...) This includes shifting some of the tax burden from labour taxation towards environmental and recurrent immovable property taxation in a fair and efficient manner, for instance by strengthening the polluter pays principle”*. Labour taxes still constitute more than half of tax revenues in the EU, even if their weight in the tax mix has declined slightly in recent years. However, the share of environmental taxes in the tax mix has also declined in almost all Member States. The same is true in most Member States when it comes to recurrent taxes on immovable property.

Keeping the EU competitive edge is at the heart of Europe's economic agenda. To this end, we need a comprehensive set of policy tools to help create an environment where businesses can thrive and the economy can grow in a fair and sustainable way. Tax policy has an important role to play in supporting the EU prosperity, as taxation influences investment decisions, corporate strategies, and consumer behavior. Also, more transparent and harmonised tax systems can play a central role to ensure that the EU Single Market untaps its full potential. Efficient and well-designed tax systems can shape labour market outcomes, stimulate innovation, and encourage economic activities that lead to job creation and growth.

Addressing these long-term challenges while boosting competitiveness and supporting economic activity is not an easy task. Looking back the EU and national tax policy proved crucial to support households and businesses through the COVID -19 pandemic and recent energy crisis. The Report shows recent EU and national initiatives

that are expected to largely contribute to competitiveness and fairer, simpler and more efficient and effective tax systems. **The Commission has tabled in a number of proposals to support competitiveness and growth, streamline business operations across the EU, reduce compliance costs and improve tax procedures.** These include among others the Directive on Faster and Safer Relief of Excess Withholding Taxes (FASTER) where a general approach has been reached by ECOFIN in May 2024, the VAT in the Digital Age package (ViDA) that is close to agreement and will provide a single VAT registration in the EU, a real time reporting based on e-invoicing and new rules on the platform economy, and a number of Directives like the Directive for Business in Europe: Framework for Income Taxation (BEFIT) building on the historic agreement on the OECD minimum Global Tax Agreement. All this coupled with automatic and digital exchange of information among member states to ensure proper enforcement and fairness.

Globally, the coming months and years will hopefully see **stronger cooperation in the tax field.** Our economies and therefore our tax systems do not exist in isolation. Hence, strengthening administrative cooperation, exchange of information, the adoption and implementation of the two-pillar solution and the UN tax process are crucial to deliver stronger tax systems.

I believe this report provides a useful analytical base in support of national and EU tax debates and policy making. It also contributes to the important reflections and debates at EU and global level on the future tax mix, including our forthcoming annual **EU Tax Symposium on 6 November 2024.**

Gerassimos Thomas

Director-General for Taxation and Customs Union

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List of abbreviations and acronyms

COUNTRY ABBREVIATIONS

AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czechia
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
PL	Poland
PT	Portugal
RO	Romania
SL	Slovenia
SK	Slovakia
SE	Sweden
EA	Euro Area
EU-27	European Union (27 countries as from 2020)
UK	The United Kingdom
US	The United States of America

ACCRONYMS

AEOI	Automatic exchange of information
AI	Artificial intelligence
ATP	Aggressive tax planning

BA	Business angels
BEFIT	Directive for Business in Europe: Framework for Income Taxation
bn	billion
CBAM	Carbon Border Adjustment Mechanism
CIT	Corporate Income Tax
CO2	Carbon dioxide
CTCP	Cooperative Tax Compliance Programmes
DAC	Directive on Administrative Cooperation
ECB	European Central Bank
EII	Energy intensive industry
EPO	European Patent Office
EATR	Effective average tax rate
EMTR	Effective marginal tax rate
ESA	European system of national and regional accounts
ESO	Employee stock option
ETD	Energy Tax Directive
ETR	Effective tax rate
ETS	Emissions Trading System
FASTER	Directive on Faster and Safer Relief of Excess Withholding Taxes
FDI	Foreign direct investment
GDP	Gross domestic product
GMT	Global minimum tax
GUO	Global ultimate owner
HED	Heavy episodic drinking
HFSS	High in fat, sugar and salt
HICP	Harmonised index of consumer prices
HNWI	High Net Worth Individuals
HOT	Directive establishing a Head Office Tax system for SMEs
ICT	Information and communication technology
IMF	International Monetary Fund
IPP	Intellectual property protection
ITR	Implicit tax rate
LMM	Labour market model
MNE	Multinational enterprise
NACE	<i>Nomenclature statistique des Activites economiques dans la Communaute Europeenne</i> ; French for statistical classification of economic activities in the European Community
NCDs	Non-communicable disease
NUTS	Nomenclature of territorial units for statistics
OECD	Organisation for Economic Co-operation and Development
PIT	Personal income tax
pp	Percentage points
R&D	Research and development

SMEs	Small and medium-sized enterprises
SRSP	Structural Reform Support Programme
SC	Social contributions
SSB	Sugar-sweetened beverages
STR	Statutory tax rate
TCTF	Temporary crisis and transition framework
TE	Tax expenditure
TFP	Total factor productivity
TP	Transfer Pricing Directive
TSI	Technical Support Instrument
VAT	Value added tax
VC	Venture capital
ViDA	VAT in the Digital Age
VTTL	VAT Total Tax Liability
WHO	World Health Organisation
WHT	Withholding taxes
ZEW	Zentrum für Europäische Wirtschaftsforschung – Centre for European Economic Research

Executive Summary

The 2024 Annual Report on Taxation (ART) presents facts and analysis of the state of play of taxation and tax systems in the Member States of the European Union (EU). The report looks at the development of the tax mix from various perspectives to inform the debate about: (i) the challenges faced by different types of taxes and different tax bases; and (ii) how the design of taxes can affect different economic agents and their behaviour. The report discusses both recent reforms in tax systems and changes in the main indicators used by the Commission to assess taxation policies in EU Member States and at EU level.

The analysis contains a survey of different tax bases and types of taxes and their role for the tax mix, with a focus on differences across countries and over time. Chapter 1 looks at different tax bases or economic functions (labour, capital and consumption), while Chapter 2 provides a survey of recent reforms at national and EU level. Chapter 3 analyses specific types of taxes, as laid down in the tax code: personal and corporate income taxes; value added taxes; and a number of taxes based on externalities (i.e. environmental taxes, excise taxes on alcohol and tobacco and health taxes in general). This chapter also includes a discussion of the existing capital-asset taxation and net-wealth taxation options.

This year's edition of the ART includes a focus on the role of taxation to support a competitive EU economy. Preserving European competitiveness and prosperity is a top priority on the EU policy agenda, as emphasised by President von der Leyen in the 2023 State of the Union address. Amidst recent geopolitical developments, the EU has sought to evaluate and improve its competitiveness standing so that it can maintain its strong social market economy. Tax policy has an important and multi-faceted role to play in supporting the competitiveness and prosperity of the EU. Taxes change relative prices, which in turn change the behaviour of economic agents, be it producers, investors or consumers. Therefore, tax policy can incentivise productivity-enhancing investments and innovation. At the same time, tax revenues can help to finance high-quality public services (such as education, research, infrastructure, healthcare) that contribute to a well-functioning and thriving economy. There are important trade-offs to be considered and tax policy should abide by the principles of simplicity, efficiency, stability and fairness. This report therefore devotes a topical chapter, Chapter 4, to a discussion of how tax systems can be designed to effectively support promote prosperity in times of uncertainty.

Following a robust post-pandemic expansion in 2021 and 2022, the EU economy experienced a slowdown in 2023. In the past 4 years, the EU economy has faced a set of extraordinary and unexpected shocks. The COVID-19 pandemic (2020-2021) and its significant socio-economic repercussions in 2020-2021 were followed by global supply-side disruptions (end-2021) and Russia's war of aggression against Ukraine (since February 2022). This in turn led to an unforeseen energy crisis and a sharp increase in inflation, unseen for decades, with significant implications for the economy. Nevertheless, the EU and Member State governments acted quickly and put forward unprecedented responses to support households and companies. It is in this more uncertain and fast-changing context that the report looks at the changes in tax revenues, tax-policy development and the structure of tax systems.

Looking ahead, a gradual GDP expansion is projected for 2024 and 2025, although high geopolitical risk continues to pose significant challenges. The fiscal situation remains difficult for several EU Member States. Currently, 11 Member States have a headline budget deficit exceeding 3% of GDP, and 5 Member States have general government gross debt surpassing 100% of GDP. This puts pressure on tax systems to deliver revenues in an effective and efficient manner. Despite these challenges, public finances are expected to stabilise over the forecast horizon, accompanied by a slight decrease in the overall tax burden.

In 2022, the tax burden (i.e., share of overall tax revenues on GDP) in the EU stood at 40.2% of GDP, a slight decrease compared to 2021. The tax burden remained below pre-pandemic levels in half of EU countries. This suggests that although some countries have managed to recover and possibly improve their tax systems, others still grapple with the economic repercussions of the successive shocks that have hit the EU

economy since 2020. Building on 2021, the tax structure by economic function showed a small shift in 2022 away from taxes on labour and consumption and towards taxes on capital as a share of total revenue. This development can be attributed to several factors, including the faster growth of business profits compared with nominal wages and the declining trend in revenues from environmental and other externality-based taxes.

Tax revenues in the EU are expected to amount to slightly below 40% of GDP in the coming years.

Between 2022 and 2025, the overall tax burden (revenues as a share of GDP) is projected to increase in 14 EU countries, led by Luxembourg and Latvia, while decreasing in 8 countries, with Greece at the forefront. The remaining 5 countries are expected to maintain a broadly stable tax burden.

In the medium-to-longer term, population ageing presents a significant challenge for the EU policy agenda, exerting economic and fiscal pressures that threaten fiscal sustainability.

The recently published 2024 Ageing Report highlights that, all else being equal, ageing will likely lead to a reduction in the working-age and contributory population, despite proposed pension reforms. This demographic shift underscores the need for policy measures to address the associated fiscal challenges. The challenge for policymakers is how to maintain or increase tax revenues through a broad tax base and high compliance, without discouraging investment, work, and economic dynamism.

Digitalisation represents another critical structural change with substantial implications for tax systems, bringing both opportunities and challenges.

Technological change and digitalisation are changing existing production, working and consumption patterns. For example, teleworking across borders is becoming an increasingly common phenomenon. This may have implications for tax systems and tax collection, including on the principle of tax residency. Advances in artificial intelligence (AI) offer promising tools for improving tax collection and monitoring by tax administrations. AI should also be considered in discussions on how to achieve a more balanced taxation of labour and capital income, as it may impact employment levels and types of employment, thereby influencing the tax base. In addition to demographic and technological changes, other pressing issues such as inequalities, climate change, and energy dependency are driving policy developments in which taxation can play a complementary role. Addressing these challenges through tax policy can help mitigate their adverse effects while promoting sustainable economic growth and social fairness.

In recent years, the uncertain and fast changing context has meant that most of the tax-related measures adopted by EU Member States have been of a temporary nature.

According to the joint OECD-European Commission Tax Policy Reform Questionnaires, in 2020 and 2021 tax policy reforms were primarily focused on mitigating the economic impact of the COVID-19 pandemic. These measures aimed to support businesses and consumers through unprecedented challenges. In 2022 and 2023, the focus of tax policy reforms shifted to addressing the effects of mounting inflation (in particular, high energy prices) on economic activity, consumers, and businesses. Turning to the main impact areas of the reform, nearly three quarters of the measures reported by Member States in the two most recent surveys mostly affected competitiveness and prosperity (40%), or fairness (32%). The remaining measures were geared towards environmental and health issues and improving efficiency in tax collection, including by combating aggressive tax planning, tax avoidance, evasion, and fraud.

To support the EU's competitiveness and growth, the European Commission has tabled a series of legislative initiatives to streamline business operations across the EU, reduce compliance costs and improve tax procedures.

The main Commission proposals discussed during the last year have been: a (i) Directive for Business in Europe: Framework for Income Taxation (BEFIT); (ii) a Directive establishing a Head Office Tax (HOT) system for SMEs; (iii) a Directive on Transfer Pricing; (iv) a Directive on Faster and Safer Relief of Excess Withholding Taxes (FASTER); and (v) the VAT in the Digital Age package (ViDA). By leveraging new technologies, these initiatives seek to address the tax complexity arising from the coexistence of 27 different tax systems within the EU, which can result in significant compliance costs. These costs often divert resources from productive activities that could otherwise enhance competitiveness and growth.

Several indicators suggest that digitalisation is improving the performance of EU tax administrations. Despite the distortions caused by the COVID-19 pandemic on many traditional indicators, several indicators suggest that digitalisation has significantly improved tax-filing procedures, simplifying the process for taxpayers. Digital reporting practices in particular have likely helped to reduce the VAT compliance gap, indicating a positive impact on overall tax compliance. Cross-border cooperation among EU tax administrations has continued to improve in recent years, yielding tangible results. Improved collaboration and information sharing have been pivotal in addressing tax-related challenges and ensuring more efficient tax administration across the EU.

Support for the reform of tax and customs administrations has been further bolstered by the Technical Support Instrument and its predecessor, the Structural Reform Support Programme. These initiatives have provided assistance to the tax and customs administrations of 25 Member States, supporting over 160 reforms. Many projects under these programmes are still ongoing, demonstrating a sustained commitment to increasing the efficiency and effectiveness of tax systems across the EU.

The analysis in this report reveals a rich and varied landscape of different approaches to taxation. Countries differ in their reliance on taxation, in the taxes they levy to collect these revenues and how they have changed their tax mix over the past decade. What is more, there is also a wide variety in the way Member States use tax expenditures for policy purposes and the extent to which they are confronted with tax avoidance and evasion.

The overall tax burden (including social contributions) across EU Member States ranges from about 20% of GDP (in Ireland) to more than 46% of GDP (in France). Social contributions (SC) are the largest revenue source in most countries (32% of all revenues in the EU-27), although Denmark collects hardly any SC. SC are also of limited significance in Sweden with only 6.2% of total tax revenues stemming from SC. Personal income tax (PIT) is another significant income source and accounts for 23.9% of total tax revenues in the EU-27. Revenues from PIT are somewhat complementary to revenues from SC in the sense that countries with the lowest SC have the highest revenues from PIT and vice versa. Value added tax (VAT) is the third-most significant revenue source making up 18.6% of all tax revenues in the EU-27. The corporate income tax (CIT) finally makes up 8.1% of total tax revenues in the EU-27. The CIT is a significant source of revenue in Ireland (21.5% of total tax revenues), Cyprus (18.1%), and Malta (14.9%) while it only contributes 3.3% of revenues in Latvia and 3.8% of revenues in Hungary.

Changes to the tax mix and the tax burden have been small, with some heterogenous developments across EU Member States. The overall tax burden has increased from 39.8% to 40.2% of GDP over the past ten years. 11 Member States have increased, and 5 Member States have decreased their overall tax burden by at least 2 percentage points of GDP. Only a few countries have made considerable changes to the tax mix over the past decade. By contrast, there is a group of about nine countries which have hardly changed their tax mix or overall tax burden during the decade. For others, the changes have been small.

Looking at developments in certain individual tax types, while changes in Member States have been varied, overall in the EU:

- **Revenues from PIT as a share of total taxation in the EU have hardly changed in the last decade, while revenues from SC have slightly declined.** Nonetheless, this hides substantial heterogeneity among Member States, and important changes in the share of PIT and SC in individual Member States.
- **In the area of CIT, both statutory and effective tax rates have decreased over the last two decades, but their reduction has not resulted in a decrease of CIT revenues as a share of GDP.** Economic literature has found that the decrease in tax rates has been largely offset by an increase

in the corporate tax base. There has also been a more recent uptick in CIT revenues in 2021 and 2022 due to the good performance of company profits in the last couple of years.

- **VAT is a significant and growing source of revenue**, although the relative importance of VAT in the tax mix has become more varied across Member States over the last decade. Following a period of rate increases between 2009 and 2015, the average standard VAT rate has remained almost unchanged from 2016 to 2023. **Over the past 10 years, almost all Member States have significantly reduced their VAT compliance gap, albeit to varying degrees.**
- Interestingly and of significance, **environmental tax revenues as a share of GDP have decreased since 2013, and for all types of environmental taxation:** energy, transport and pollution and natural resources.
- **Property tax revenues have consistently declined since 2013.** Compared to ten years ago, revenue from property taxes (which comprise several taxes on wealth assets and transfers, including inheritances) related to total tax revenue has fallen in all but five Member States.

These developments must be seen in the context of the European Semester recommendations that propose to shift from labour taxation to other taxes that may impact less on growth.

Revenue losses due to tax avoidance and evasion are a problem for all types of taxes. Different types of tax face different collection problems and to differing extents. These problems include aggressive tax planning, non-compliance, underreporting and misreporting of income and outright fraud. In all contexts, however, significant tax revenues are being lost. For PIT, income underreporting is responsible for revenue losses of up to 1% of GDP in the most affected countries. The VAT compliance gap is estimated at a nominal value of EUR 61 billion for 2021 or about 6% of all VAT revenues. Revenue losses due to corporate profit shifting as one strategy of aggressive tax planning are estimated to be worth up to 20% of all CIT revenues collected in 2022 in the EU which would amount to about EUR 100 billion in nominal terms. Beyond those substantial revenue implications, avoidance and evasion of taxes tilt the level playing field among actors in the economy and threaten to undermine tax morale. This can lead to negative feedbacks on tax compliance and result in more evasion, avoidance and revenue losses.

There is a fine line between in principle legal tax avoidance and tax evasion, which is illegal. In the area of tax avoidance, individuals can borrow against their assets (e.g. stocks) to finance their consumption instead of selling assets, which would create a taxable income stream. Self-employed individuals also can find ways for tax arbitrage where income can be declared as capital or labour income. Corporations can shift their profits to low-tax jurisdictions or play on mismatches between several tax jurisdictions to strongly minimise or suppress their tax liabilities. On the other hand, tax evasion comprises a wide array of illegal activities from the basic underreporting of income to sophisticated criminal schemes where chains of companies are used to engage in VAT fraud through intra-community missing trader fraud schemes.

Tax expenditures play a role in supporting households, but they are significant sources of tax revenue losses and can have negative side-effects. Tax expenditures are tax reductions commonly used to implement a policy objective. For example, these can be (i) the support of work or family in the PIT system through deductions and allowances; (ii) reduced VAT rates to mitigate distributional implications; or (iii) tax credits, allowances and special depreciation rules to foster certain business investments. Since these provisions are often targeted towards specific types of taxpayers or behaviour, they increase the complexity of the tax code, make tax compliance more costly and can distort the equal treatment of taxpayers. Within the Single Market, the extensive use of tax expenditures in individual countries can increase the risk of harmful tax competition. Tax expenditures should be regularly evaluated and reported to make them accessible to democratic discourse and assure that they provide a cost-effective policy solution for the objective at hand.

Traditional economic literature suggests that high corporate tax rates may weigh on economic growth, prompting countries to significantly decrease corporate statutory tax rates. Over the last 30

years and based largely on the argument that taxing capital harms growth (combined with the argument that capital is highly mobile), top statutory CIT rates in the EU have significantly declined by more than 30% (the average EU-27 rate declined by 10.9 pp) in the period 1995-2022. Top EU statutory CIT rates in 2022 ranged from 35% (Malta) to 9% (Hungary). Also, effective tax rates (ETRs), which estimate the potential de facto cost that taxes represent for an investment decision, have decreased, or remained unchanged across almost all EU Member States during the last decade. In 2022, ETRs in the EU ranged between 32.4% (Spain) and 9.0% (Bulgaria). However, more recent evidence suggests that corporate taxation has a more nuanced and multi-faceted impact on growth and investment than claimed in the traditional literature.

In the context of labour shortages and the declining working population, changes in labour taxation may affect labour market performance, which is a key determinant of a country's economic performance. In particular, labour taxation influences both labour supply and labour demand. Despite recent declines, the tax wedge (i.e. the share of labour costs caused by taxes and SC), remains relatively high in the EU (41.6%) compared to the OECD average (34.6% in 2023). The EU is currently experiencing a persistent labour market tightness, with vacancy rates and reported labour shortages remaining at historically high levels. Tax and transfer policies may particularly affect women's employment and contribute to the gaps in labour supply between men and women. Changes in tax design can be one of the tools to promote greater gender equality while helping to reduce labour shortages.

Reducing tax uncertainty through simple and predictable tax rules, coupled with the efficient use of revenues for growth-enhancing public spending, would contribute to a more growth-friendly environment. In parallel, ensuring increased compliance by all EU taxpayers, including by fighting against aggressive tax planning, would help to promote a prosperous economy by harnessing the full revenue potential of current tax bases and rates. It has been estimated that compliance with tax obligations costs SMEs 2.5% of their turnover. Tax simplification, as recently promoted by the European Commission with dedicated legislative initiatives, would help SMEs to expand cross-border, boosting their productivity with a significant effect on GDP and tax revenue. In addition, a shift between tax bases, and away from labour taxation, may also encourage long-term economic growth although attention should be paid to the possible negative impacts it may have on more vulnerable individuals or households.

Well-justified tax incentives can be an important tool to support economic activities that advance public goals, provided that they are compatible with the Treaty and with existing fiscal space and that they are accompanied by effective anti-fragmentation tools to protect the integrity of the single market. Tax incentives play a key role in the policy mix to support research, development and innovation, which are key drivers of productivity and long-term economic progress. Empirical evidence shows the positive impact of tax incentives in promoting R&D investments by firms. Tax incentives – for example accelerated depreciation or tax credits – can also help boost investment in the greening of industrial production and thereby help to accelerate the green transition, underpinning Europe's long-term competitiveness. However, it is crucial to regularly monitor and evaluate tax expenditures to ensure that they: (i) are fit for purpose; (ii) are a cost-effective way of achieving their respective policy objectives; and (iii) have no unexpected or negative implications. This is without prejudice to the application of the State aid rules. Energy taxation can be used more efficiently to support the energy transition, for example by putting in place a clearer price signal toward the use of energy-efficient energy products. This is a core component of the pending Commission proposal for a revision of the Energy Taxation Directive. Also, given that companies and investors including venture capitalists must navigate many different tax systems in the EU, reducing the complexity of the EU tax policy landscape as a whole could make EU more attractive to investors and investment.

A future-proof tax mix requires a holistic approach which considers the various types of taxes and is guided by the principles of fairness, efficiency, simplicity and stability. EU tax policy and tax systems can be a key component in achieving a competitive economy that results in sustainable growth and shared prosperity in the EU's social market economy. Nevertheless, the impact of tax systems on growth and investment

is more nuanced and multi-faceted than often assumed. Therefore, the design of taxes is crucial to ensure that policy developments are effective and that any negative effects are mitigated.

The report is structured as follows:

- **Chapter 1** sets the context for the rest of the report. It presents the macroeconomic situation and outlook, investigates recent developments in the tax mix with a special focus on the analysis by economic function, and briefly discusses the impact of long-term structural changes, such as ageing, on taxation.
- **Chapter 2** provides an overview of recent tax reform initiatives, at both national level and EU level. It also presents recent developments around the performance of EU tax administrations.
- **Chapter 3** undertakes a comprehensive survey of the most important taxes in the EU and their role in Member States. It looks at developments over the past ten years. In addition, it discusses the impacts of tax avoidance and evasion and considers the role that tax expenditures play across tax types.
- **Chapter 4** discusses the contribution of tax systems to a competitive and prosperous single market, showing that tax policy can play a role in bolstering competitiveness of the EU economy. When designing tax measures, it is also important to protect fairness.

1

Main developments and structural challenges to taxation

This chapter sets the scene by presenting the developments and the challenges that are shaping taxation systems in the EU in the short to the longer term. First, it provides an overview of the macroeconomic context and the outlook for the next two years ⁽¹⁾. Second, it presents the most recent data on tax revenues (until 2022), including the main results from TAXUD's Taxation Trends data ⁽²⁾, such as the analysis by economic function. The last section of the chapter discusses the impact of structural changes (also known as "megatrends") on taxation.

1.1 Macroeconomic situation and outlook

The EU economy has faced a set of extraordinary and unexpected shocks in the past four years. The COVID-19 pandemic, which exerted its strongest socio-economic repercussions in 2020-2021 ⁽³⁾, was followed by global supply-side disruptions (end-2021) and Russia's war of aggression against Ukraine (since February 2022). The EU and Member States' governments acted fast and put forward unprecedented responses ⁽⁴⁾ to support households and companies during the successive health-related restrictions and later to deal with the unforeseen energy crisis and the strong increase in inflation, not seen for decades. Confronted with these headwinds, the EU economy has nevertheless shown strong resilience. Real GDP closed the gap with its pre-pandemic levels in Q3-2021 (see Figure 1-left), while more recently the inflationary pressures have been restrained (see Figure 1-right). However, this succession of shocks has prompted structural changes in the economies and societies of the EU Member States and left long-lasting marks in the public finances of some. This calls for a need to strengthen national tax systems including by ensuring high tax compliance and making the tax mix responsive to the *megatrends* that are reshaping our societies and economies (see Section 1.3).

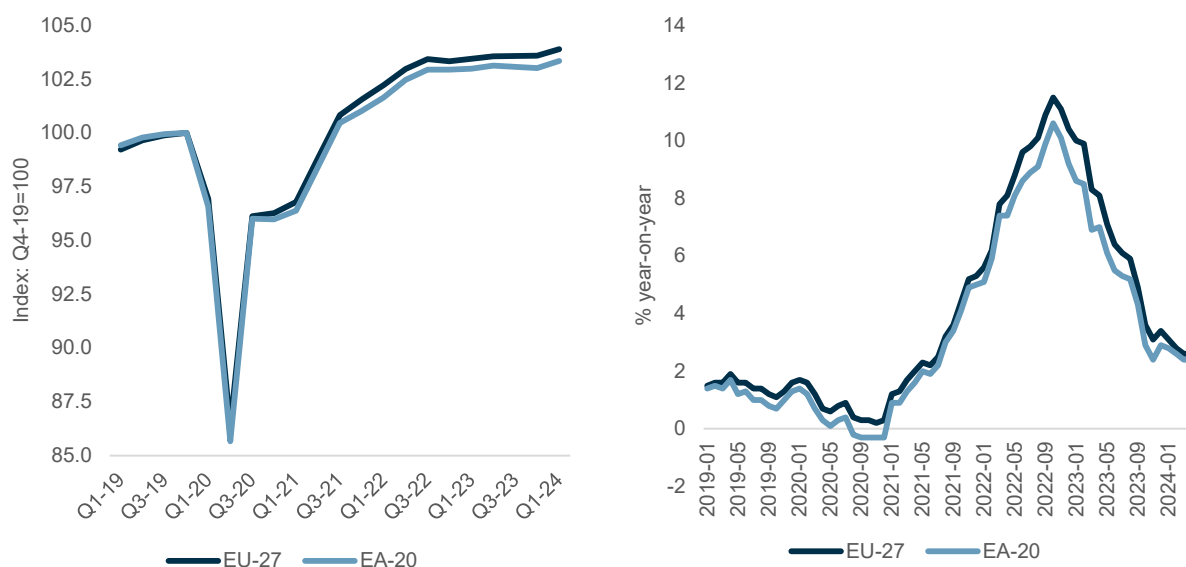
1 Unless specified differently, cut-off date for macroeconomic data used in this report is 17 May 2024.

2 Unless specified differently, data on tax revenues for EU countries referred in this report are based on the 2024 edition of [TAXUD's Taxation Trends data](#), released on 15 March 2024 (cut-off date: 31 January 2024, which entails that ratios on GDP are calculated using the GDP data available in that date).

3 Some of the main impacts of the pandemic were the following: economic recession (some Member States did not recover the pre-pandemic level of GDP until early-2023); unemployment (notably during the lockdown and concerning temporary workers); rising income inequality (low-skilled workers and women were disproportionately affected by job losses and economic hardship); public finances under strain (national governments incurred in two-digit deficits in 2020 as they had to implement emergency measures to support individuals and businesses, bringing up the level of debt as well); healthcare system pressures (including on non-COVID medical services); education disruptions (school closures and the shift to online learning disrupted education systems across the EU, while the digital divide widened), etc.

4 The European's Commission Joint Research Centre has developed an extensive work on how fiscal policy measures have cushioned the impact of the successive crisis, for instance: a) Michael Christl, Silvia De Poli, Francesco Figari, Tine Hufkens, Chrysa Leventi, Andrea Papini and Alberto Tumino (2023), [Monetary compensation schemes during the COVID-19 pandemic: implications for household incomes, liquidity constraints and consumption across the EU | The Journal of Economic Inequality \(springer.com\)](#); b) Vanda Almeida, Salvador Barrios, Michael Christl, Silvia De Poli, Alberto Tumino and Wouter van der Wielen (2021), [The impact of COVID-19 on households' income in the EU | The Journal of Economic Inequality \(springer.com\)](#); Chafwehé, B., Ricci, M. and Stoehker, D., [The Impact of the Cost-of-Living Crisis on European Households](#), European Commission, 2024, JRC136870.

Figure 1: Evolution of real GDP (left-hand) and HICP inflation (right-hand) since 2019



Source: Eurostat. Real GDP, chain linked volumes [namq_10_gdp]. HICP, year-on-year variation [PRC_HICP_MANR].

Following a robust post-pandemic expansion in 2021 and 2022, the EU economy lost momentum in 2023. After the sharp decline in 2020 (-5.6%), EU's real GDP rebounded strongly and grew by 6.0% in 2021 and by 3.5% in 2022. However, the EU economy entered a phase of stalling growth by the end of 2022 due to the impact of the energy crisis prompted by Russia's war of aggression against Ukraine. Real GDP contracted slightly in the fourth quarter of 2022 and remained roughly flat in the four quarters of 2023 (Figure 1-left). Annual growth reached 0.4% in the year helped by the carry-over effect from 2022 and a strong labour market. Real GDP contracted in several Central and Northern EU countries more exposed to energy imports from Russia, while some Southern EU economies more oriented to the service sector saw an expansion above 2%. The economic slowdown was underpinned by the lack of a solid growth driver, weaknesses coming from private consumption and the external side. Economic growth picked up at the beginning of 2024, accelerating to 0.3% quarter-on-quarter growth rate in Q1-2024, following five quarters of stagnation.

A high cost of living is dragging on economic growth. Russia's war of aggression against Ukraine sparked the surge in gas prices that was rapidly passed through to electricity prices (as the latter are often linked to gas prices by contract). Despite a concerted policy response at EU level, the inflationary pressures from energy prices broadened to the other components of the consumption basket, pushing HICP (Harmonised Index of Consumer Prices) inflation to two-digit record highs (11.5% year-on-year) in October 2022. This prompted a vigorous policy response by the monetary authorities, including the European Central Bank, who increased its policy interest rates at the fastest pace on record. This response has succeeded in alleviating the inflationary pressures and has brought the HICP rate back below 3% by the end of 2023 in the euro area and at the beginning of 2024 in the EU as a whole (see Figure 1-right). On the downside, tightening financial conditions are constraining credit flows to the private sector and precautionary savings are weighing on consumption (notably, of goods) and investment (notably, in construction) ⁽⁵⁾. As a result, real GDP growth in the EU remained subdued from the end of 2022 to the end of 2023 and the share of private consumption expenditure in GDP is at historically low levels (52% in 2023, compared to 55% on average in the period 1995-2019, see Figure 7.c in section 1.2 for further details). In

⁵ In particular, the increase in mortgage rates resulting from surging interest rates is having a significant impact on households, notably those most vulnerable and in countries where mortgage rates were mostly floating. Although several EU governments adopted support measures for households to facilitate mortgages' repayment, the increase in mortgage rates has squeezed further households' savings and consumption.

addition, the higher cost of new debt issuances and the temporary energy-related measures introduced by national governments to support households and firms have contributed to deteriorating public finances.

Despite the economic slowdown, the labour market continued to perform strongly in 2023. The EU labour market is showing a remarkable resilience to all the shocks that have hit the EU economy since 2020. It overcame the COVID-19 crisis with limited damages thanks to the deployment of various support measures including short-time work schemes by the national governments, with the fiscal support of the EU (“SURE” facility). Accordingly, employment ⁽⁶⁾ grew by 1.5% in 2021 and 2.0% in 2022. It increased by a further 1.2% in 2023, helped by strong labour demand on the back of declining real wages. The number of people employed reached 216.4 million on annual average, and thus a new record level. In parallel, the unemployment rate (based on the Labour Force Survey) receded to 6.1%, the lowest ever recorded in the EU. Meanwhile, weak output developments combined with resilient employment resulted in weak labour productivity. Moreover, significant challenges persist in the labour market, among others: the employment gap of women, the integration of young people (notably those not in education) into the labour market, high unemployment rates in certain regions and for certain vulnerable groups, and the need to adjust to fast changing skills needs. Vacancy rates and reported labour shortages remain historically high, pointing to a tight labour market. Many of the current shortages (e.g. in science, technology, engineering and mathematics -STEM-, information and communications technology -ICT-, construction, healthcare, hospitality) are long-standing and will likely be further exacerbated by the needs of the green and digital transitions (European Commission 2023a).

Strong nominal wage growth was not enough to prevent further real wage losses in 2023. The unprecedented price escalation of 2022 led to significant losses in households’ purchasing power. The increase in nominal compensation of employees per head (4.8%), fell significantly short of cushioning the historic-high annual HICP inflation (9.2%). Despite some rebalancing in 2023, HICP inflation (6.4%) again surpassed nominal wage growth (5.8%), although this trend turned around in the second half of the year as inflation continued to abate and wage growth strengthened. The contraction of real wages poses challenges particularly for those at the lower end of the income scale and has led several national governments to adjust minimum wages as well as nominal tax brackets in the personal income tax (PIT) to mitigate the so-called “bracket creep” ⁽⁷⁾.

The EU current account balance improved in 2023 despite the deceleration of global trade. The combination of disappointing growth in China and continued geopolitical tensions aggravated the slump in global goods trade that has been lingering since early 2022. Nonetheless, the fall in energy prices since the end of 2022 has improved the EU’s terms of trade and paved the way for the rebound of the trade balance of goods, which had turned negative in 2022. The trade balance of services continued to be positive on the back of inward tourism. As a result, the current account balance increased from 0.9% of GDP in 2022 to 2.9% in 2023.

Nominal GDP growth has pushed down the debt-to-GDP ratio, but general government deficit remains above 3% of GDP. After hitting a historically high level of 91.7% at the end of 2020, the EU aggregate gross debt-to-GDP ratio ⁽⁸⁾ fell significantly, reaching 84.8% at the end of 2022 and 82.9% in 2023. The decline was driven by the post-pandemic economic recovery (real GDP effect) and high inflation (GDP deflator effect). On the downside, high primary deficits continued to lift debt levels, while higher interest rates on new debt issuances are raising interest expenditure (even if only gradually thanks to the long maturity of public debts in the EU). General government gross debt remained above 100% of GDP in five EU countries: Greece (161.9%), Italy (137.3%), France (110.6%), Spain (107.7%) and Belgium (105.0%). After a sizeable reduction in 2022, the EU aggregate government deficit in 2023 increased marginally from 3.4% to 3.5% of GDP, as the deterioration of economic conditions and increased interest expenditure outweighed the reduced cost of discretionary policy. Eleven Member

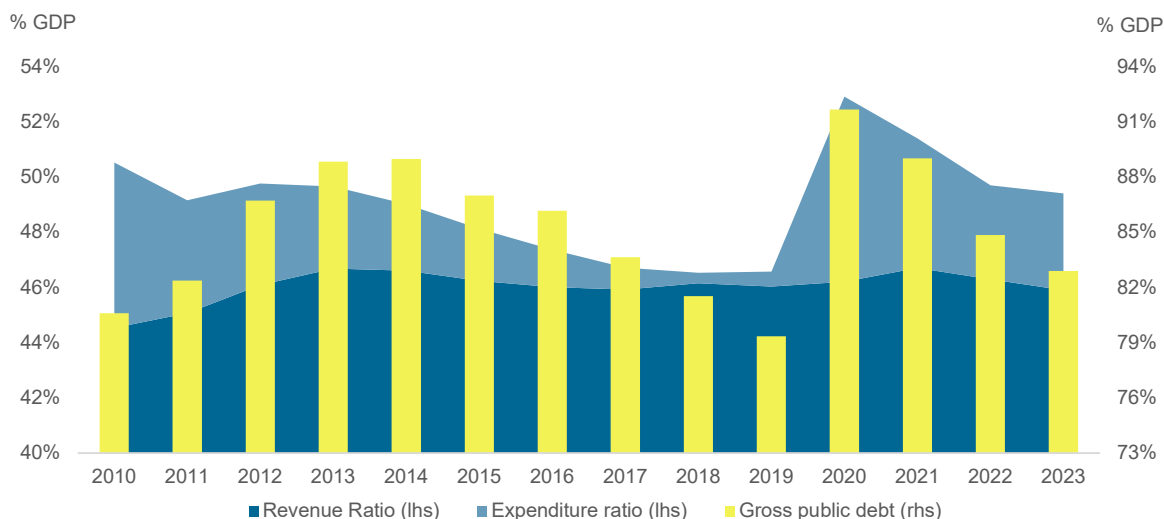
6 Measured through national accounts, online code [nama_10_a10_e].

7 A situation in which nominal tax brackets are kept constant and wage inflation pushes a household’s income into a higher tax bracket, even though its income has not increased in real terms.

8 Measured through AMECO, [UDGG] series. The gross debt for the EU-27 aggregate is measured as non-consolidated for intergovernmental loans.

States had a headline budget deficit above the Treaty reference value of 3%, namely Italy (7.4%), Hungary (6.7%), Romania (6.6%), France (5.5%), Poland (5.1%), Slovakia (4.9%), Malta (4.9%), Belgium (4.4%), Czechia (3.7%), Spain (3.6%), and Estonia (3.4%). General government revenues have remained broadly stable in the EU in recent years, moving around 46% of GDP ⁹. By contrast, public expenditure has been more volatile while national governments have had to resort to debt issuances to cope with the successive shocks that the EU economy has faced. At 49.4% of GDP in 2023, general government total expenditure in the EU was still 2.8 percentage points higher than in 2019 (see Figure 2). In this context, tax policy instruments can play a relevant role to address excessive deficits.

Figure 2: EU-27 general government revenue, expenditure and gross debt (% of GDP)



Source: AMECO [URTG, UUTG, UDDG; UVGD].

The European Commission’s Spring 2024 Forecast projects a gradual expansion of the EU economy amid high geopolitical risks. According to European Commission (2024a), EU-27 GDP will expand by 1.0% in 2024 and by 1.6% in 2025; growth rates in the euro area are projected slightly below (0.8% in 2024 and 1.4% in 2025). Almost all Member States are expected to return to growth in 2024 (see Table 1). With economic expansion in the southern and eastern rim of the EU still outpacing growth in Northern and Western Europe, economic convergence within the EU is set to progress further. HICP inflation is projected to continue declining over the forecast horizon, down to 2.7% in 2024 and 2.2% in 2025 for the EU, and to 2.5% in 2024 and 2.1% in 2025 for the euro area. Over the next two years, the EU economy is expected to generate another 2.5 million jobs, while the unemployment rate should hover around the current record-low rates. An improved outlook for global merchandise trade should support EU’s external demand for goods, in turn helping to lift the prospects of the weakened manufacturing sector. Both exports and imports of goods and services are set to rebound. With favourable movements in terms of trade, the current account balance of the EU is expected to rise back to 3.1% of GDP in both years, in line with pre-pandemic average, though with a larger contribution of export of services. The forecast notes that risks originating from outside the EU have increased recently amid two ongoing wars in the EU’s neighbourhood and mounting geopolitical tensions. Global trade and energy markets appear particularly vulnerable. Moreover, persistence of inflation in the US may further delay interest rate cuts in the US, but also beyond, resulting in somewhat tighter global financial conditions.

⁹ Looking in detail, there was sizeable revenue windfalls in 2021-22, also as a result of high inflation. The EU revenue-to-GDP ratio increased from 46.1% of GDP in 2020 to 46.7% in 2021 and 46.3% in 2022. The reversal of those windfalls in 2023 led to general government’s revenues to grow less than nominal GDP, and so the revenue-to-GDP ratio decreased to 45.9%.

Table 1: European Economic Forecast Spring 2024 – Overview

Country	Real GDP			HICP inflation			Unemployment rate			Current account balance			Budget balance		
	2023	2024	2025	2023	2024	2025	2023	2024	2025	2023	2024	2025	2023	2024	2025
BE	1.4	1.3	1.4	2.3	4.0	2.3	5.5	5.6	5.4	0.0	-0.4	-0.5	-4.4	-4.4	-4.7
DE	-0.3	0.1	1.0	6.0	2.4	2.0	3.1	3.1	3.1	6.9	7.0	7.0	-2.5	-1.6	-1.2
EE	-3.0	-0.5	3.1	9.1	3.4	2.1	6.4	7.4	6.9	-1.9	-2.5	-2.4	-3.4	-3.4	-4.3
IE	-3.2	1.2	3.6	5.2	1.9	1.8	4.3	4.4	4.4	9.9	9.1	9.5	1.7	1.3	1.2
EL	2.0	2.2	2.3	4.2	2.8	2.1	11.1	10.3	9.7	-5.8	-5.2	-4.8	-1.6	-1.2	-0.8
ES	2.5	2.1	1.9	3.4	3.1	2.3	12.2	11.6	11.1	2.5	2.8	2.8	-3.6	-3.0	-2.8
FR	0.7	0.7	1.3	5.7	2.5	2.0	7.3	7.7	7.8	-2.2	-1.4	-1.4	-5.5	-5.3	-5.0
HR	3.1	3.3	2.9	8.4	3.5	2.2	6.1	5.8	5.6	1.2	1.1	1.0	-0.7	-2.6	-2.6
IT	0.9	0.9	1.1	5.9	1.6	1.9	7.7	7.5	7.3	0.3	1.5	1.5	-7.4	-4.4	-4.7
CY	2.5	2.8	2.9	3.9	2.4	2.1	6.1	5.6	5.4	-12.1	-11.2	-10.8	3.1	2.9	2.9
LV	-0.3	1.7	2.6	9.1	1.6	2.0	6.5	6.5	6.3	-3.6	-2.8	-2.6	-2.2	-2.8	-2.9
LT	-0.3	2.0	2.9	8.7	1.9	1.8	6.9	7.0	6.9	0.6	0.3	-0.3	-0.8	-1.8	-2.2
LU	-1.1	1.4	2.3	2.9	2.3	2.0	5.2	5.8	5.7	-3.3	-3.4	-3.2	-1.3	-1.7	-1.9
MT	5.6	4.6	4.3	5.6	2.8	2.3	3.1	3.0	2.9	4.2	3.4	3.6	-4.9	-4.3	-3.9
NL	0.1	0.8	1.5	4.1	2.5	2.0	3.6	3.9	4.0	10.1	10.2	10.2	-0.3	-2.0	-2.1
AT	-0.8	0.3	1.6	7.7	3.6	2.8	5.1	5.3	5.1	1.7	1.9	1.7	-2.7	-3.1	-2.9
PT	2.3	1.7	1.9	5.3	2.3	1.9	6.5	6.5	6.4	1.3	0.8	0.6	1.2	0.4	0.5
SL	1.6	2.3	2.6	7.2	2.8	2.4	3.7	3.7	3.6	3.6	1.4	1.4	-2.5	-2.8	-2.2
SK	1.6	2.2	2.9	11.0	3.1	3.6	5.8	5.4	5.2	-0.7	-2.0	-2.5	-4.9	-5.9	-5.4
FI	-1.0	0.0	1.4	4.3	1.4	2.1	7.2	7.4	7.2	-1.4	-1.6	-0.8	-2.7	-3.4	-2.8
EA-20	0.4	0.8	1.4	5.4	2.5	2.1	6.6	6.6	6.5	2.9	3.2	3.2	-3.6	-3.0	-2.8
BG	1.8	1.9	2.9	8.6	3.1	2.6	4.3	4.3	4.0	-0.4	0.3	-0.3	-1.9	-2.8	-2.9
CZ	-0.3	1.2	2.8	12.0	2.5	2.2	2.6	2.8	2.9	1.4	1.9	1.4	-3.7	-2.4	-1.9
DK	1.9	2.6	1.4	3.4	2.0	1.9	5.1	5.6	6.0	10.9	11.7	11.3	3.1	2.4	1.4
HU	-0.9	2.4	3.5	17.0	4.1	3.7	4.1	4.5	4.0	0.3	0.0	-1.4	-6.7	-5.4	-4.5
PL	0.2	2.8	3.4	10.9	4.3	4.2	2.8	3.0	2.9	2.0	1.2	1.0	-5.1	-5.4	-4.6
RO	2.1	3.3	3.1	9.7	5.9	4.0	5.6	5.5	5.5	-6.7	-7.0	-6.6	-6.6	-6.9	-7.0
SW	-0.2	0.2	2.1	5.9	2.0	1.8	7.7	8.4	8.2	6.7	6.6	6.7	-0.6	-1.4	-0.9
EU-27	0.4	1.0	1.6	6.4	2.7	2.2	6.1	6.1	6.0	2.9	3.1	3.1	-3.5	-3.0	-2.9

Source: European Commission – DG Economic and Financial Affairs, [Spring 2024 Forecast](#).

Public finances are projected to stabilise over 2024 and 2025, with a slight decrease in the overall tax burden.

According to the Spring 2024 Forecast, the EU government deficit is projected to resume declining in 2024 (to 3.0%) and 2025 (to 2.9%), driven by the almost complete phase-out of energy-related measures, lower subsidies on private investment as well as the gradual improvement in economic activity. The tax revenues-to-GDP ratio in the EU is expected to remain slightly below 40% in the 2023-2025 period, moving from 40.1% in 2022 to 39.8% in 2025 ⁽¹⁰⁾. The overall tax burden is set to increase in 14 EU countries (led by Luxembourg and

¹⁰ The tax revenues-to-GDP ratio (also referred as tax burden) used in this Report corresponds to Indicator 2 of Eurostat National Accounts Working Group: Total receipts from taxes and compulsory social contributions after deduction of amounts assessed but unlikely to be collected [D2_D5_D91_D61_M_D611V_D612_M_M_D613V_D614_M_D995]. The value ratios indicated in this paragraph and in Table 2 do not necessarily match with those indicated in the rest of the Report due to differences in extraction dates. While the current section is consistent with data in ECFIN Spring 2024 Forecast (published on 15 May 2024, cut-off date of 30 April 2024), the tax indicators of the

Latvia) between 2022 and 2025, to decrease in eight (led by Greece) and to remain broadly stable in the remaining five (see Table 2). As for the gross public debt, the EU debt-to-GDP ratio is set to remain at 82.9% this year before edging up by around 0.4 pp in 2025, amid higher costs of servicing debt and lower nominal GDP growth. By the end of 2025, in most Member States the debt-to-GDP ratios are projected to be lower than in 2020 but to remain above 60% of GDP in 12 countries.

Table 2: Tax revenue-to-GDP ratio in the EU countries, 2020-2025

Country	Actual values (1)			Forecast values (2)			Trend	
	2020	2021	2022	2023	2024	2025	Diff 22-25	
Belgium	43.4	43.2	43.3	43.3	43.8	43.5	↔	0.2
Germany	39.6	40.9	40.8	39.7	39.9	40.4	↓	-0.4
Estonia*	33.3	33.8	32.9	34.0	34.5	33.3	↗	0.4
Ireland	19.8	20.7	20.9	22.2	22.4	22.0	↑	1.1
Greece	39.5	40.0	41.2	39.9	38.6	37.9	↓	-3.3
Spain	37.0	37.9	37.7	37.5	37.8	37.9	↔	0.2
France	45.4	45.1	46.2	44.1	44.3	44.5	↓	-1.7
Croatia	37.7	36.7	37.0	38.2	38.4	38.5	↑	1.5
Italy	42.5	42.5	42.7	42.5	42.4	42.2	↓	-0.5
Cyprus	33.7	34.8	36.5	38.1	37.9	37.6	↑	1.1
Latvia	31.0	30.7	30.3	31.9	32.3	32.4	↑	2.1
Lithuania	31.2	31.9	31.6	32.5	33.2	33.3	↑	1.7
Luxembourg*	38.4	38.3	38.4	41.0	41.1	41.4	↑	3.0
Malta	29.0	29.4	29.0	27.9	28.1	28.0	↓	-1.0
Netherlands	39.9	39.2	38.5	39.0	38.6	38.8	↗	0.3
Austria	42.2	43.4	43.2	42.8	43.2	43.2	↔	0.0
Portugal*	35.2	35.2	36.0	35.8	35.6	35.5	↓	-0.5
Slovenia	37.8	38.4	37.5	37.0	38.6	38.9	↑	1.4
Slovakia*	34.6	35.3	34.9	35.3	35.4	35.3	↗	0.4
Finland	41.8	43.2	43.0	42.0	41.0	41.2	↓	-1.8
EA-20	40.3	40.8	40.8	40.2	40.2	40.4	↓	-0.4
Bulgaria	30.5	30.8	31.1	30.1	30.2	31.1	↔	0.0
Czechia	35.9	35.9	35.3	35.6	36.8	36.7	↑	1.4
Denmark*	47.4	47.6	41.9	43.7	43.7	43.5	↑	1.6
Hungary	36.0	33.9	35.1	35.1	35.7	35.0	↔	-0.1
Poland	35.6	36.7	34.5	34.8	36.6	36.6	↑	2.1
Romania	26.1	26.3	26.8	26.0	27.2	27.2	↗	0.4
Sweden*	42.4	42.6	41.8	40.8	41.4	41.1	↓	-0.7
EU-27	40.0	40.4	40.1	39.6	39.7	39.8	↓	-0.3

Source: European Commission – DG Taxation and Customs Union based on Eurostat and AMECO database.

- (1) Eurostat data extracted on 17 May 2024, online data code [gov_10a_taxag], Indicator 2 of Eurostat National Accounts Working Group: Total receipts from taxes and compulsory social contributions after deduction of amounts assessed but unlikely to be collected [D2_D5_D91_D61_M_D611V_D612_M_M_D613V_D614_M_D995].
- (2) AMECO data extracted on 17 May 2024, based on DG Economic and Financial Affairs, Spring 2024 Forecast: Total tax burden excluding imputed social security contributions [UTAT] minus Capital transfers from general government to relevant sectors representing taxes and social contributions assessed but unlikely to be collected [UKTG].
- (*) Data for 2023 are actual values available on Eurostat [gov_10a_taxag]

rest of the Report are normally based on the 2024 edition of [TAXUD's Taxation Trends data](#), released on 15 March 2024 (cut-off date: 31 January 2024).

1.2 Recent developments in tax revenue ⁽¹¹⁾

Inflation drove up nominal tax revenues in the EU-27, but the tax burden as a ratio to GDP decreased slightly. EU Member States collected EUR 6,388 billion in taxes in 2022 (including compulsory actual social contributions – SC) ⁽¹²⁾, 8.0% more than in 2021 (see Figure 3). The tax-to-GDP ratio, which represents the average macroeconomic tax burden and better reflects the evolution of tax revenues in real terms, decreased slightly from 40.4% of GDP in 2021 to 40.2% in 2022, still close to record high levels ⁽¹³⁾. While the strong increase in nominal terms was mostly driven by high inflation (at 9.2%, HICP in the EU registered its highest ever annual rate, since records started in 1996), the evolution in relative terms (i.e., expressed in % of GDP) was the result of a combination of various factors. On the upside, the end of the COVID-19 restrictions spurred economic recovery and widened tax bases (consumption, capital and labour). At the same time, some of the measures for the deferral of tax and social security contribution payments introduced in 2020 still continued into 2021 and hence impacted on the receipts of 2022 ⁽¹⁴⁾. On the downside, tax measures were a key component of support packages deployed by national governments to help households and businesses cope with inflation. Most Member States adopted temporary rate reductions regarding excise duties and value added taxes (VAT) on energy products, and some Member States also indexed tax bracket thresholds, allowances, and credits for inflation within personal income taxes (PIT) and social contributions (SC). Despite some visible immediate effects, some of these measures often failed to target the most vulnerable households and firms, raised budgetary costs and reduced incentives to contain energy consumption and increase energy efficiency ⁽¹⁵⁾. Section 2.1 of the report provides for an overview of the tax reforms adopted by Member States in 2022–2023.

11 Tax revenue data used in this section are based on the Taxation Trends data produced by DG TAXUD and available online, with information per country and for the various indicators. [Data on Taxation Trends](#). **The 2024 edition of TAXUD's Taxation Trends data was released on 15 March 2024 and has a cut-off date of 31 January 2024.**

12 Measured by Indicator 2 of Eurostat National Accounts Working Group, as defined in June 2001: Total receipts from taxes and actual compulsory social contributions payable to general government, including those for government as an employer. This indicator is consistently used across this report to measure tax revenues.

13 In the Euro Area, the tax revenue-to-GDP ratio remained unchanged at 40.8% of GDP.

14 For instance, in The Netherlands, the scheme of special tax deferrals for entrepreneurs introduced during the pandemic envisaged that as from 1 April 2022 beneficiaries should timely meet all their new payment obligations again, and as from 1 October 2022 they should start to pay off their tax debt accrued during the special regime and in line with the arrangement agreed with the tax administration (for a maximum of 60 monthly instalments).

15 According to ([European Commission 2023b](#)), in 2022, more than 70% of the amounts dedicated to energy support corresponded to measures that were not sufficiently targeted to the most vulnerable households and firms. Furthermore, two thirds of the measures have distorted the price signal and may have reduced incentives to contain energy consumption and increase energy efficiency. According to ([European Commission, 2023c](#)), tax measures were the second largest tool used by EU governments to subsidise energy in 2022, with an estimated amount of EUR 136 billion across the EU-27 (35% of the estimated overall amount of energy subsidies in the EU-27). Meanwhile, ([Amores et al., 2023](#)) found out that fiscal measures compensated households for about a third of their welfare loss, though with significant differences between countries. Most fiscal measures were not particularly well targeted at low-income households, resulting in a higher than necessary fiscal burden to cushion the distributional impact of the inflationary shock.

Figure 3: Tax revenues in the EU since 2009 (nominal terms and percentage of GDP)



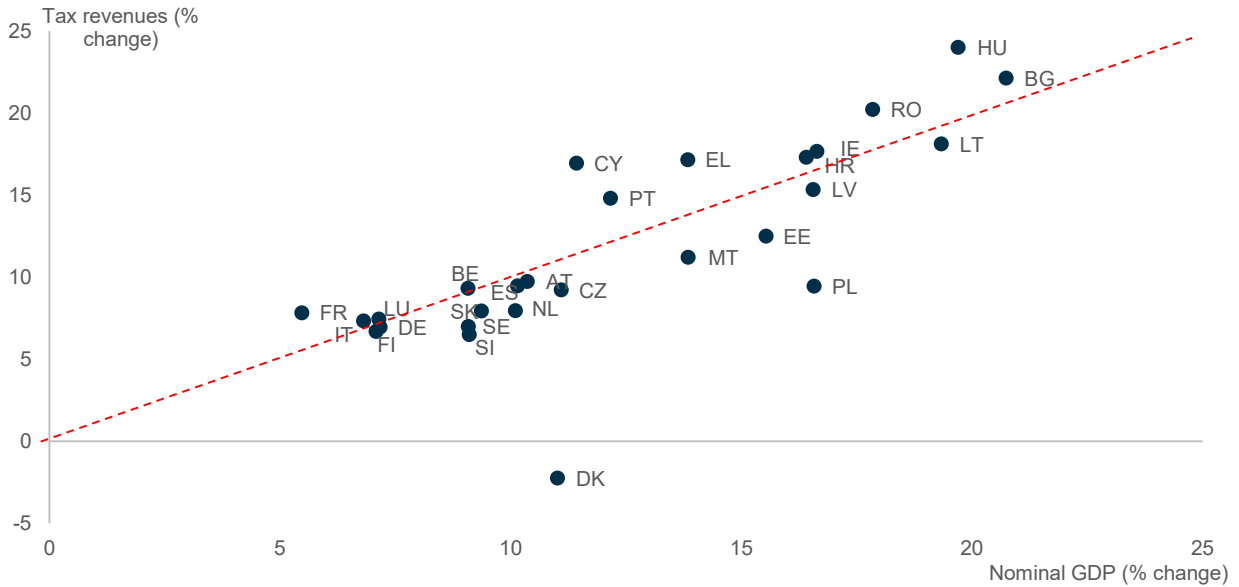
Source: Eurostat [gov_10a_taxag], as of 31 January 2024. Nominal values converted in EUR for non-EA countries.

In 2022, total tax revenues grew below nominal GDP in 15 Member States. As shown in Figure 4, nominal tax revenues (numerator) did not grow as fast as nominal GDP (denominator) in many EU countries, which led to a decrease in their tax revenue-to-GDP ratio in 2022. The largest gaps were recorded in Poland (tax revenues up by 9.5%, 7.1 pp below nominal GDP) and specially in Denmark (the only EU country where tax revenues decreased, by 2.2%, although nominal GDP surged by 11.0%). The rates of change of tax revenues and nominal GDP may differ for a variety of reasons that require more detailed country level analysis. Generally speaking, tax systems may be distorted by high inflation through different channels, such as non-adjustment of nominal tax parameters or time-lag between tax payments/refunds and liabilities incurred that may change the real value of the payment to be made ⁽¹⁶⁾ ⁽¹⁷⁾. Recent research from the OECD suggests that revenues from CIT and VAT are historically more sensitive to GDP changes than those from PIT and, especially, those from SC and excises (OECD, 2023a). It could be also the case that nominal output from sectors with a lower tax burden is growing faster than others with a higher tax burden, or vice versa. Similarly, tax policy changes are not homogeneous across sectors and could impact more/less sectors affected by higher/lower inflation.

16 For a comprehensive analysis of the various channels through which inflation can impact taxation, please see Box 1 of the Annual Report on Taxation 2023.

17 In a budgetary perspective, EUROMOD simulations to illustrate the short-term budgetary impact of the inflation shock seen in 2022 point at a favourable and differentiated short-term budgetary impact of inflation across the EU resulting from wage indexation. The analysis by (Leventi et al., 2024) suggests that in almost half of the EU countries, bracket creep and benefit erosion cause an implicit increase in government revenues sufficient to finance an indexation of benefits and pensions to the inflation of that year.

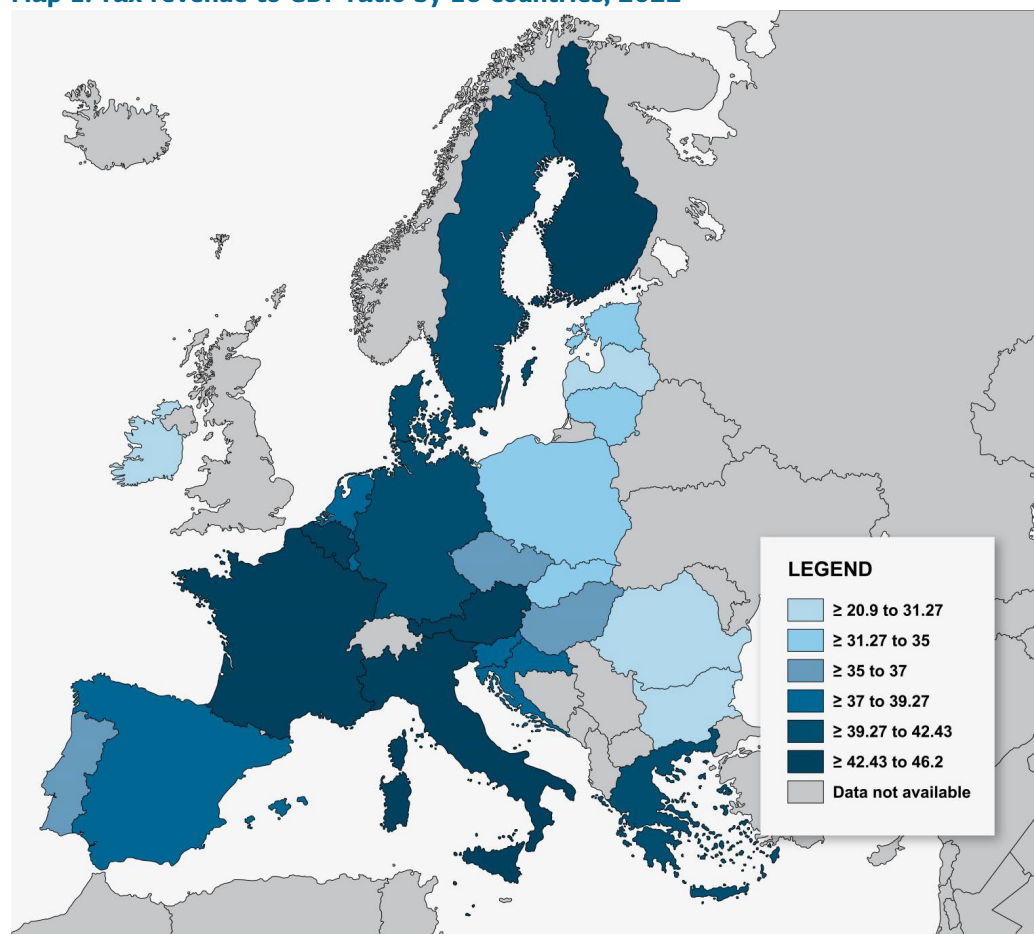
Figure 4: Change in nominal GDP and nominal tax revenues 2021-2022



Source: Eurostat [gov_10a_taxag]. Nominal values measured in national currencies.

The tax burden differs significantly across Member States. In 2022, France registered the highest tax revenue-to-GDP ratio of the EU, at 46.2% of GDP, followed by Belgium, Austria and Finland (all of them above 43% of GDP). By contrast, Ireland had the lowest ratio (20.9% of GDP), although in this case the prominent flow of foreign investment largely amplifies the denominator (GDP) and hence distorts the ratio. As shown in Map 1, Eastern European and, to a lesser extent, Iberian countries, tend to have a tax-to-GDP ratio below the EU average. This may be related to a variety of reasons that may differ across countries, such as the statutory level of tax rates, tax compliance, efficiency of tax administrations, repatriation of benefits abroad, ageing population, political choices, provision of public services, etc. Countries have varied approaches to the provision and financing of welfare services and public goods, and their priorities in economic policy diverge; this may lead to diverse tax designs, including different tax rates and different definitions of the tax base.

Map 1: Tax revenue to GDP ratio by EU countries, 2022



Source: Eurostat [gov_10a_taxag].

The tax burden was below pre-pandemic levels in half of the EU countries in 2022, with limited convergence among Member States. Despite having increased by 0.3 percentage points (pp) in the EU between 2019 and 2022 (from 39.9% of GDP to 40.2%), the tax burden has grown in only 13 Member States and decreased in the remaining 14 (see Figure 5). The most significant increase has taken place in Spain (2.9 pp), followed by Cyprus (2.3 pp), Greece (1.7 pp) and Portugal (1.5 pp). These four countries ⁽¹⁸⁾ are the most relevant cases in which a convergence towards the EU average has been observed (only complete in the case of Greece). Meanwhile, in other cases (e.g., Ireland, Malta, Hungary, Lithuania, Estonia) the gap widened between 2019 and 2022. On the other hand, Denmark registered the strongest decrease in its tax revenue-to-GDP ratio between 2019 and 2022 (by -5.2 pp), followed by Croatia (-1.4 pp), Hungary (-1.2 pp) and Luxembourg (-1.2 pp). Country specific analysis is needed to understand if the evolution since 2019 is driven by structural changes, temporary factors or a conjunction of both. For instance, in the case of Spain most of the increase has been driven by a pro-cyclical enlargement of tax bases (labour, capital) in a context of robust job creation, strong raises in pensions, public wages and statutory minimum wage, as well as mounting company profits, all that complemented with reforms conducive to facilitate tax compliance. The sharp decline in Denmark is largely explained by the abrupt fall in 2022 of revenues from the tax on the yields of certain pension scheme assets and the lagged effect of other temporary measures introduced during the COVID-19 pandemic.

¹⁸ Interestingly, the four countries are subject to post-programme surveillance following the assistance received under adjustment programmes during the Great Financial Crisis. In this context, the concerned countries carried out structural reforms in the 2010's decade that made their fiscal system more resilient to shocks.

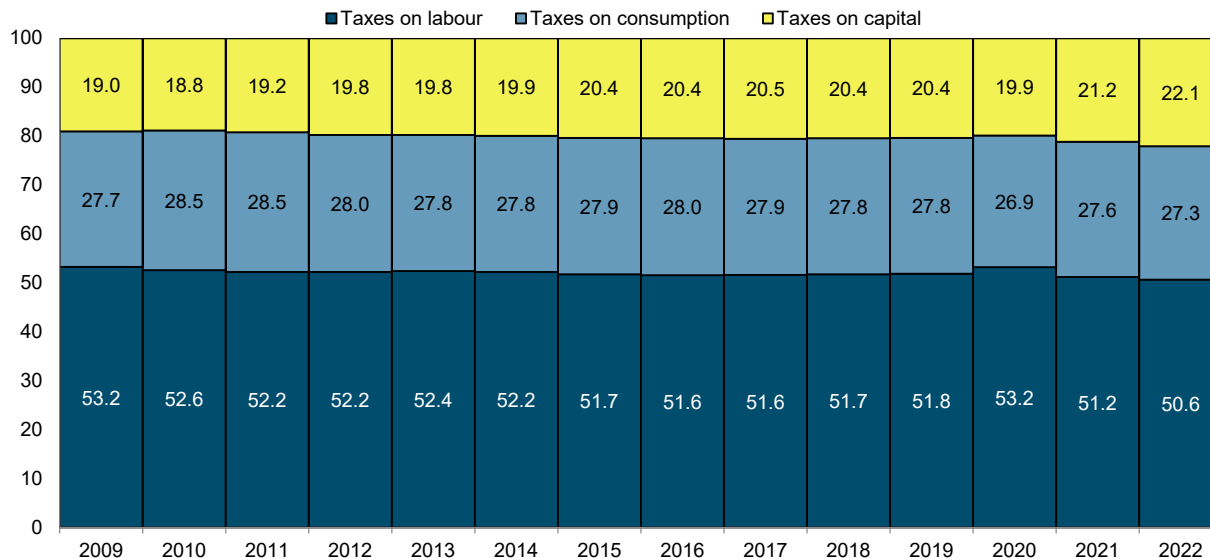
Figure 5: Tax burden: gap with the EU-27 aggregate (percentage points of GDP)



Source: Eurostat [gov_10a_taxag].

In 2022, the tax structure by economic function showed again a small shift from taxes on labour and consumption to taxes on capital as a share of total revenues. Although tax revenues derived from specific tax bases tend to be rather stable over time, some relevant changes can be observed during the current economic cycle in the EU tax structure. While nominal revenues from the three sources (capital, labour and consumption) increased in 2022, revenues from capital bases grew twice as fast as from labour and consumption bases. As a result, the weight of taxes on capital in the tax mix reached 22.1% in 2022 (see Figure 6), its highest share since 2007. It is thus 0.9 pp higher than in 2021 and 1.7 pp above the average in the 2015-2019 period. By contrast, the share of labour taxes (including social contributions) in total tax revenues decreased in 2022 to 50.6%, 0.6 pp less than in 2021 and 1.1 pp below the average in the 2015-2019 period. Revenues from taxes on consumption represented 27.3% of total tax revenues in 2022, 0.3 pp less than in 2021 and 0.6 pp below the 2015-2019 average. For further analysis of the drivers and trends, see Box 1.

Figure 6: EU-27 tax revenues by economic function (tax base), 2009-2022 (% of total)

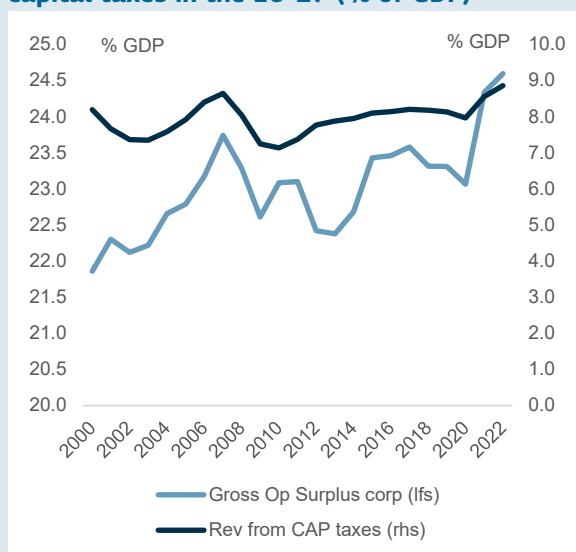


Source: European Commission, DG Taxation and Customs Union, based on National Tax Lists data.

Box 1: Recent evolution of tax structure by economic function

The evolution of the tax structure by economic function in recent years is explained, inter alia, by the faster growth of business profits compared to nominal wages. The present box looks into the evolution of the respective tax bases to better understand the recent evolution of tax revenues by economic function and the underlying trends. The analysis concludes that the strength of the corporate sector in the aftermath of the COVID-19 pandemic has pushed up revenues from capital taxes and offset the decreases observed in revenues from labour and consumption taxes. Looking forward, any option to keep the current level of tax revenues up will require a shift from labour taxes to capital and consumption taxes.

Figure 7.a: Evolution of gross operating surplus of corporations vs revenues from capital taxes in the EU-27 (% of GDP)



Source: AMECO, DG TAXUD.

The recent rise in business profits has significantly broadened the capital tax bases. In 2022, gross operating surplus of corporations (a measure used as a proxy of business profits) reached 24.6% of GDP in the EU, its historic high (Figure 7.a). At the same time, revenues from taxes on capital also reached a historic high (8.9% of GDP). Figure 7.a shows a moderate correlation between both variables, as CIT represents less than 40% of total revenues from capital taxes ⁽¹⁾ and the relationship between profits and taxes is not linear (companies pay taxes only when profitable and can deduct past losses). Evidence suggests that price rises in intermediate goods were quickly transmitted and amplified to the price of final goods, and hence rising corporate profits have made a visible contribution to domestic price pressures in the euro area ⁽²⁾. Corporate profits in 2022 also benefitted from contained labour costs and the declining value of asset depreciation, all that having an immediate effect on CIT revenues.

Tailwinds for capital taxes are anticipated in the near future. In a broader context, the declining trend in CIT rates came to a halt the beginning of the current decade. EU Member States are also implementing reforms to address base erosion and profit shifting by multinational enterprises (including by transposing the Pillar Two Directive) and the digitalisation of tax administration and procedures is helping increase enforcement and curb aggressive tax planning ⁽³⁾. Despite these trends, incentives remain for certain taxpayers to engage in income shifting from labour bases to capital bases, as long as the highest marginal tax rates in the PIT on labour income remain higher than that on capital income or the CIT rate. In addition, two policy discussions are gaining traction in recent times: first, the question of net wealth taxation in a context of accelerating wealth inequality and increasing need for revenues to face megatrends; second, the need to reinforce the role of recurrent immovable property taxes due to economic efficiency considerations (see Section 3.2 for further details). These developments together point at a sustained increase in the medium term of the weight that revenues from CIT and overall capital taxes have on the tax mix.

The large gap between inflation and nominal wage growth weakened revenues from labour taxes in 2022. Revenues from taxes on labour represented 20.5% of GDP in the EU in 2022, the lowest since 2011. Employment growth (2.0%) was not enough to offset the fall in real wages (-4.2%), thus impacting on

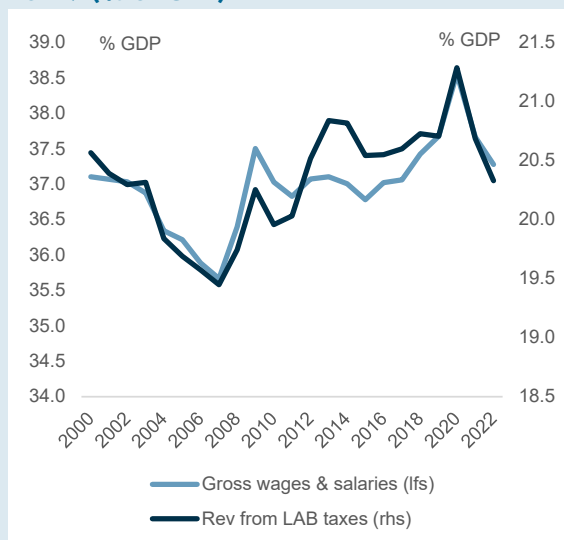
(1) The other capital tax bases are capital income of households and of self-employed, and stock of capital, and have remained broadly stable overtime -see Figure 16 and Section 3.2.

(2) European Central Bank (2023a): ECB Economic Bulletin, [Issue 4/2023](#).

(3) See Section 2.1 on country reforms for further information.

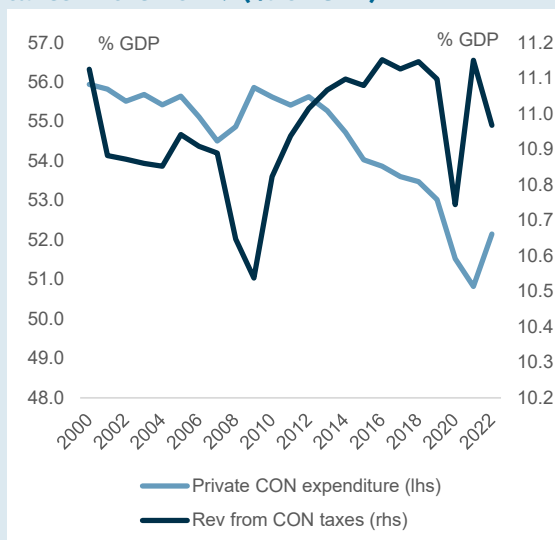
Box 1 (continued)

Figure 7.b: Evolution of gross wages and salaries vs revenues from labour taxes in the EU-27 (% of GDP)



Source: AMECO, DG TAXUD.

Figure 7.c: Evolution of private consumption expenditure vs revenues from consumption taxes in the EU-27 (% of GDP)



Source: AMECO, DG TAXUD.

PIT revenues from labour income. Figure 7.b shows the strong historic correlation between gross wages and salaries and revenues from labour taxes. High inflation in 2022 could have further eroded labour tax bases in countries where social security contributions are not linked to real parameters or when the deferred SC payments allowed during the COVID-19 pandemic lost real value. Looking forward, megatrends such as population aging and digitalization pose important challenges on the labour market and hence on labour taxation (see Section 1.3 on structural changes for further information), pointing to a future decline in the weight of labour taxes on the tax mix.

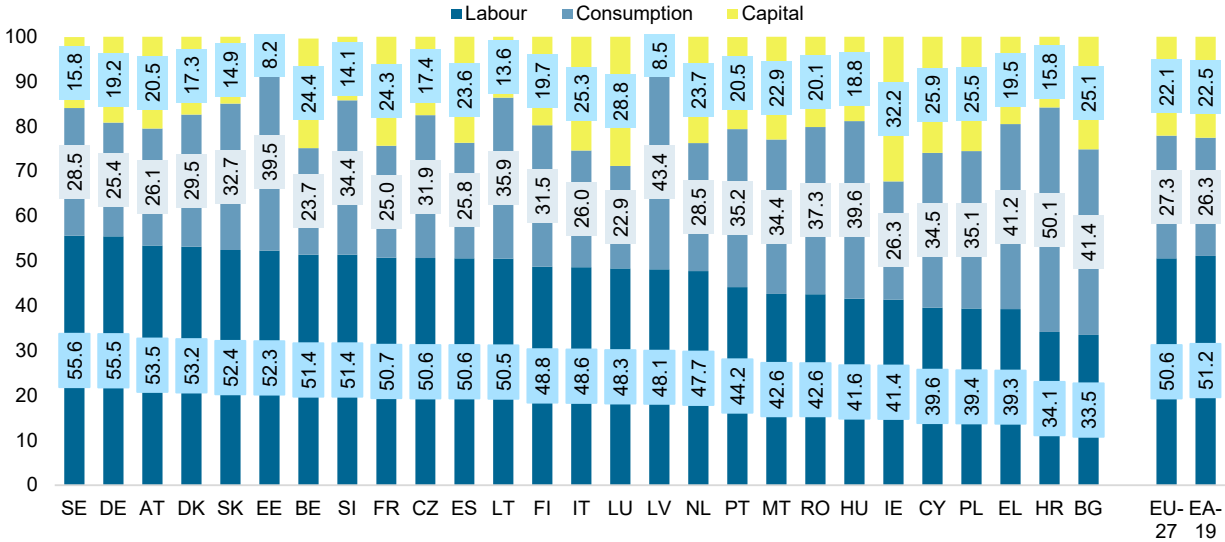
Enhanced tax compliance upholds revenues from consumption taxes despite weak private consumption. Figure 7.c reveals a low correlation between private consumption expenditure and revenues from consumption taxes, as the gradual decline in the former since the Great Financial Crisis (GFC) has not prevented the latter from outstripping the levels seen prior to the GFC (4). This has been possible thanks to the long-term upward trend of VAT revenues (from 6.5% of GDP in 2009 to 7.5% in 2022, its historic high) on the back of enhanced compliance and rising rates (see Section 3.4 for further reference). This contrasts the declining trend in revenues from environmental and other externality-based taxes, which has accelerated in recent times (see Graph 13 and Sections 3.5 and 3.6). While this retreat can be explained to some extent by the reduction of the tax base (e.g., decrease in the consumption of goods or services subject to the tax), in many other cases the fall in revenues is driven by the absence of indexation or insufficient action of the national governments to delve into the use of this type of taxes.

(4) The decoupling of the trend of consumption of private household and consumption tax revenues might also be explained by other drivers, such as an increase of VAT borne by gross fixed capital formation and intermediate consumption by exempted sectors (European Commission 2023a, VAT Report).

The distribution of tax revenues by tax bases reflects important differences in the design of tax policies across EU Member States. In 2022, labour tax bases (including SC) were the largest source of tax revenues for all Member States but three (namely Greece, Croatia and Bulgaria, see Figure 8). Even so, large disparities across countries are observed in this regard. Labour tax revenues tend to be more prominent in Northern and Central Europe countries, representing more than 55% of total tax revenues in Sweden and Germany. By contrast, they amounted to less than 40% of total tax revenues in countries like Cyprus, Poland and

the above-mentioned Greece, Croatia and Bulgaria. The magnitude of the labour tax burden and the features of the tax design are important for labour supply and demand, work incentives and economic growth. Consumption tax bases were the largest source of tax revenues in 2022 in three countries (Greece, Croatia and Bulgaria). By contrast, the share of consumption taxes in total tax revenues remained below 25% in Luxembourg, Belgium and France. Consumption taxes are seen to be less distortive to growth and employment than labour taxes, although some may be more regressive as they put a higher burden on those with lower incomes or not in employment. Finally, Ireland (32%) and Luxembourg (29%) are the EU countries with the largest share of revenues from capital taxes, while Estonia and Latvia (8% both) are those with the smallest. Historically, the relatively high mobility of capital as compared to other tax bases has contributed to a reduction in corporate income tax rates as well as to the erosion of wealth taxation, and thus limited the ability to raise significantly more revenues from capital bases. A greater use of tools that support increased cross-country exchange of information and the fight against tax evasion and avoidance may contribute to additional revenues from this base. In addition, concerns with rising inequality might see some governments support a more intensive use of certain types of capital taxation.

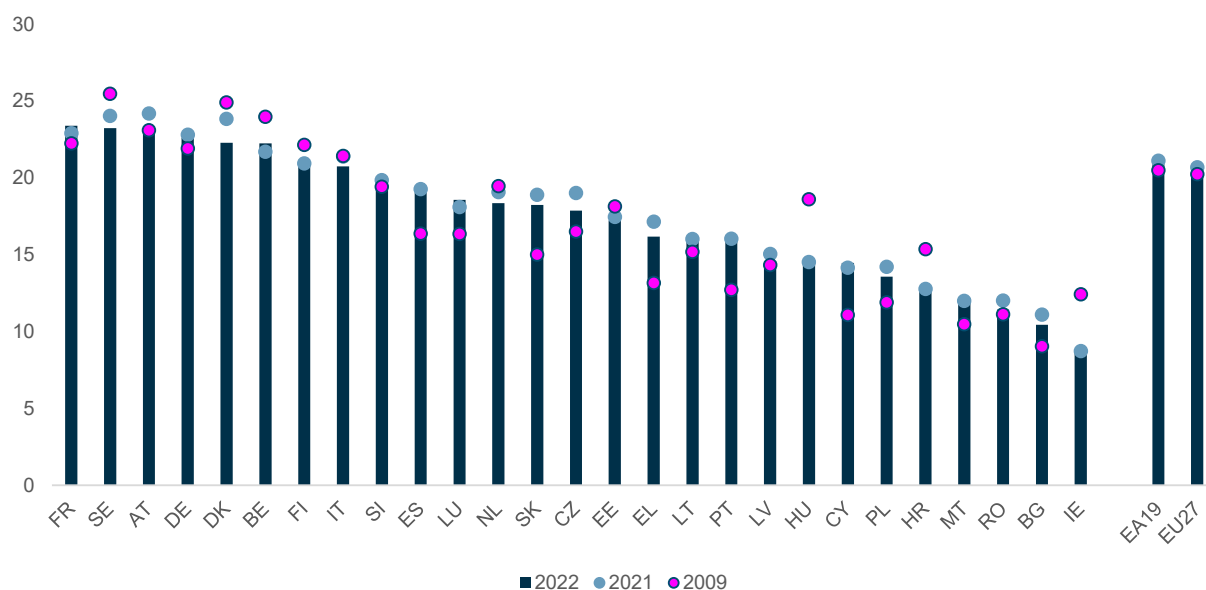
Figure 8: Tax revenues by economic function in EU Member States, 2022 (% of total)



Source: European Commission, DG Taxation and Customs Union, based on National Tax Lists data.

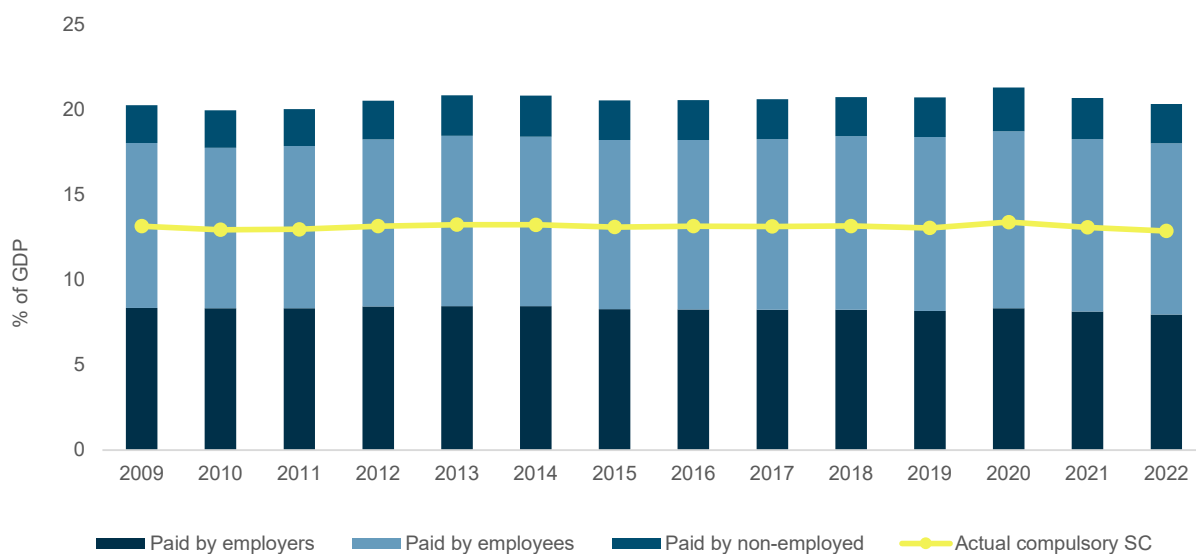
The GDP weight of revenues from taxes on labour decreased in 20 EU Member States in 2022. Tax revenues obtained from labour bases amounted to 20.3% of GDP in 2022, a decrease of 0.4 pp from the previous year and the lowest ratio since 2011. Denmark recorded the sharpest decline (-1.6 pp), followed by Czechia and Austria (-1.1 pp both). With 23.4% of GDP in 2022, France was the country with the highest revenue from labour taxes, followed by Sweden (Figure 9). On the opposite side, Ireland (8.7% of GDP) remained the country with the lowest revenue. Across the EU, around 65% of revenues from taxes on labour come from actual compulsory SC, paid both by employers and employees (Figure 10). Employees also pay other labour taxes via PIT. In total, labour taxes paid by employers amounted to 8.0% of GDP in 2022, those paid by employees to 10.1% of GDP and those paid by non-employed (i.e., pensioners, unemployed and other recipients of social benefits) to 2.3% of GDP.

Figure 9: Revenues from taxes on labour as % of GDP in EU Member States, 2009-2022



Source: European Commission, DG Taxation and Customs Union, based on National Tax Lists data.

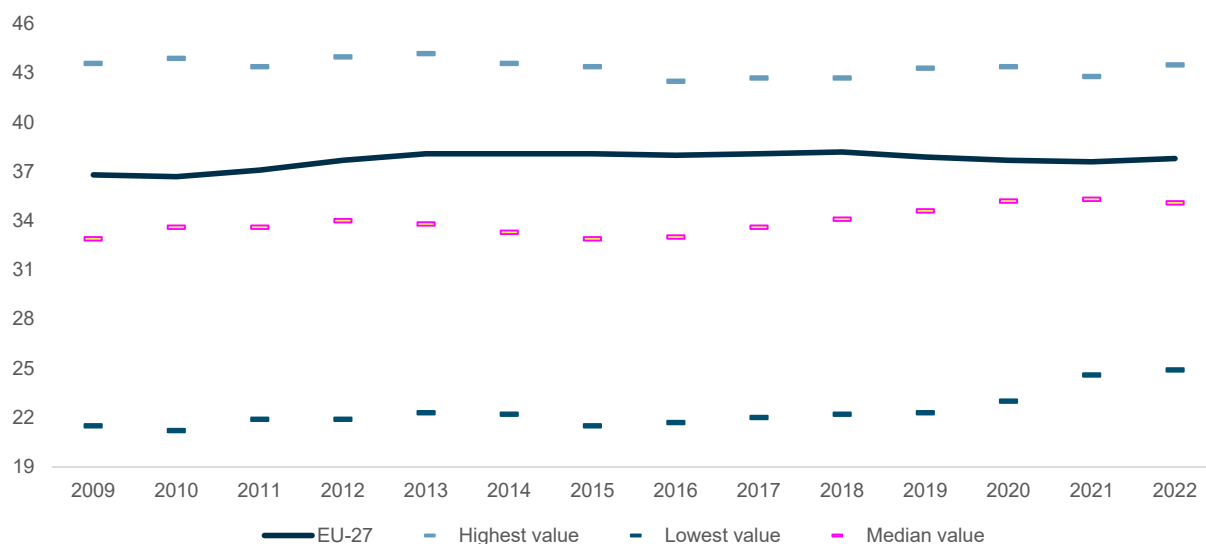
Figure 10: Revenues from taxes on labour as % of GDP in the EU-27, 2009-2022



Source: European Commission, DG Taxation and Customs Union, based on National Tax Lists data.

The implicit tax rate (ITR) on labour has remained broadly stable in recent years. The ITR on labour measures the overall tax burden on all employed labour incomes. It does so by dividing taxes and social contributions on employed labour income by total compensation of employees and payroll taxes. As shown in Figure 11, the ITR on labour has remained broadly stable in the EU since 2012, with small fluctuations. It reached 37.8% in 2022, 0.2 pp more than in 2021. At 43.5%, Italy was the EU country with the highest ITR on labour, while Bulgaria (24.9%) had the lowest one. Interestingly, the median value of the distribution of Member States has been approaching the EU aggregate during the last decade, indicating the convergence of some small countries with lower rates.

Figure 11: Implicit tax rate on labour (%), 2009-2022

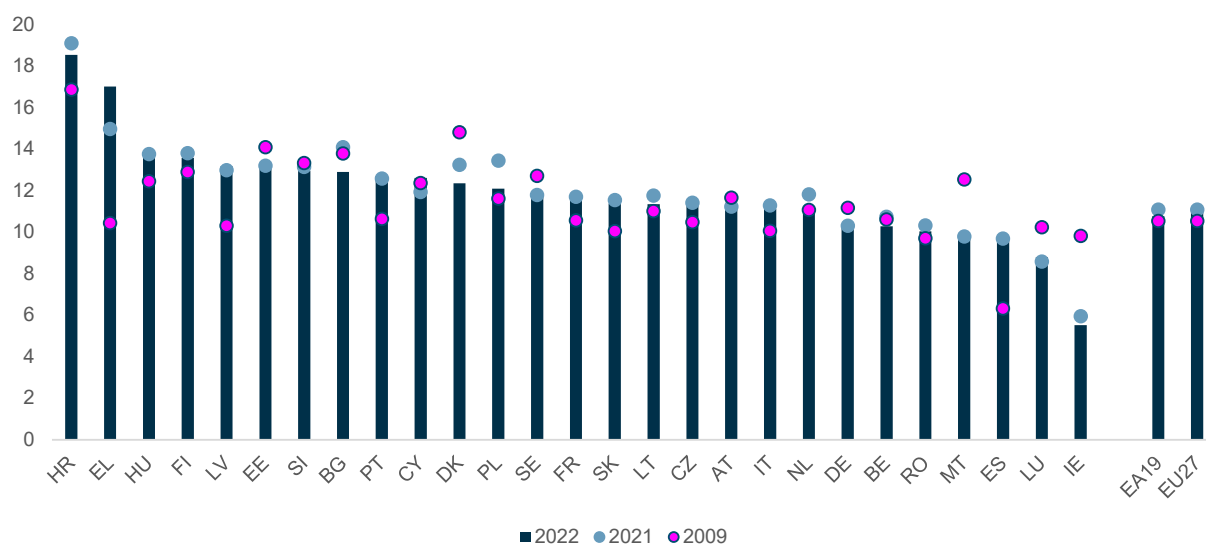


Source: European Commission, DG Taxation and Customs Union, based on National Tax Lists and National Accounts data.

The GDP weight of revenues from consumption taxes decreased in 2022 due to a fall in externality-based taxes. Tax revenues obtained from consumption bases in the EU amounted to 11.0% of GDP in 2022, down from 11.2% in 2021 (Figure 13). 16 Member States recorded a decline in the ratio, of which Poland (-1.4 pp) and Bulgaria (-1.2 pp) recorded the most significant decreases. Meanwhile, Greece recorded the highest increase (2.0 pp of GDP) in revenues from taxes on consumption. Croatia remains as the only Member State where revenues from this tax base are the most prominent (18.5% of GDP), followed by Greece (17.0%). On the opposite side, Ireland (5.5% of GDP), Luxembourg (8.8%) and Spain (9.7%) have the lowest revenues (see Figure 12). Across the EU, VAT is the most important consumption tax and has historically amounted to 65%-70% of overall revenues from consumption taxes (Figure 13). In 2022 revenues from that source reached 7.5% of GDP in the EU, its highest ever (7.4% in 2021). Revenues from other taxes and duties on imports remained stable (0.5% of GDP), while revenues from excise duties on tobacco and alcohol (0.7% of GDP) decreased marginally. By contrast, revenues from environmental taxes¹⁹ and other externality-based taxes receded from 2.5% of GDP in 2021 to 2.3% in 2022.

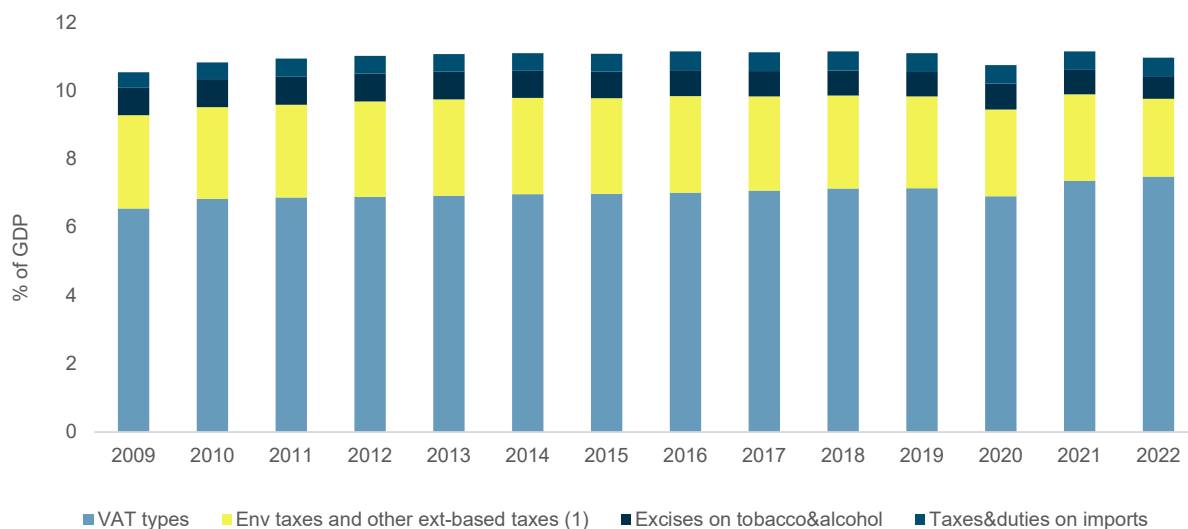
¹⁹ Environmental tax statistics rely on the tax definition of the national accounts as a reference because this improves international comparability of the statistics and allows integration of the tax data with the national accounts and with systems of environmental and economic accounting. In order to define environmental taxes precisely and to ensure international comparability, a list of tax bases was established. All taxes defined as such in the national accounts and relying on the tax bases listed comply to the definition of an environmental tax. See [Environmental taxes - A statistical guide - 2013 edition - Products Manuals and Guidelines - Eurostat \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1)

Figure 12: Revenues from taxes on consumption as % of GDP in EU Member States, 2009-2022



Source: European Commission, DG Taxation and Customs Union, based on National Tax Lists data.

Figure 13: Revenues from taxes on consumption as % of GDP in the EU, 2009-2022

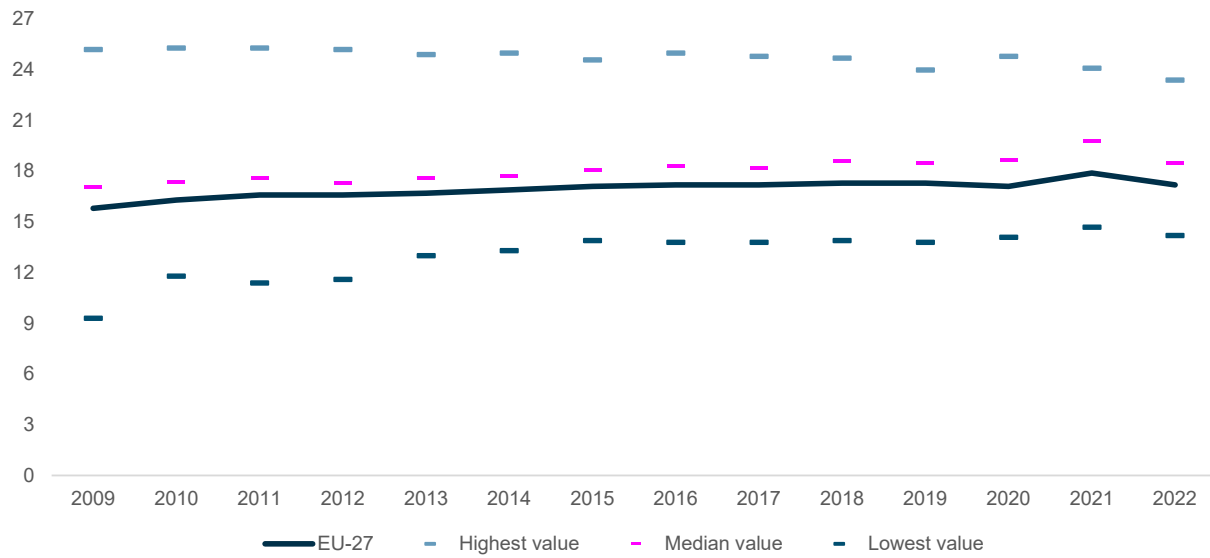


Source: European Commission, DG Taxation and Customs Union, based on National Tax Lists data.

This series does not show all revenues from environmental and other externality-based taxes as they may also come from capital bases.

In 2022, the implicit tax rate on consumption reversed the increase of 2021. The ITR on consumption is the relation between the revenue from consumption taxes and the estimated base. It increased gradually during the 2010s, in parallel to strengthening VAT compliance and slightly rising tax rates in a number of EU countries. After that, it increased significantly in 2021 (from 17.1% to 17.9%), but the advance was almost completely reverted in 2022 (17.2%) (Figure 14). The 2022 decline is largely explained by the reduction of VAT rates of energy goods and basic foodstuffs and other temporary tax measures enacted to mitigate the inflationary pressures (see Section 2.1 for a comprehensive review). At 23.4%, Denmark was the EU country with the highest ITR on consumption in 2022, while Spain is the EU country with the lowest rate since 2006 (14.2% in 2022). The partial harmonisation of VAT rates results in higher concentration of national rates around the median/average values than in case of the ITR on labour.

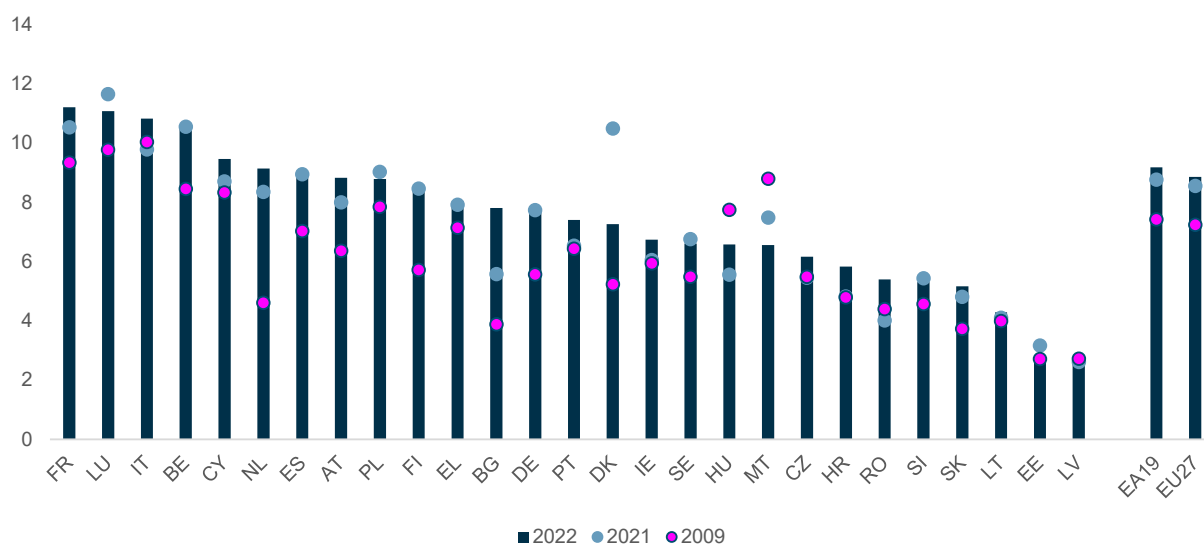
Figure 14: Implicit tax rate on consumption (%), 2009-2022



Source: European Commission, DG Taxation and Customs Union, based on National Tax Lists AND National Accounts data.

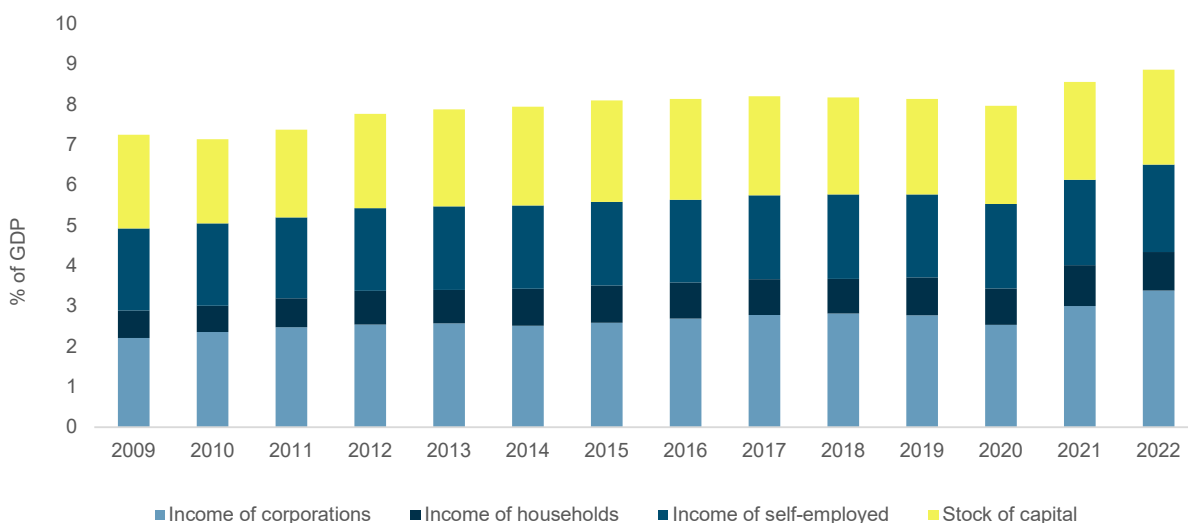
The slight increase in revenues from taxes on capital in 2022 was driven by corporate income taxation while revenues from other sources of capital remained stable. At 8.9% of GDP in 2022, revenues from capital taxes increased by 0.3 pp compared to 2021 and reached their historic high. Out of the different sources of income, tax revenues from the income of corporations moved up from 3.0% of GDP in 2021 to 3.4% in 2022, also the highest ratio ever (Figure 16). As explained above, the current situation is explained to a large extent by the rise in corporate profits on the back of the economic recovery and the inflation of 2021 and 2022. The remaining capital tax bases (capital income of households and of self-employed, stock of capital) have remained broadly stable in recent years. Overall revenues from taxes on capital increased in 18 Member States, with Bulgaria at the top (up by 2.2 pp of GDP). The most significant fall in revenues took place in Denmark (-3.2 pp of GDP). France (11.2% of GDP), Luxembourg (11.1%) and Italy (10.8%) were the EU countries with the highest revenues from capital taxes (Figure 15). At the other end, Latvia (2.6% of GDP) and Estonia (2.7%) recorded the lowest level of revenues.

Figure 15: Revenues from taxes on capital as % of GDP in EU Member States, 2009-2022



Source: European Commission, DG Taxation and Customs Union, based on National Tax Lists data.

Figure 16: Revenues from taxes on capital as % of GDP in the EU, 2009-2022



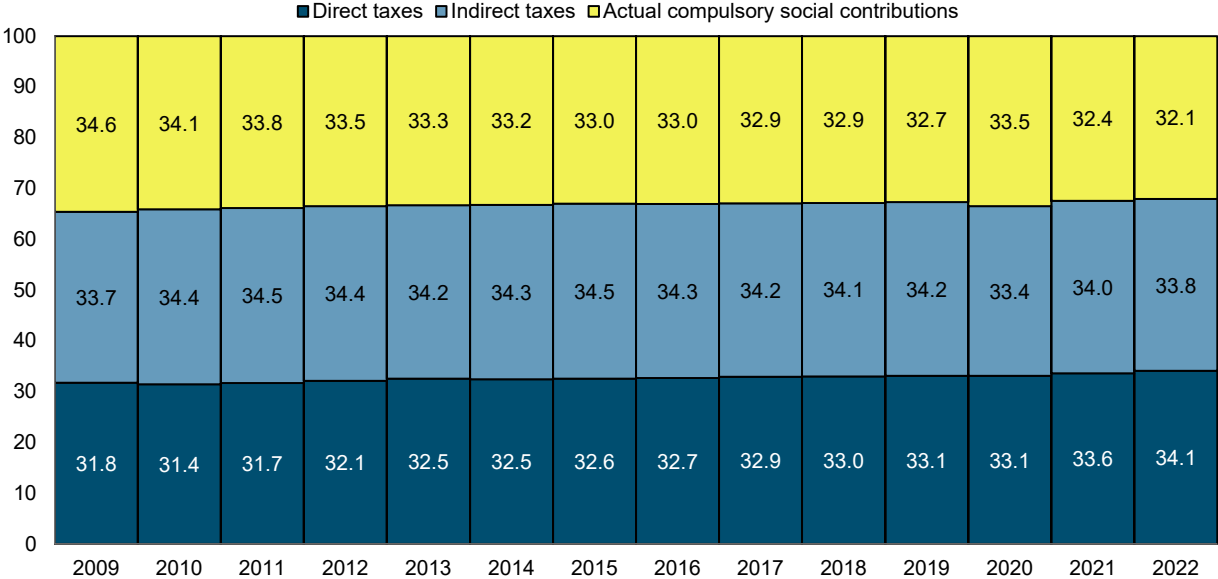
Source: European Commission, DG Taxation and Customs Union, based on National Tax Lists data.

Direct taxation became the tax category with the highest share of revenues in 2022. The structure of tax revenue can also be analysed according to the three main categories of taxes (namely, direct taxes, indirect taxes, and actual compulsory social contributions) ⁽²⁰⁾. Although each of these three types roughly represents around a third of total tax revenues in the EU, some relevant changes have been observed during the last decade. The share of direct taxes on the total has increased every year since 2010, moving up from 31.8% in 2009 to

20 Direct tax is a tax levied on a situation that is durable by nature and directly on a specific (legal or natural) person via a notice of assessment, e.g. personal income tax (PIT), corporate income tax (CIT), and wealth tax. Indirect tax is a tax levied on a material or legal event of an accidental or temporary nature and on a (legal or natural) person that can often be an intermediate and not the person responsible for the event (hence the indirect character of the tax), e.g. VAT, import levies, excise duties. Finally, social contributions (SC) are compulsory payments done to the general government that confer entitlement to receive a (contingent) future social benefit; contributions can be levied on employees, self-employed, employers or non-employees.

34.1% in 2022 (Figure 17). In parallel, the share of actual compulsory SC has decreased every year since 2009 (with the exception of 2020), moving down from 34.6% in 2009 to 32.1% in 2022. The described changes reflect the shift in the tax structure by economic function described above, with a growing share of revenues from taxes on capital that offsets the slow decline in revenues from taxes on labour. With regards to revenue from indirect taxes, its share over the total has remained broadly stable during the period, with small fluctuations over the years.

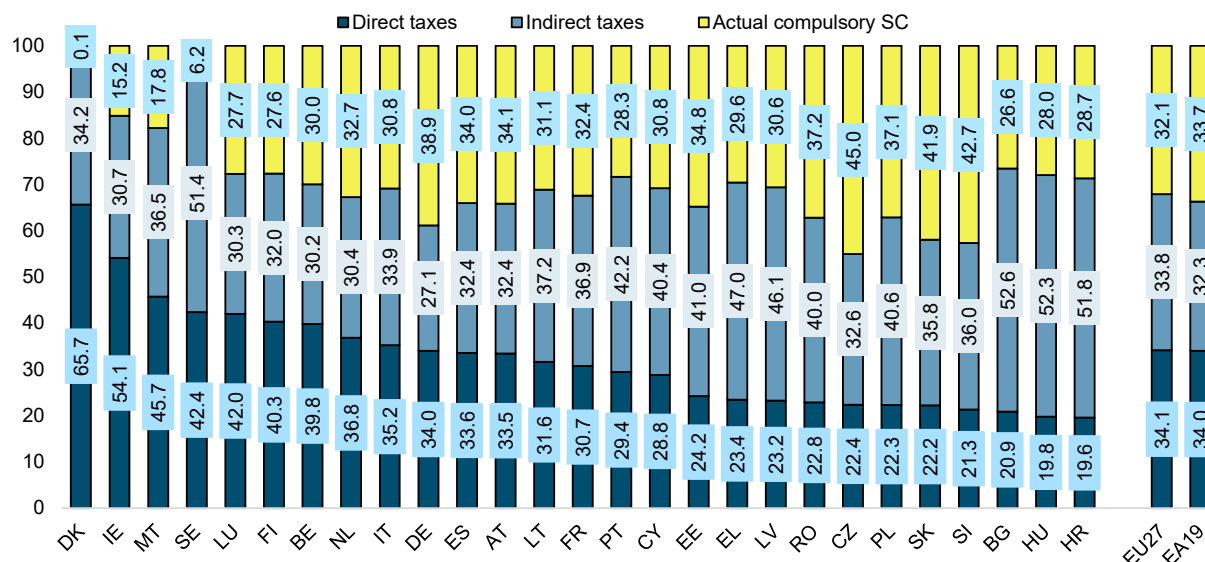
Figure 17: EU-27 tax revenues by category, 2009-2022 (% of total)



Source: European Commission, DG Taxation and Customs Union, based on Eurostat data [gov_10a_taxag].

The revenue structure by category of tax presents significant variations across the EU Member States (see Figure 18). Denmark has the highest share of direct tax revenues (65.7%), but a negligible share of revenues from SC because most of welfare spending is financed through direct taxes. A similar profile, although less pronounced, is present in other countries such as Ireland, Malta and Sweden. By contrast, other Member States (e.g., Czechia, Slovakia and Slovenia) combine relatively high shares of revenue from SC (above 40% of total) with low shares of revenues from direct taxes (around 21-22% of total). In four countries indirect taxes make up more than half of all tax revenues (Bulgaria, Croatia, Hungary and Sweden). Correspondingly, Bulgaria, Croatia and Hungary have the lowest shares of revenue from direct taxes.

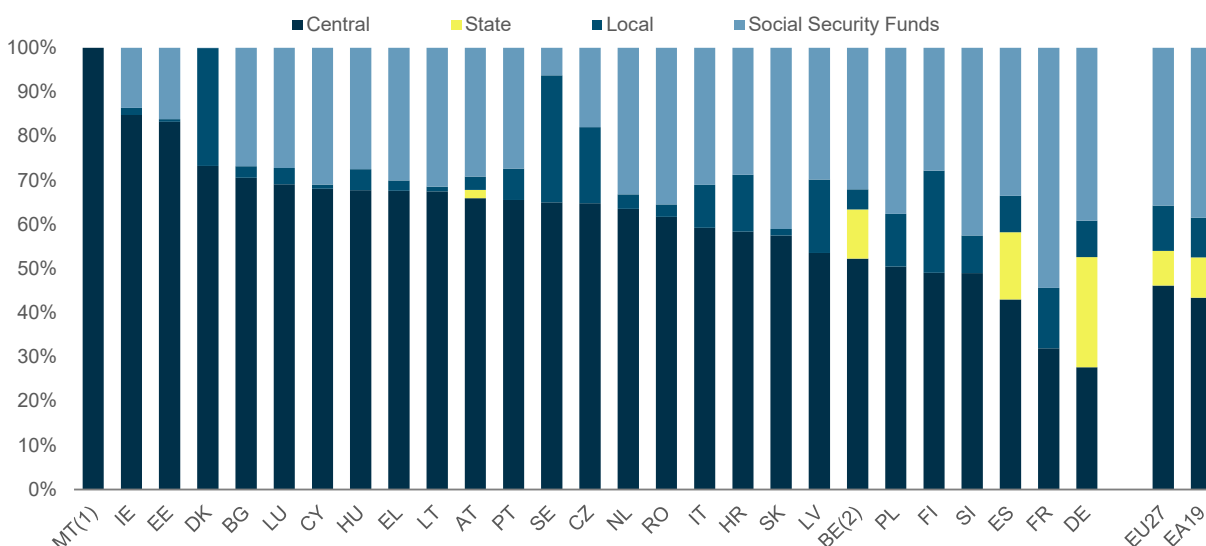
Figure 18: Distribution of tax revenues by category of tax in EU Member States, 2022 (% of total)



Source: European Commission, DG Taxation and Customs Union, based on Eurostat data [gov_10a_taxag].

The political and administrative organisation of a country determines the revenue structure by level of government. At EU aggregate, central governments received 45.8% of total tax revenue in 2022, 0.4 pp more than in 2021. State governments (i.e., regions) received 7.8% (unchanged from 2021), local governments 10.2% (down by 0.1 pp), and social security funds 35.5% (down by 0.3 pp) (Figure 19). At country level, the distribution of the revenues relies on the constitutional organisation of each country and how the welfare benefits are managed. Central governments receive more than 80% of tax revenues in centralised countries such as Malta, Ireland or Estonia, but less than 30% in a federal country as Germany. In the latter, “landers” receive 25% of total revenue, and the share of tax revenues received by state entities is also high in other sort of federal countries like Spain (15% for the “autonomous regions”). Local entities receive a relevant share of tax revenues (above 20%) in some Nordic countries (Denmark, Sweden, Finland), where decentralisation is done at local level.

Figure 19: Revenue structure by level of government, 2022 (% of total taxes)



Source: European Commission, DG Taxation and Customs Union, based on Eurostat data [gov_10a_taxag]. Total tax revenues exclude those claimed by institutions and bodies of the EU.

Notes: (1) In the ESA 2010 national accounts, the social security funds subsector is not distinguished for MT.

(2) Alternative allocation of tax revenue by sub-sector according to “ultimately received revenue”. Belgium’s data are therefore not comparable with other countries’ data.

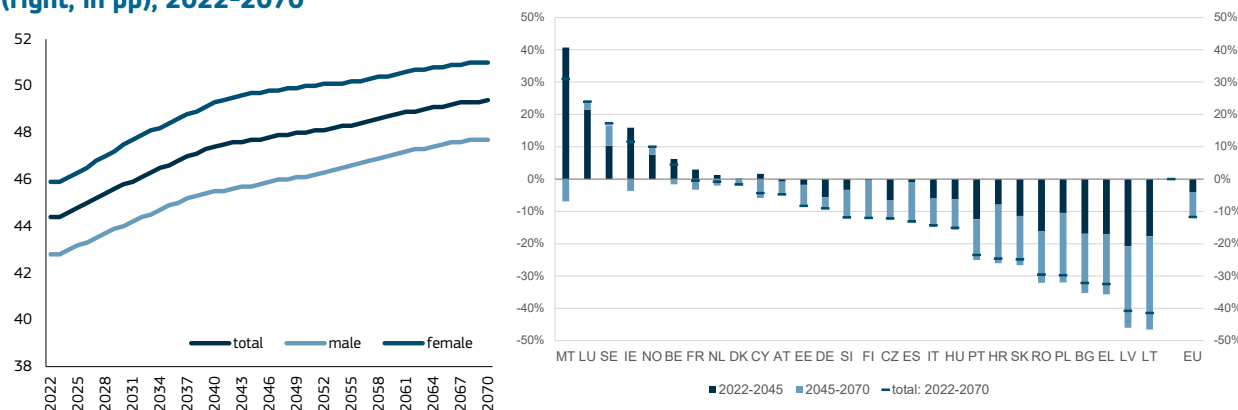
1.3 Impact of long term structural economic and social changes on taxation

European societies will experience increasingly severe fiscal challenges resulting from population ageing, while also adapting to broader structural economic shifts or “megatrends”. These trends include digitalisation and the diffusion of artificial intelligence (AI), disruption to labour markets and the spread of new ways of working, climate change and environmental degradation. Following a period characterised by globalisation and liberalisation we are also experiencing significant shifts regarding where and how global trade is conducted. There is a trend towards both the regionalisation and diversification of supply chains, as well as an increase in the strategic use of tariffs, import and export restrictions and subsidies. Besides profound social and economic implications, many of these trends could compromise the ability of governments to collect stable and adequate tax revenues in an efficient and fair manner, exacerbating existing fiscal pressures in EU Member States. The challenge for tax policy makers is how to maintain or increase tax revenues through broad tax bases and high compliance, without discouraging investment, work, and economic dynamism. In this context, reassessing and rebalancing the tax mix may be necessary going forward to make tax systems more responsive and resilient to demographic and other structural changes (European Commission, 2023f).

Ageing societies

Population ageing provides a challenging economic and fiscal backdrop to the EU policy agenda. The EU’s population is ageing and projected to start declining by 2030, despite positive net migration into the majority of Member States. As a result of higher life expectancy at birth and fertility rates that have already been low for some time, the EU is currently the region with the second highest share (after Japan) of the population over 65 years of age. As Figure 20 shows, the EU’s median age is set to rise further, from 44.4 in 2022 to 48.8 in 2070, with most of that increase happening by 2040 (European Commission, 2023e). In the long term, the working-age population of the EU as a whole is projected to decline – by 12% or around 25 million by 2070 (see Figure 20) – and the old-age dependency ratio to increase. While we have about 3 working-age individuals (aged 20-64) for one person over 65 today, we’ll see this ratio shrink to less than 2 working-age individuals for each person aged over 65 by 2045.

Figure 20: Projected change in the median age (left, in years) and size of the population aged 20-64 (right, in pp), 2022-2070



Source: 2024 Ageing Report: Underlying Assumptions & Projection Methodologies (European Commission, 2023e).

Ageing creates fiscal and economic pressures that threaten fiscal sustainability but can be mitigated if people stay in the labour market for longer.

Under constant policies, population ageing drives up the share of public spending as a share of GDP, due largely to raising demand for pensions, healthcare and social care. The 2024 Ageing Report (European Commission, 2024b) estimates that, despite reforms in many Member States to limit future growth in the cost of pensions, the total cost of ageing (pension, health care, long-term care and education expenditure) is set to increase in the EU by 1.2 pp over the projection period, to 25.6% of GDP in 2070, with the bulk of this increase expected by 2045. The Annual Sustainable Growth Survey 2024 (European Commission, 2023f) highlights that, in light of demographic changes and fast-evolving labour markets, social protection systems must remain fiscally sustainable while still ensuring adequate income support for individuals. This reduces the fiscal space available for investment in other policy priorities, such as the green and digital transitions. The revenue implications of ageing are less clear-cut, but as almost all national tax systems rely heavily on taxing labour income, a shrinking workforce or a falling labour share in national income can narrow the tax base. A high and rising old-age dependency ratio also carries the risk of slower economic growth. The Joint Employment Report 2024 (European Commission, 2024c) emphasised that demographic trends are contributing to increasingly widespread labour and skills shortages, while also increasing the future need for long-term care. In this context, many governments will need to broaden other tax bases if they are to keep public debt under control while avoiding overburdening workers and undermining work incentives. Another key mitigating measure is to increase the number of older people in the labour force by raising effective retirement ages. The underlying assumptions for the 2024 Ageing Report project an increase in the employment rate of 55-64 year olds of 6 pp for men and 13 pp for women by 2070, with an increase in the number of people continuing to work beyond the age of 65 also expected to drive a higher average age of labour market exit in many Member States.

Artificial intelligence

The effects of the diffusion of the use of artificial intelligence (AI) across the economy will be important and pervasive, as have been previous waves of automation and digitalisation. As discussed in section 4.3, the growth in the revenues of AI producers and sellers may largely mirror and reinforce existing trends in the digital economy, which tends to generate high and concentrated profits.

The implications of AI also strengthen arguments for a more balanced taxation of labour and capital income. One trend which AI can intensify is the increasing relative importance of the capital relative to the labour share in GDP, along with further blurring of the boundary between capital and labour income. Many jurisdictions currently tax labour income more heavily than that derived from capital (including capital gains, land rents and dividends) so the diffusion of AI risks leading to a net fall in the tax-to-GDP ratio.

AI can serve as a tool to improve tax collection and monitoring by tax administrations. As EU tax administrations collect and exchange increasing amounts of data on taxpayers, AI may help authorities to manage this big data in a more efficient manner. This is particularly relevant for risk-assessment of tax fraud and avoidance, tax inspections and red flagging. AI has the potential to process data swiftly and detect cases of non-compliance and abuse quicker than humans. AI can also be used to increase voluntary tax compliance: Many tax administrations already have virtual assistants and chatbots to deal with taxpayers' questions about taxes.

From globalisation to regionalisation?

Economic integration can facilitate tax competition and aggressive tax planning (ATP). Today, companies and workers can carry out activities virtually anywhere in the world without maintaining a physical presence in all jurisdictions where they are active. There is also an increased use of – relatively mobile – intangible assets in global value chains. As discussed in section 4, this has spurred tax competition and generated new opportunities for aggressive tax planning (ATP). Average statutory CIT rates have fallen and many jurisdictions have introduced special regimes in PIT. Research suggests that lower-income individuals suffer a welfare loss from tax competition while higher earners gain (Munoz, M, 2023). The international corporate taxation system is still largely residence-based and designed decades ago, for mostly traditional brick-and-mortar companies. These developments led the OECD to initiate its global efforts on base erosion and profit shifting (BEPS), resulting in the Inclusive Framework two pillar approach including a global minimum tax (see Section 3.4). There have also been a range of initiatives at both the EU and global level, including the OECD's Common Reporting Standards and the EU's Directive on Administrative Cooperation (DAC and its amendments), to develop and automate the exchange of information for tax purposes.

There is an increasing focus on supply chain resilience and regional integration in the face of challenges to the previous trend of global trade liberalisation. After a long period of increased openness in the global economy and a reduction in (still significant) barriers to global trade, globalisation and trade liberalisation have become more contested and patchier. Part of the cause of the backlash against economic globalisation is a concern, discussed in Section 4.2, that unfair and damaging competition can result from countries undercutting each other by low taxes or regulatory standards, or unrestricted subsidies. Recent developments, including Russia's war of aggression against Ukraine, have also increased concerns over the lack of resilience of EU economies due to dependence on foreign suppliers. The resulting focus on re-shoring and friend-shoring production capacity and stronger reliance on local inputs and intermediate production, in the EU and other regions, may mean an increased focus on regional economic integration in future. The European Commission communication on "Long-term competitiveness of the EU: looking beyond 2030" considers that sustainable competitiveness builds on productivity growth, environmental sustainability, macroeconomic stability and fairness (European Commission, 2023g). Section 4 discusses the role of tax policy in enabling the EU to maintain and improve living standards at home by making the Single Market function effectively, improving the external competitiveness of EU firms, and promoting decarbonisation of production both within and outside the EU.

New ways of working

The growth of remote working challenges the stability of national income tax bases. According to Eurofound (2022), in 2021, 12.3% of the total EU workforce worked from home on a full-time basis, while 9.6% worked from home on an occasional basis. Remote working increased sharply during the COVID-19 pandemic and has remained at much higher levels than was the case before the pandemic. Digital nomads are individuals who work fully remotely and are highly mobile, not bound to a specific location or jurisdiction. Both digital nomads and "static" individuals can be employed or self-employed and earn their living by working online from a jurisdiction which can be different from their employer's or from where their clients are located. This has the benefit of lowering barriers to the free movement of labour. Member States have increasingly implemented preferential tax regimes to attract mobile taxpayers including digital nomads. Personal tax obligations are generally linked to the residency principle, i.e., the jurisdiction where the taxpayer is considered resident for tax

purpose has the right to tax. In this context, high labour mobility and individuals working across several jurisdictions within the Single Market can lead to complex questions of (potentially multiple) tax residency and losses of tax revenue for the Member State of origin. In most Member States a significant share of the revenue from personal income tax is levied from a small number of high-income taxpayers. This also means that the relocation of relatively few individuals with high-income and/or high-net-worth can have a significant fiscal impact.

A digitalising labour market makes it more feasible for individuals to take advantage of the growth of special tax regimes in order to pay lower taxes. Across the Single Market, the number of preferential regimes, i.e. preferential tax treatments in personal income taxation (PIT) for specific types of individuals, is increasing. A common feature of all these regimes is that they reduce the effective income tax burden for certain groups, such as high-net worth individuals, well-off pensioners, sought-after experts and/or recent immigrants. Their policy objective is to make (tax-)residency in the respective country more attractive for the targeted groups. While many factors influence individuals' decisions on whether and where to move, in the context of free mobility within the Single Market, taxation can be an important determinant. Preferential regimes may result in excessive tax competition for digital nomads within the internal market. They may also increase tax evasion and avoidance through underreporting of income, due to potential issues with monitoring of highly mobile individuals and identifying the tax due and where it should be paid. Sections 3.2.3 and 4.2.3 discuss these issues and trends in more detail.

Wealth and inheritance-driven inequality

Income inequality within EU Member States is marked, but still tends to be less pronounced than in most of the rest of the world. After a strong increase between the 1980s and the mid-90s, income inequality (as measured by the Gini coefficient) in the EU as a whole decreased until the 2010s and has since remained relatively stable. However, income inequality varies across Europe and the trend in the EU average hides an increase in Southern Europe linked to the financial and sovereign debt crises.

Household wealth is more concentrated and unequal than income. As discussed in Section 3.3, the top 1% of individuals hold 25.6% of the net personal wealth in the EU, a significantly higher concentration than the 11.6% of total income accruing to the top 1% of earners. An increasing share of economic resources is held as wealth, with wealth to income ratios increasing from 549% to 626% over the past ten years. Wealth inequality reinforces income inequality through capital income, which is often more lightly taxed than labour income. Households in the top wealth quintile own more than half of all real estate wealth and nearly 80% of all financial wealth. However, taxes on immovable property, and wealth more broadly, represent a small share of the total tax revenues in the EU.

Household wealth inequality increasingly stems from inheritance. As discussed in more detail in Section 3.3, inheritance is one of the main drivers of the intergenerational perpetuation and reinforcement of inequalities in living standards. According to Alvaredo et al. (2017) more than half of all wealth holdings in large western European countries (France, Germany, and the UK) and in the US, and close to half in Sweden, have been acquired through inheritance. This share is set to increase in ageing societies where small families are the norm. Alvaredo et al. (2017) also highlight that the share of inheritances in private wealth is returning to the high share seen at the turn of the 20th century in some countries. There is wide variation across EU Member States on whether, how and at what rates inheritances and gifts are taxed. In most Member States revenues from taxes on such transfers of wealth are low or non-existent.

Climate change and environmental degradation

Climate change and its effects are becoming increasingly apparent, and the EU has ambitious objectives to reduce carbon emissions and other pollution. The last year has seen an unprecedented spike in global temperatures, underlining the urgency of effective climate action. Although the deployment of

renewable technologies continues, progress on reducing global emissions is to date patchy. The European Green Deal aims to ensure zero net emissions of greenhouse gases by 2050 through a just and inclusive transition with economic growth decoupled from resource use. This ambition has been operationalised by the European Climate Law which provides a legal framework to drive climate action and transition toward a sustainable future. The green transition will require a consistently high level of new investments. As it will also increasingly lead to stranded assets (as carbon-intensive assets lose their value), front-loading investment in decarbonisation can facilitate sustainable and inclusive growth in the EU.

Taxation has a clear role to play in reducing emissions, as part of a climate action policy mix that enables Europe's economy to remain competitive. Environmental taxes internalise the externalities created by activities with a negative impact on the environment. They comprise taxes on energy (including taxes on transport fuels), transport (excluding taxes on transport fuels, but including taxes on motor vehicles import or sale, registration or use of motor vehicles, congestion charges, etc.) and pollution and resources. While environmental taxes may push firms to become more innovative and efficient, relatively high environmental taxes – or wholesale energy prices – in a jurisdiction can impair its price competitiveness in global markets for energy-intensive products and services. This also risks economic activity shifting to places where it is cheaper to pollute – so-called carbon leakage. Emission taxes set the price of emissions whereas emission trading schemes (cap-and-trade systems) set the quantity of emissions. The EU's strategy to move towards net zero emissions will require a judicious mix of the tax, spending and regulatory policy levers so that, as discussed further in Section 4, the EU economy can remain competitive and successful in sustainable industries. A landmark tool to put a fair price on the carbon emitted during the production of carbon intensive goods that are entering the EU is the Carbon Border Adjustment Mechanism (CBAM), whose gradual introduction has started. As discussed in Section 3.6, revenues from environmental taxes differ substantially across EU Member States, and in most cases have declined over the last decade.

2

Recent tax policy and related reforms in the EU. Performance of tax administrations

The present chapter focuses on tax reform initiatives and the performance of tax administrations.

Section 2.1 presents the latest main tax policy reforms enacted by the EU Member States, on the basis of the responses received by the OECD and the EU Commission to their annual joint questionnaire. Section 2.2 moves the focus to the latest reform proposals at EU level, grouped in three blocks: corporate sector, tax procedures and green transition. Section 2.3 assesses the performance of tax administrations across the EU, while Section 2.4 provides an overview of recent actions taken at EU level to improve the performance of tax administrations. Section 2.5 presents the specific examples of reforms to tax systems and tax administrations under the support of the EU's Technical Support Instrument (TSI).

2.1 Recent reforms in the EU Member States

This section focuses on the most recent tax measures adopted by EU Member States, including measures introduced to address the effects of high price inflation. The information in this section is based on the tax measures reported by national administrations in the Joint OECD-European Commission Annual Tax Policy Reform Questionnaire, by aggregating and processing the responses received to the 2023 and 2024 questionnaires ⁽²¹⁾. While comprehensive, the list of tax measures is non-exhaustive and the information on the content of some measures has been expanded or complemented from other sources. The section is structured as follows. First, an overview of the tax measures by type of tax is presented, followed by an analysis of the area of impact of the reforms with specific national examples ⁽²²⁾. Box 2 provides estimates from the Joint Research Centre of the redistributive and budgetary impact of some national reforms.

2.1.1 Recent reforms by type of tax

Most Member States have enacted reforms of the PIT, CIT and VAT in the last two years. Table 3 presents the tax measures reported by Member States in the 2023 and 2024 joint Commission-OECD questionnaires according to the concerned tax type. Aggregated results are shown in Figure 21. Out of 855 tax measures reported by Member States, 237 (28%) concerned personal income taxes (PIT). All Member States but one report reforms of the PIT, with these being particularly prominent in the area of earned income. 25 Member States report reforms on corporate taxation (138 measures in total) and 24 on value added taxes (116 measures in total). 22 Member States report measures concerning externality-based taxes (including environmental) for a total of 161 measures, while 50 measures related to property taxes are reported by 16 countries. Finally, 14 countries report 63 measures concerning social security contributions.

21 Responses to the 2024 questionnaire are made up of tax policy measures self-reported by the Member States that were implemented, legislated, or announced in each country between 01 January 2023 and 31 December 2023. Likewise, responses to the 2023 questionnaire are made up of tax policy measures self-reported by the Member States that were implemented, legislated, or announced in each country between 01 January 2022 and 31 December 2022. Detailed country information can be found in the online country fiches accompanying this report: https://taxation-customs.ec.europa.eu/taxation-1/economic-analysis-taxation/tax-reforms-eu_en.

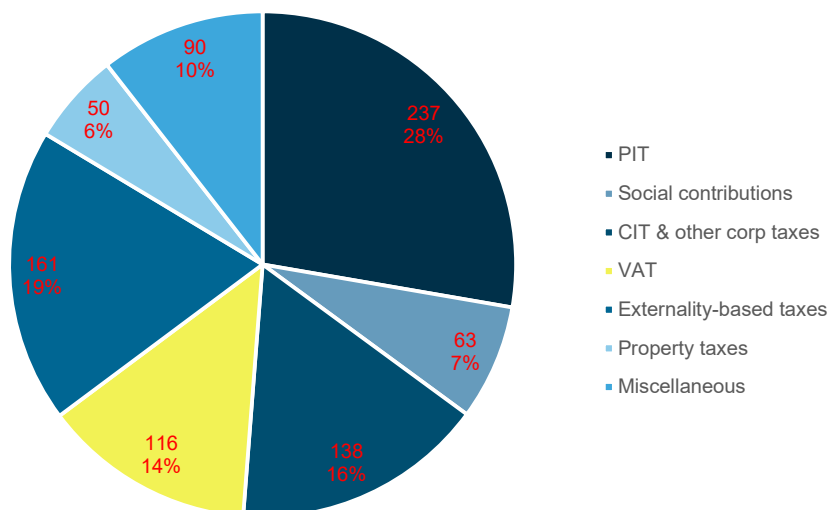
22 The categorisation by type of tax is self-reported by the Member States in their responses. The categorisation by area of impact is done by DG TAXUD on the grounds of the self-reported main objective of the reform. Further details can be found in subsection 2.1.2.

Table 3: Latest tax and related reforms by type of tax as reported by Member States in the 2023 & 2024 joint Tax Policy Reform Questionnaires

Type of tax	Countries
Personal income tax: Earned income	AT, BE, BG, CY, CZ, DE, DK, EE, EL, ES, FI, FR, HR, HU, IE, IT, LT, LU, LV, NL, PL, PT, RO, SE, SI, SK
Personal income tax: Savings	DE, DK, ES, NL, RO, SE, SI
Personal income tax: Unincorporated businesses/Self-employment income	BG, CZ, DE, EL, ES, FI, IT, LV, NL, PL, RO, SI
Taxes on payroll and workforce	AT, FR, HR, SE
Social security contributions: Employee	BE, BG, CZ, DE, EL, ES, IT, LV, RO, SI, SK
Social security contributions: Self-employed	BG, EL, ES, FR
Social security contributions: Employer	BE, BG, DE, EL, ES, FR, NL, SE, SI, SK
Corporate income tax	AT, BE, BG, CY, CZ, DE, DK, EE, EL, ES, FI, FR, HR, HU, IE, IT, LU, LV, NL, PL, PT, RO, SE, SI, SK
Other corporate taxes	BE, BG, CY, CZ, DE, DK, ES, FI, FR, HU, IE, IT, LT, NL, RO, SI, SK
Value-added tax	AT, BE, BG, CY, CZ, DE, EE, EL, ES, HR, FI, HR, HU, IE, IT, LT, LU, LV, NL, PL, PT, RO, SE, SI, SK
Environmentally-related taxes	AT, BE, BG, CZ, DE, DK, EE, EL, ES, FI, FR, HU, IE, IT, LT, LV, NL, PT, RO, SE
Health-related taxes	BG, CZ, DK, EE, FI, HU, IE, IT, LV, NL, PT, RO, SE, SI
Other excise duties	BE, CZ, DK, EL, FR, HU, IE, NL, PT, SI, SE, SK
Estate duties/inheritances/gift taxes	DK, EL, NL, PL, PT
Transaction taxes (movable and immovable property)	EL, FI, MT, NL, PT
Recurrent taxes on (net) wealth	EE, ES, IT
Recurrent taxes on immovable property (business and residential)	CZ, DK, EL, FR, IE, NL, PT, RO, SE
Multiple taxes	BG, CY, CZ, DE, EL, FR, IT, LV, PL, PT, SE
Other taxes	AT, BE, CY, CZ, EE, EL, FI, FR, HR, HU, IE, LV, NL, PL, PT, RO, SK

Source: European Commission based on responses to the 2023 & 2024 joint OECD-European Commission Annual Tax Policy Reform Questionnaires.

Figure 21: Reforms reported in 2023 & 2024 by type of tax



Source: European Commission based on responses to the 2023 & 2024 joint Tax Policy Reform Questionnaires.

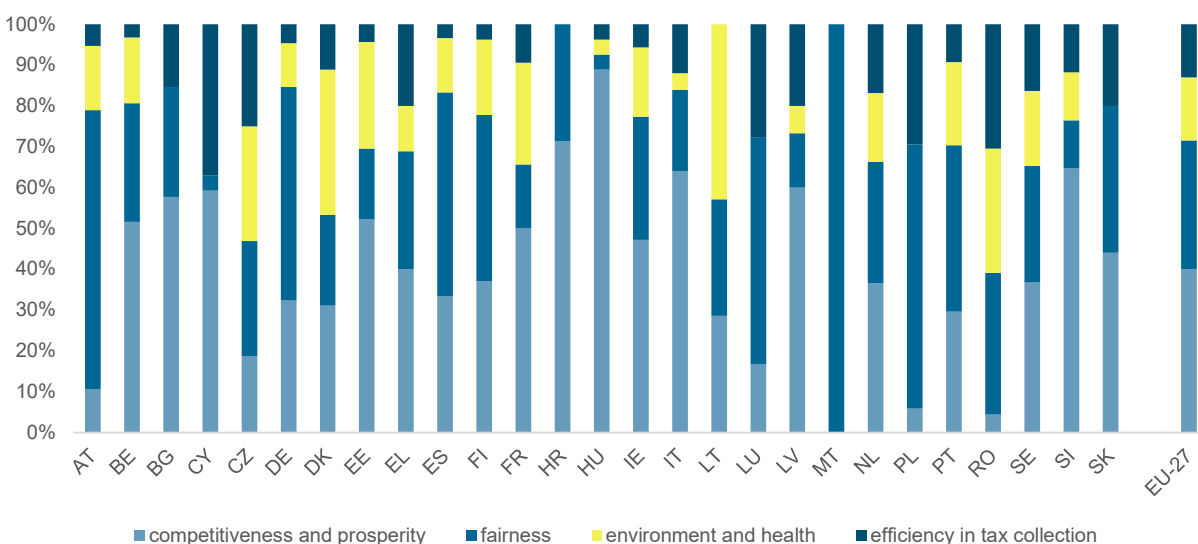
From a different angle, nearly 10% of the reported tax reforms in 2023 and 2024 stemmed from EU legislation. They include, among others, measures to implement the Council Directive 2022/2523 on Pillar Two, measures for harmonising the VAT (Council Directive 2019/2235) and excise duties (Council Directive 2050/1151) legislation, and measures associated with excess profits in the energy sector in line with Council Regulation 2022/1854.

2.1.2 Recent reforms by area of impact

Two out of five measures reported by Member States in 2023 and 2024 aim at improving competitiveness and prosperity. The 855 tax measures reported by the Member States in 2023 and 2024 have been grouped by their main area of impact ⁽²³⁾ and results by country and EU aggregate are shown in Figure 22. 40% of the reported measures mostly impact competitiveness and prosperity, being associated with self-reported objectives such as supporting investment and employment, encouraging savings and consumption, boosting economic growth or raising revenues. 32% of the reported measures mostly impact fairness, as their self-reported main objective is to increase equity and fairness. 15% of the reported measures mostly impact environment and health, having associated main objectives such as supporting clean investment, improving health and promoting environmental sustainability. Measures impacting efficiency of tax collection, including aggressive tax planning (ATP), tax avoidance, evasion and fraud, account for the remaining 13%.

²³ The categorisation by area of impact is done by DG TAXUD on the grounds of the self-reported main objective of the reform. Measures assigned to the area of competitiveness and prosperity have one of the following self-reported main objectives: support R&D /innovation, encourage savings, support employment or enhance skills, raise revenues, boost economic growth, and encourage consumption. Measures assigned to the area of fairness have the self-reported main objective of increasing equity/fairness. Measures assigned to the area of environment and health have one of the following self-reported main objectives: support clean investment (climate-change mitigation), improve health and promote environmental sustainability. Measures assigned to the area of efficiency of tax collection, including ATP, tax avoidance, evasion and fraud, have one of the following self-reported main objectives: increase tax certainty, simplify the tax system/increase tax compliance, in response to Pillar Two. Measures without a self-reported main objective have been assigned manually to one or another area of impact.

Figure 22: Reforms reported in 2023 & 2024 by area of impact



Source: European Commission based on responses to the 2023 & 2024 joint Tax Policy Reform Questionnaires.

a) Reforms impacting competitiveness and prosperity

Several Member States approved temporary reductions in VAT rates with the aim to encourage consumption and sustain economic growth in a context of high inflation. For instance, Luxembourg temporarily reduced VAT rates by one percentage point in 2023; Germany has reduced the VAT rate for meals in restaurants; Bulgaria has done it for the supply of certain touristic services including restaurant and catering; Greece for agricultural machinery, certain beverages and restaurant services; Portugal for attendance at certain spectacles; Hungary for art works, certain desserts and newspapers; Lithuania for accommodation and catering services, and attendance at sport, artistic and cultural events; and Latvia for electronic books.

Member States have intervened in many other tax areas trying to support investment and employment and boost economic activity in general. For instance, in the area of corporate taxation Germany has temporarily made the rules for loss carry-back more flexible and extended reimbursements of the electricity tax for manufacturing companies; Ireland has increased the tax credit for R&D; Finland has introduced a new R&D tax deduction; Spain and Portugal have reduced the CIT rate for start-up companies; Portugal has also enlarged the scope of the reduced CIT rate to Small and Medium-sized Enterprises (SME) and made more flexible the rules for loss carry-forward, Finland continued the accelerated depreciation of fixed assets and Ireland introduced a new tax credit to support digital games developers. In the remit of PIT, Germany has accelerated the deductibility of contributions to pension schemes and the depreciation allowances for movable assets, Spain has increased the tax credit on investments in new companies, Italy has increased the deductibility of labour costs for certain contracts /workers, and Sweden has temporarily raised the ceiling for tax credit for building repairs, maintenance and improvement. Finally, Italy suspended the sugar and plastic tax in 2023 and 2024.

Member States have explored different ways to raise additional revenues that offset the expected decrease associated to other measures. For instance, Estonia has increased its general VAT rate from 20% to 22%. In the area of corporate taxation, Czechia, Estonia and Slovenia have increased their standard CIT rates; Estonia has also abolished the reduced rate and increased the rate for credit institutions, and Portugal has restricted the deductibility of losses. In the area of capital taxation, Spain has introduced a temporary solidarity tax on large fortunes, Belgium removed the tax benefit for purchase of second and subsequent residence, Czechia increased the real estate tax rate, Portugal started to tax real estate gains of non-residents the same way as real estate gains of residents are taxed, Estonia introduced a motor vehicle tax and Spain and the Netherlands increased the tax rates on capital income in the PIT. Other reforms in the area of PIT concern the

increase of rates in Estonia and the phasing out of the tax credit for expats in the Netherlands. In the remit of social contributions, Sweden abolished the employers' reduction for young employees and Slovenia increased the general rate to introduce a long-term care contribution. In the area of externality-based taxes, Bulgaria, Czechia, Estonia, Latvia, the Netherlands, Sweden, and Slovakia have increased their gambling or lottery tax rates, Estonia introduced a tax on sweetened beverages and Greece an accommodation tax. Extraordinary temporary taxes on entities in the energy and financial sectors are grouped all together under the label of fairness right below.

b) Reforms impacting fairness

Many Member States have adjusted their personal income taxes to ease the burden of inflation on their citizens. When thresholds of the tax schedule are kept constant, inflation might push households into higher tax brackets, resulting in the so-called “bracket creep”. Member States have different approaches to respond to this phenomenon: while most countries adjust their personal income tax brackets on a discretionary basis, Belgium, Denmark, Lithuania, the Netherlands, Slovakia, Slovenia, Sweden ⁽²⁴⁾ and more recently also Austria (since the beginning of 2023) have an automatic adjustment mechanism in place. In Austria, tax brackets are increased by two thirds of the inflation rate and the extra tax revenues resulting from the incomplete indexation of these parameters are allocated to fund annual discretionary income support measures ⁽²⁵⁾. Germany, Luxembourg, Ireland and Portugal have discretionally adjusted their tax brackets in 2023 and/or 2024, and in Portugal this was accompanied by a decrease in the marginal tax rate for the second bracket ⁽²⁶⁾. Italy has merged in 2024 the two lowest (of four) tax brackets applying an unified tax rate of 23% to reduce the tax burden on middle incomes, while the Netherlands has departed from its automatic adjustment mechanism to reduce the increase of some of the brackets, and Poland has reduced the tax rate for the first bracket. Finally, Spain has indexed the social security contribution bases and rates in both 2023 and 2024.

In addition to the adjustments of the tax brackets, other PIT reforms addressing inflation in the EU-27 were directed at the introduction of new tax credits, deductions, allowances, and non-taxable receipts as well as at increasing existing ones. For instance, Germany, Spain, Portugal, Estonia, Lithuania ⁽²⁷⁾ and Croatia have increased the basic personal tax allowance in the PIT; Germany, Denmark and Bulgaria the allowance for children; Croatia and Hungary the allowance for dependent family members; Portugal the deduction for dependent family members; Luxemburg the tax credit for single parents, and France the tax credit for childcare. Austria has introduced a one-off tax credit for employees, temporarily increased the lump-sum deduction for commuters and exempted up to EUR 3 000 of bonus payment from tax. Sweden has increased the tax deductions for commuting, France has introduced tax allowances for commuters, and Germany increased the existing one and introduced a one-off energy price allowance. Ireland has introduced a new rent tax credit, Denmark, Finland, and Luxembourg have introduced temporary tax credits to compensate for rising energy prices, and Luxembourg has also introduced a new permanent tax credit for lower earners that offsets the cost of the CO2 tax on energy products and increased the face value of tax-free meal vouchers.

24 For a detailed description of different approaches to indexation across the EU, see Table 3 in Annual Report on Taxation 2023 (on measures enacted in 2022).

25 The estimated distributive and budgetary effects of this reform are analysed in Box 2.

26 The estimated distributive and budgetary effects of this reform are analysed in Box 2.

27 The estimated distributive and budgetary effects of this reform are analysed in Box 2.

Box 2: Case studies of recent PIT reforms in the area of fairness

This box presents the estimated impact by the Joint Research Centre (JRC) of three of the above-mentioned PIT reforms. It concerns in particular the overall tax bracket reform in Austria, the tax bracket adjustment in Portugal and the increase of the personal tax allowance in Lithuania. Estimates rely on EUROMOD ⁽¹⁾ simulations performed by the European Commission Joint Research Centre in the context of the European Semester exercise.

Case 1: Austria

At the beginning of 2023 Austria introduced an automatic mechanism to adjust its personal income tax system to inflation, consisting in increasing the respective thresholds (except for the highest bracket at a tax rate of 55% for taxable income above EUR 1 million) by 2/3 of the inflation rate from July of the preceding year to June of the last year. The indexation to inflation also includes payable tax credits (transport, supplement to the transport, pensioner, alimony, single-parent and single-earner tax credits). The remaining volume of 1/3 of the fiscal effect of the fiscal drag is redistributed via discretionary relief measures for employed persons and/or pensioners predominantly in the areas of income taxation and SC. The JRC estimates ⁽²⁾ that the tax reform increases the mean equivalised disposable income by 4.5% in 2023 and by 5.9% in 2024, whereas, without the tax reform, mean equivalised disposable income would have increased by 3.5% in 2023 and 4.4% in 2024. The at-risk-of-poverty (AROP, poverty line of 60%) rate has decreased by 1.4 pp in 2023 and by 1.6 pp in 2024. The impact is particularly high for single-parent families (-5.1 pp in 2023 and -2.0 pp in 2024). However, the reform slightly increases disposable income inequality as measured by the Gini index (by 0.5 pp in 2023 and by 0.4 pp in 2024).

Case 2: Portugal

The Portuguese 2023 State Budget increased the thresholds of each PIT tax bracket by 5.1%, in line with the approved increase in public wages. In addition, the marginal tax rate of the second bracket (out of nine) was reduced from 23% to 21%, the personal tax allowance increased from EUR 9 870 to 10 640 (in line with the statutory minimum wage), and tax deductions for earners under 26 years old also increased in line with the rise in the Social Support Index, known as *Indexante dos Apoios Sociais*, IAS. The JRC has analysed the aggregate impact of these tax measures and found them regressive, as equivalised disposable income increases more for higher deciles (see Figure 23.a). The combined effect of all measures for the lowest income deciles is relatively limited, as many of these households rely on pensions or subsistence social benefits, which are less affected by the PIT reform. Consequently, the result is an expected marginal rise in the Gini index, and a marginal reduction in the AROP rate. The simulated net fiscal cost of the measure EUR 632 million.

(1) Detailed information about EUROMOD can be found at <https://euromod-web.jrc.ec.europa.eu/>.

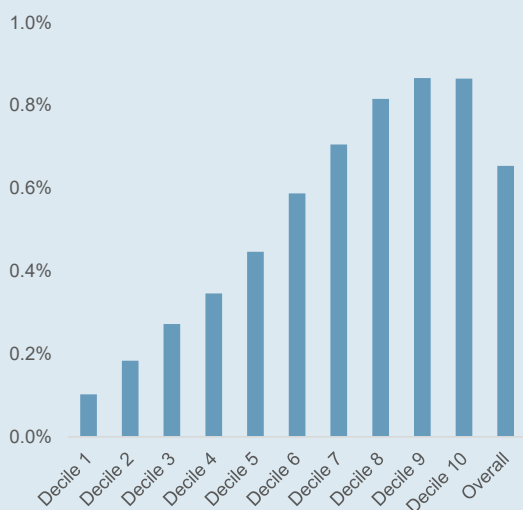
(2) Results for 2023 compare with the situation in 2022 as baseline scenario, results for 2024 compared to 2023 as baseline scenario. For the sake of comparability, the latest available marginal tax rates (i.e., those of 2024) are used for all scenarios. The analysis was performed using EUROMOD version i6.0+.

Box 2 (continued)

Case 3: Lithuania

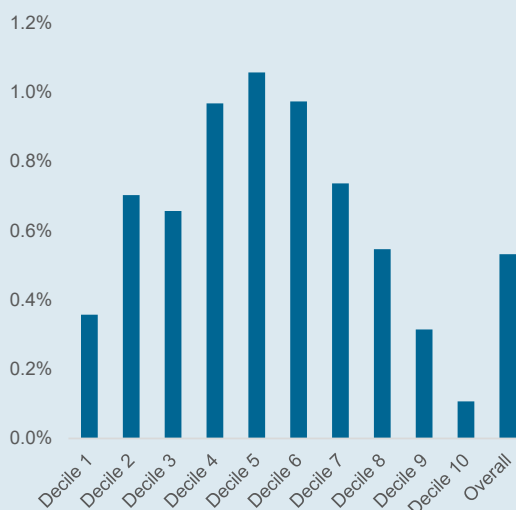
HICP inflation in Lithuania hiked above 20% in the second half of 2022. In response, the country has undergone three successive changes in its PIT personal tax allowance: the basic allowance rose from EUR 5 520 to EUR 6 480 in June 2022, to EUR 7 500 in January 2023, and to EUR 8 964 in January 2024; similar increases took place in the tax allowance for elderly individuals with disabilities. The JRC has analysed the distributional and budgetary impact of the rise in January 2023. Estimates indicate that the tax changes have increased to a larger extent the equivalised disposable income of intermediate deciles in the income distribution (see Figure 23.b), having a negligible effect on the Gini index. The impact on the AROP rate is more significant (decline of 0.3 pp), being particularly relevant among single-parent households (-1.9 pp). The simulated net fiscal cost of the measure is EUR 134.5 million. These effects become more evident when analysing the rise in the personal tax allowance in combination with other complementary measures adopted by Lithuania as part of the same package, such as the increase in the statutory minimum wage (from EUR 730 to EUR 840/month), the state supported income and the basic social allowance; and the increase in the average pension from EUR 482 to EUR 542/month. The combined effect of these measures is estimated to have reduced the Gini index by 1.6 pp and the overall AROP rate by 4.4 pp (-7.9 pp in the case of single-parent households).

Figure 23.a: Change in the equivalised disposable incomes due to the 2023 tax reform in Portugal (2023 values), by deciles (% change with respect to the baseline)



Source: European Commission, Joint Research Centre, based on the EUROMOD model, version i5.0+.

Figure 23.b: Change in the equivalised disposable incomes due to the 2023 tax reform in Lithuania (2023 values), by deciles (% change with respect to the baseline)



Source: European Commission, Joint Research Centre, based on the EUROMOD model, version i4.109+.

Conclusions

The tax reforms analysed in this box have achieved their primary objective of increasing the disposable income across the income distribution to mitigate the effects of high inflation. Likewise, the three reforms have been successful in reducing the at-risk-of-poverty rate, although to a significant extent only in Austria and partly in Lithuania (only for vulnerable households like single-parent families). However, none of the analysed tax reforms is found to be successful in reducing inequality, for which more targeted measures would be necessary.

Other PIT reforms not directly related to rising prices are likely to impact fairness. In Portugal, the non-habitual resident regime is partly phased out, dwellings provided by the employer are exempted from PIT until 2026 and income from crypto assets start to be taxed. In the Netherlands, the special tax regime to attract skilled foreign workers is streamlined and the tax deduction for self-employed will be gradually reduced until 2027. Ireland has introduced a temporary one-year mortgage interest relief, while Slovakia has increased the tax credit on mortgage instalments and Luxembourg the annual ceilings on deductible interest charges for owner-occupied housing. By contrast, Estonia has abolished the deduction of interest on mortgages and the additional basic allowance for second and more children, on the rationale that both were mostly used for individuals with higher incomes. Since January 2023, mothers under 30 years are exempted from PIT in Hungary.

Member States report multiple changes on indirect taxation rates on the grounds of fairness. In a context of ramping energy prices, the Netherlands temporarily reduced the VAT rate on consumer energy, Germany on heating via heating grid, Italy on the supply of gas for civil and industrial uses, Ireland on the supply of gas and electricity, Finland on electricity and passenger transportation, Croatia on heating, Belgium on natural gas and electricity, Spain on natural gas and certain electricity supplies, Slovenia on the supply of electricity, natural gas and district heating, and Bulgaria on the supply of natural gas and district heating. To alleviate the impact of inflation on low-income households, Poland has reduced the VAT rate on foodstuff and certain fertilisers, Italy on feminine hygiene products, Spain on hygiene products and non-medicated contraceptives, Spain and Croatia on staple food, Greece on services that are solely connected with the removal of architectural barriers that hinder the mobility of persons with disabilities, and Bulgaria on supplies of bread and flour. By contrast, Slovenia has abolished the reduced VAT rate for alcoholic beverages in restaurants. Apart from the VAT, the rate reductions have concerned other energy-related environmental taxes, such as the excises on diesel and petrol in Ireland and Czechia. On electricity in Austria, on motor fuels in Poland, on petrol and diesel in Sweden, etc. In addition, Sweden has abolished CO₂-tax for heat production within EU Emissions Trade System.

Several measures with the goal of increasing fairness are also expected to increase revenues. Many countries report the introduction of temporary measures (the so-called “solidarity contribution” as per the EU Council Regulation 2022/1854) applied to the extraordinary turnover or profits of enterprises in the energy sector: Austria, Czechia, Bulgaria, Romania, Slovakia, the Netherlands, Italy, France, Denmark, Spain, Germany. Three other countries (Romania, Latvia, Spain) report extraordinary levies on credit entities.

c) Reforms impacting environment and health

Renewable energies, electric vehicles and carbon pricing are the core areas of environmental-friendly tax reforms in the Member States. To support the green transformation in the mobility sector, many EU MS have introduced tax incentives for electric vehicles, recharging points and other low-emission modes of transportation, such as bikes, that range from tax exemptions and reduced VAT to increased allowances and more favourable depreciation. At the same time increases in flight taxes (e.g. in the Netherlands and Denmark) and duties on fossil fuels (in the Netherlands) intend to disincentivise the use of high-emission modes of transportation. However, many countries have simultaneously addressed high energy prices through temporary tax measures to decrease the burden on households that are dependent on using combustion engine cars for commuting by reducing related charges, not only in the transportation sector but in relation to energy taxes more generally (see heading on fairness above). In addition to the mobility sector, other permanent tax measures aim to increase the share of renewables in the energy and buildings sector, for instance by reducing VAT rates and increasing tax exemptions for solar panels and photovoltaics (in Sweden, the Netherlands, Ireland, Germany, Belgium, Austria). For heating, the use of biomass (Portugal), heat pumps (Belgium) and low-emission heating systems more generally (Portugal, Denmark) is supported by reducing VAT rates and other duties for related products and services. Finally, some Member States have introduced new taxes to disincentivise certain activities and products, such as: a levy on CO₂ emissions from horticulture in The Netherlands; a new tax on main transport infrastructures in France; a tax on landfilling and a plastic tax in Spain; an overnight stay accommodation tax in Greece; a flight ticket tax and a kilometre-based tax for trucks in Denmark, and a carbon pricing scheme covering non-ETS sectors in Austria.

Member States increasingly focus on taxing tobacco, alcohol and sugar-based products to reduce consumption that is detrimental to citizens' health. A majority of the recent health-related tax reforms are aimed at increasing excise duties or VAT rates on tobacco and nicotine products, as well as on alcoholic beverages. Such changes were made for instance in Slovenia, Sweden, Romania, Portugal, Bulgaria, The Netherlands, Italy, France, Finland, Estonia, Denmark, Czechia, and Belgium. Romania further abolished the reduced VAT rate for products with added sugar (over 10g/100g) and replaced it by the standard rate, and introduced an excise duty and a VAT rate increase on non-alcoholic beverages containing sugar or other sweeteners. Other tax reforms in the area of health were related to the health and long-term care insurance schemes of a few Member States. For instance, Germany increased the contribution rates for both health insurance and long-term care insurance, and Romania introduced a health contribution for sick leaves and for employees in certain sectors (construction, agriculture, food industry).

d) Reforms impacting efficiency in tax collection, including ATP, tax avoidance, evasion and fraud

Several Member States have reported multiple policy reforms with the objective of simplifying their tax systems and increasing tax compliance. Many of the reforms imply the simplification or abolishment of existing special tax regimes. For instance, Sweden has simplified taxes on chemicals, Poland has abolished the middle-class relief (as it was based on a complicated algorithm and did not apply to some taxpayers including pensioners), Czechia has abolished the student tax credit and the child placement tax credit, and The Netherlands has merged the sustainable energy and climate transition surcharge (ODE) with the ordinary energy tax raised on gas and electricity. Further reforms aimed at changing procedures, such as limiting options in tax registration (e.g. inheritance tax in the Netherlands), demanding payment service providers to provide tax authorities with information to make tax collection more efficient (e.g. in Sweden), or extending ordinary deadlines for tax returns (e.g. in Luxembourg). In Greece, the deployment of the new digital platform “myData” implies that tax documents not transmitted electronically through this platform are not taken into account for CIT purposes.

Member States have adopted a variety of measures to address ATP, tax avoidance, evasion and fraud, some of them oriented to pave the way for the implementation of the Pillar Two Directive. Many EU countries reported having introduced reforms to implement Pillar Two as part of the EU directive on ensuring a global minimum level of taxation for multinational enterprise groups and large-scale domestic groups in the Union. Beyond this, Slovakia has introduced a reform to prevent citizens from not paying social healthcare contributions, and Croatia has increased the withholding tax rate on payments to taxpayers from non-cooperative jurisdictions from 20% to 25%. Other reforms focused on closing loopholes in VAT collection. For instance, Portugal has introduced a VAT data reporting obligation for payment service providers to improve data on cross-border e-commerce transactions. Poland has introduced the electronic invoicing system (KseF) for VAT to reduce loopholes in the Polish tax system. Luxembourg has implemented a reverse charge mechanism in alignment with the Council Directive 2006/112/EC to prevent VAT fraud. The Netherlands, as part of their annual tax plan, have limited how tax-free investment funds are allowed to work. Greece has enacted a law with measures to combat tax evasion including among other things regulation on short-term rental activities. Cyprus has established principles in accordance with the OECD Transfer Pricing Guidelines for MNEs and Tax Administrators. Ireland has introduced withholding taxes on outbound interest, royalty and dividend payments. Bulgaria has committed itself to implementing a Crypto-Asset Reporting Framework in order to support the common efforts to ensure tax compliance in the field of crypto assets.

2.2 Recent EU proposals in the area of taxation

This section provides an overview on ongoing EU tax initiatives. Firstly, three recent directive proposals for the corporate sector are presented, known as “BEFIT”, “HOT” and “TP”. Secondly, we explain two other new initiatives that aim to improve tax procedures, “FASTER” and the “ViDA” package. Finally, we refer to measures that contribute to the green transition, including the revision of the Energy Taxation Directive.

2.2.1 Improving the business tax environment: Directive proposals for the corporate sector

The legislative package put forward in September 2023 aims to make it easier to do business in Europe. The business tax environment in the EU can be complex and difficult to navigate for companies with activities in more than one Member State. The EU has a closely integrated internal market across many dimensions, but businesses still face 27 different national corporate tax systems and numerous bilateral tax treaties. This creates unnecessary complexity, uncertainty and high compliance costs for EU businesses as soon as they want to operate in more than one Member State. This may be especially the case for SMEs, which have relatively higher compliance costs, and therefore face a barrier when they want to expand their operations across borders. Given the crucial role of young firms in job creation, innovation and productivity growth, such barriers can have a negative impact on the EU's competitiveness. In this context, Commission President Von der Leyen said in her 2022 State of the Union Address, "We need an enabling business environment (...) as our future competitiveness depends on it" and announced that the Commission would propose a single set of tax rules to make it easier to do business in Europe. As a result, on 12 September 2023, the Commission published a package with three tax proposals: (a) a Directive for Business in Europe: Framework for Income Taxation (BEFIT), (b) a Directive establishing a Head Office Tax (HOT) system for SMEs, and (c) a Directive on Transfer Pricing. The three initiatives are explained in detail below after providing further evidence on the type of challenges they aim to address in the subsequent paragraphs.

Table 4: Number of firms, absolute and average CIT compliance costs, cross-tabulated by firm size and cross-border activity, 2019

		Operating cross-country?		
		No	yes	Total
Total	CIT compl. Costs (bn EUR)	47.7	6.2	53.9
	.. per enterprise	3 259	3 398	3 274
	Number of enterprises	14 643 966	1 817 497	16 461 463
SMEs	CIT compl. Costs (bn EUR)	46.9	5.9	52.8
	.. per enterprise	3 223	3 308	3 232
	Number of enterprises	14 566 027	1 784 673	16 350 700

Source: Commission services, based on data from European Commission (2022a).

Survey results confirm the burden of tax compliance for SMEs with cross-border activities. A recent survey-based study carried out on behalf of the European Commission (European Commission, 2022a) estimated tax compliance costs for businesses. In 2019, businesses in the EU and the United Kingdom spent an estimated annual amount of around EUR 204 billion to comply with their tax obligations. The study also confirms that tax compliance costs are positively correlated with cross-border activities. European Commission analysis based on the study's firm-level data set excluded the United Kingdom and considered only corporate income tax. CIT compliance costs for EU firms amounted to an estimated EUR 54 billion (0.4% of the EU's GDP). The amount has more than doubled between 2014 and 2019. Table 4 gives an overview over the estimated number of firms present in the EU and their CIT-related compliance costs, broken down by cross-border activity (European Commission, 2023h, section 6.2.1). It shows that 98% of CIT-related compliance costs in the EU is borne by

SMEs, i.e., those enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million ⁽²⁸⁾.

This multitude of different tax rules generally affects the business environment in the EU. Different tax rules mean the tax treatment varies a lot from one business to another and as such it distorts the level playing field, potentially leading to production inefficiencies which reduce the competitiveness of the EU. While in many other areas, there is significant progress in EU law to ensure that businesses can operate in the internal market under common standards, the proliferation of different corporate tax systems can still lead to distortions in investment decisions.

Simpler rules help reduce compliance costs. Simpler and more transparent international tax rules are enormously important for businesses. The analysis in Box 3 provides an illustration of how simplified tax rules may reduce CIT compliance costs of cross-border operating firms by nearly a third, everything else being equal. Moreover, Table 4 shows that by far most of today's SMEs are not operating cross border. They may shy away from expanding their business to other EU Member States as they fear the tax consequences this step may entail.

Better transparency and more accountability of international tax rules will push economic growth and trigger overall tax revenues. As a result, more SMEs will extend their business to other countries, thus better capitalising on the internal market. This would have major positive implications for productivity and growth. Box 8 in Chapter 4 presents evidence that that going international is likely to push firms' productivity. This, in turn, can have significant positive macro-economic implications on countries' GDP and overall tax revenue.

Box 3: The potential of lowering CIT compliance costs, especially for SMEs

It can be shown that the simplification of tax rules bears significant potential of reducing firms' tax-related compliance costs and increase transparency / reduce complexity of tax compliance when investing cross-border. The results below have been first presented by the Commission's Impact Assessment for the HOT initiative ⁽¹⁾.

In order to investigate this, a regression analysis was carried out, based on a company-level survey which covers around 2,400 EU-based firms and also provides weights in order to project the total population of firms represented by the sample. The survey includes questions about both outsourced and internalised compliance activities. If internalised, the survey asks for frequency of data collection as well as the hours spent on data collection, preparation, review, submission and other related activities. It is thus possible to calculate total hours internally spent within the firm on the different CIT-related compliance activities. These hours were then multiplied by average hourly labour costs for administrative and support activities. Total CIT compliance costs are then the sum of outsourced and internalised compliance costs.

Besides the information on compliance costs, the survey also includes relevant firm characteristics:

- the size of the firm (turnover, number of employees);
- whether not the firm operates cross-border;
- whether or not the firm is subject to 'regular' CIT or to some kind of 'simplified tax regime'. A simplified tax regime could be a lump-sum tax for SMEs, the filing of simplified tax return requirements, simplified accounting rules, balance sheet or income statement requirements, or other simplified documentation rules.

⁽¹⁾ See Annex 4 from European Commission (2023h).

28 Following the definition of Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises ([C \(2003\) 1422](#)).

Box 3 (continued)

Stakeholders interviewed for the study tend to have a positive view on simplified tax systems, considering them as a solution for reducing administrative burdens for SMEs. Indeed, those regimes reduce the amount of tax rules that SMEs need to know and comply with, thus reduce compliance costs. To demonstrate in a multiple regression analysis, a set of categorical variables are constructed from the survey data.

The econometric model explains total (logarithm of) CIT-related compliance costs, calculated as explained above, on a set of explanatory variables that include:

- the (log) number of employed workers (in quintiles),
- the (log) turnover (in quintiles),
- a binary dummy-variable CROSS, informing whether the firm operates cross-border,
- a binary dummy variable SIMPL informing whether the firm is subject to a ‘simplified tax regime’ or CIT,
- an interaction term CROSS x SIMPL informing whether the impact of operating cross-border is moderated by the availability of a simplified tax regime. This dummy-variable is equal to one if a firm operates cross-border *and* is subject to a simplified tax regime. In this case, the reference category against which the results are interpreted are purely *domestic* firms *not* subject to simplified tax rules.
- fixed effects controlling for the sector and the jurisdiction in which the firm operates.

Table 5 shows to what extent the CIT-related compliance costs would change, relative to the respective reference category, using the results of the estimation of the econometric model. For Model 2, which contains the interaction term CROSS x SIMPL. All coefficients included in the model are highly statistically significant ($p < .001$).

Table 5: Explaining CIT related CC, regression analysis, selected coefficients

Variable	% change relative to reference		
	Model 1	Model 2	Model 3
CROSS	2%	10%	17%
SIMPL ²	30%	35%	37%
CROSS x SIMPL		-25%	-5%
TO>500.000			58%
CROSS x SIMPL x TO>500.000 ³			-71%
Control for country-specific effects	yes	yes	yes
Control for sector-specific effects	yes	yes	yes
Control for firm size	yes	yes	

Source: Commission services, based on data from European Commission (2022).

1 Cross country differences in tax complexity are relevant for compliance costs of cross-country operating firms only. This is why this coefficient should not be interpreted on its own. Technically it measures the impact of having a simplified tax system for firms not operating cross-border. For those entities, individual factors not captured by the model may lead to compliance costs correlating positively with being subject to a simplified tax system.

2 Model 3: Interactions not reported in the table: CROSS x TO>500.000: +7%, SIMPL x TO>500.000: +3%.

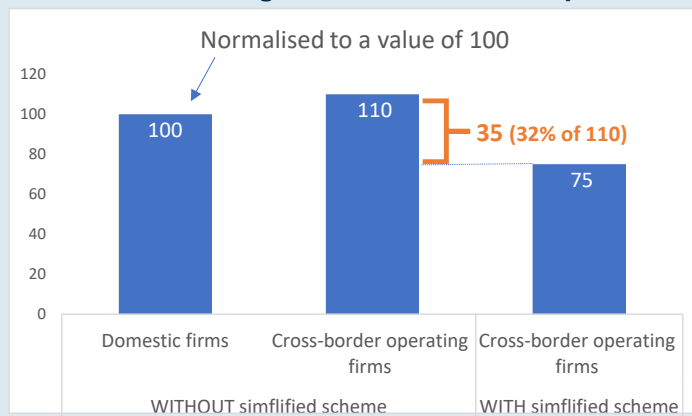
Models 1 and 2 control for firm size (the number of employees and the firms’ turnover) as well as country and sector specific effects. The simple model without interaction term (Model 1) reveals that operating cross-border increases CIT-related compliance costs overall as shown by the coefficient estimated for the CROSS variable. The estimation results for Model 2 suggest that simpler tax rules tend to lower the deterring effect of tax compliance costs on cross-border investment as shown by the estimated coefficient for the interaction

Box 3 (continued):

term CROSSXSIMPL. If a simplified tax regime is *not* available, cross-border operating firms are estimated to have, on average, 10% *higher* CIT compliance costs than domestic firms not subject to a simplified tax regime (the reference group). By contrast, with simplified tax rules, cross-border operating firms are estimated to have 25% *lower* compliance costs than the reference group. Therefore, the regression analysis suggests that the simplification of tax rules has potentially a positive and significant effect on cross-border operating firms in the sense that they are able to reduce compliance costs very substantially: by 32%, relative to cross-border operating firms with *no* access to simplified rules.

The chart below illustrates these regression results, normalising the CIT compliance costs of domestic firms without simplified tax regime to a value of 100. The compliance cost for cross-border operating firms *without* simplified regime would be 110 (+10% higher than in the reference situation), while *with* simplified regime they would amount to 75 (25% lower than in the reference). For cross-border operating firms, simplified schemes would then make a difference of 35, corresponding to 32% of 110.

Illustration of the regression results: CIT compliance costs by firm type (Model 2)



Source: Commission services, based on data from European Commission (2022a).

Model 3 adds another layer of interaction to Model 2 while simplifying the size dimension. The latter is reduced to only a simple dummy variable whose value is set to one for firms with an annual turnover of more than EUR 500 000, zero otherwise. One third of the firms represented by the sample exceed this turnover threshold. This is to capture the effect of firm size on the cost savings cross-country operating firms may have due to being subject to simplified tax systems (i.e., the effect on the interaction CROSS x SIMPL in Model 2). The result reveals that bigger international firms may face higher compliance costs altogether. But they may also save more than their small counterparts on the availability of simplified tax systems. One possible explanation is that bigger firms may find it easier to exploit simplified tax systems for tax compliance.

It is in this context that the legislative package put forward in September 2023 with the aim to make it easier to do business in Europe is now described.

a) Business in Europe: Framework for Income Taxation (BEFIT)

Business in Europe: Framework for Income Taxation (BEFIT) is a proposal which lays down a common set of rules to determine the corporate tax base of groups of companies in the EU. It introduces common rules for computing the taxable results of companies which operate in the internal market as part of a larger group. The aim is to simplify tax rules and to ensure a level playing field for businesses in the EU. The

framework builds on international developments in the field of corporate taxation, such as the OECD/G20 Inclusive Framework Two-Pillar Approach ⁽²⁹⁾.

BEFIT rules will be mandatory for large groups operating in the EU with annual combined revenues of at least EUR 750 million provided that the group prepares consolidated financial statements. This aligns the mandatory scope of BEFIT with the Pillar Two Directive adopted in 2022. Large international groups with only a limited presence in the EU are kept out of the mandatory scope of BEFIT to balance the burdens and benefits of the new system. However, all groups that are not covered by the mandatory scope can choose to opt into BEFIT, if they prepare consolidated financial statements.

Groups' taxable base is calculated in a two-step process:

- To arrive at the taxable base for these groups, the first step is to compute the preliminary tax result of each group member based on their existing financial accounts, which must follow accounting standards accepted under EU law, i.e., a national Generally Accepted Accounting Principles (GAAP) of a Member State or the International Financial Reporting Standards (IFRS). A limited number of tax adjustments, e.g., regarding depreciation, are applied to the financial accounts to convert them into a tax base. The preliminary tax results of all group members will be aggregated into one BEFIT tax base. This will entail cross-border loss relief, as losses will automatically be set off against profits across borders, as well as increased tax certainty in transfer pricing compliance for transactions within the BEFIT group.
- As a second step, the aggregated tax base will be allocated to the group members using a transitional allocation rule. Accordingly, each group member will have a percentage of the aggregated tax base calculated as the average of the taxable results in the previous three fiscal years. Member States may allow for additional national adjustments to the share allocated to group members in their jurisdiction, which will leave room to integrate important national policy choices. The transitional rule may pave the way for a permanent allocation method that can be based on a formulary apportionment using substantive factors. The transition solution will allow the Commission services to take into account more recent data on the impact of the implementation of Pillars One and Two of the OECD/G20 Inclusive Framework on national tax bases and also benefit from more comprehensive Country-by-Country Reporting (CbCR) data, which will provide a better picture of the current tax environment.
- In pricing transactions between BEFIT group members and associated enterprises outside the BEFIT group, the system will facilitate transfer pricing compliance through a new risk assessment tool referred to as the 'traffic light system'. The substantive transfer pricing rules are not affected by the BEFIT rules.

The administration of the BEFIT rules will be carried out through a hybrid one-stop-shop. This entails that the process will be partly centralised as one group member will file the BEFIT information return with one tax administration in the EU. Individual tax returns of group members, along with audits and appeals, remain at Member State level, but it will be possible for Member States to request joint audits and create an obligation on the other side to accept the request. In addition, for each BEFIT group, a "BEFIT Team" will be formed by representatives from the relevant national tax administrations, to ensure coordination and closer cooperation with a view to reaching tax certainty. This hybrid system will prioritise simplicity and provide for an efficient use of resources.

²⁹ Mandated by the G20, the global community has been working towards updating global corporate tax rules within an Inclusive Framework comprising over 140 jurisdictions and led by the OECD. The work gradually focussed around two pillars: the reallocation of a share of taxing rights arising from large and profitable multinational enterprises (MNEs) towards market jurisdictions (Pillar One), and the establishment of a minimum effective corporate tax rate (of 15%) on large MNEs' profits (Pillar Two). The work on Pillar Two is more advanced and the EU has been leading in its implementation worldwide. The EU 'Pillar Two Directive' was adopted by Member States on 14 December 2022 and ensures the consistent application of the rules in the internal market as of 2024.

b) Head Office Tax (HOT) system for small and medium-sized enterprises

The Head Office Tax system gives SMEs the option to interact with only one tax administration when they operate cross-border through permanent establishments. If SMEs wish to operate cross-border, they become taxable in more than one Member State as soon as their activity abroad creates a permanent establishment (PE), and they need to comply with up to 27 different tax systems. Compliance with those obligations comes with fixed costs, which disproportionately affect smaller businesses. SMEs spend approximately 2.5% of their turnover on compliance with their tax obligations (e.g., CIT and other taxes) while large enterprises spend 0.7% (European Commission, 2022a). This creates a barrier to developing a business cross-border, especially for SMEs at the inception stage of expansion when their activities carried out abroad would mainly be ancillary to the primary business operations in the state of origin.

This SME simplification initiative will eliminate complexities and related costs of SMEs having to deal with multiple tax systems and tax administrations. The directive proposal puts forward an option where the tax rate for each PE will remain within the full competence of the Member State where the PE is situated, but the SME will be able to compute the taxable result of each PE based on the same tax rules as the head office of the SME, i.e., of the Member State of origin (“head office” tax system). In addition to applying the same tax rules, the optional system also provides for a single “head office tax return” including both the tax result of the head office and of all PEs. The SME will only have to file this return and pay the resulting taxes in the Member State of its head office (one-stop-shop). This Member State will then exchange this information and transfer the collected revenue to the other entitled Member States. The proposal will therefore also amend the Directive on Administrative Cooperation (DAC) ⁽³⁰⁾, in order to accommodate the modalities for the exchange of information between the respective tax authorities.

The proposal has a targeted scope and is complementary to the BEFIT proposal. The HOT system is targeted to SMEs at their initial stage of expansion in the internal market, which will benefit most from continuing to apply the national rules they are familiar with. It is only open to SMEs crossing borders with PEs, as PEs are not separate legal entities but still part of the legal personality of the SME itself. However, simplification is also available for SMEs that go abroad with subsidiaries (i.e., SME groups). They can opt into BEFIT if they prepare consolidated financial statements (see above).

The proposed system includes eligibility and termination provisions which are designed to discourage tax planning practices, such as the transfer of the head office to a Member State with attractive features in its tax system. To be eligible, the head office must have been tax resident in the same Member State for at least two years, and the turnover of the head office must be at least one third of the joint turnover of the PEs. If an SME is eligible and opts into the HOT system, this needs to be renewed after five years, to remain in the system. A business will be disqualified from renewal if, e.g., it set up a subsidiary, outgrew its status as “SME”, or the head office changed tax residence.

c) Transfer Pricing Directive

Transfer Pricing (TP) is a central element of international corporate taxation. It determines the allocation of income earned by a multinational enterprise among those countries in which it does business. TP rules are based on the arm’s length principle. In simple terms, the arm’s length principle prescribes that individual group members of a multinational enterprise must transact with each other as if they were independent third parties.

The TP proposal lays down rules to ensure a common approach to TP with the aim of increasing tax certainty for business operating in the EU internal market and reducing occurrences of double

³⁰ Council Directive 2011/16/EU of 15 February 2011 on administrative cooperation in the field of taxation and repealing Directive 77/799/EEC. Since its adoption, the Directive has been amended several times with the aim of strengthening the administrative cooperation among Member States.

taxation as well as double non taxation. To this end, the proposal (i) incorporates the arm's length principle and key TP rules into Union law, (ii) clarifies the role and status of the OECD TP Guidelines and (iii) creates the possibility to establish common binding rules on specific subjects.

Firstly, the proposal enshrines the arm's length principle into EU law by establishing that associated enterprises must transact with each other as if they were independent third parties. The proposal also provides for key TP rules, in particular:

- To ensure that the arm's length principle is applied in a uniform way across the Union, the proposal provides a common definition of associated enterprises which is the pre-condition to apply transfer pricing rules.
- The proposal provides for the various TP methods that should be used to establish the arm's length prices and clarifies how to select the most appropriate method for a particular transaction.
- The proposal explains how a comparability analysis (comparing transactions between associated enterprises and between independent enterprises) should be performed to assess whether the transaction is at arm's length.
- To minimise disputes, the proposal clarifies how the range of acceptable transfer pricing outcomes should be defined.
- The proposal requires Member States to put in place adequate mechanisms to enable them, to adjust the tax base booked in their country ("corresponding adjustment") after a primary adjustment has been made in another Member State or third country jurisdiction. This aims at mitigating double taxation. In addition, the proposal provides the conditions under which Member States should recognise a compensating adjustment.
- The proposal finally stresses the need for taxpayer to gather all the necessary TP documentation. The Commission shall make proposals to further specify which documentation is needed. This will be done by means of a delegated act.

Secondly, it clarifies that the rules laid down in the proposal should be applied in a manner consistent with the OECD TP Guidelines. As the OECD TP Guidelines will be amended over time, these amended guidelines should become the new binding reference framework, if these changes have been agreed by all Member States.

Finally, the proposal provides for the possibility to establish further common binding rules on how to apply TP rules by way of implementing acts. Such rules would mainly consist of safe-harbours and would remain fully consistent with the OECD TP Guidelines, with the aim to create more certainty for taxpayers and mitigate the risk of double taxation.

2.2.2 Measures to improve tax procedures in support of businesses in the EU.

The fragmentation of withholding tax (WHT) procedures across the EU implies high compliance costs and creates a barrier to cross-border investments in securities. The payments received as remuneration of a cross-border investment can be subject to a WHT in the country of the investment. The tax is withheld either by the issuer of the securities or by a financial intermediary that is involved in the payment of the income and then remitted to the tax administration of the source country on behalf of the investor/taxpayer. However, the WHT is generally levied at a rate which is higher than the reduced rate the non-resident investor is entitled to according to the applicable double tax treaties (DTT) or domestic legislation. To avoid double taxation, a non-resident investor who would have been subject to a WHT rate that is higher than the DTT rate would normally submit ex-post a refund claim of the excess tax withheld in the country that levies the withholding tax. The current state of play shows that procedures are cumbersome, lengthy, and costly for investors, financial intermediaries and tax administrations.

In addition, the EU legal framework needs to be adapted to technological progress. While several Member States have made significant technological investments to improve risk assessment and tax control processes, the possibilities offered by new technologies have not yet been reflected in the VAT Directive, whose reporting mechanism is outdated compared to the digital reporting systems implemented by some Member States. Digitalisation creates opportunities, providing new digital tools and solutions to help tax authorities cope with their tasks while allowing for the simplification of tax compliance and the reduction of associated costs. Studies show that digital reporting requirements can be very helpful in combating VAT evasion by preventing fraud or tackling it at the earliest opportunity (Andrew C, Baer K., 2023). This however requires coordinated efforts to implement a European framework to reduce fragmentation costs for businesses and enhance Member States' capabilities in their fight against VAT evasion, in particular in cross-border situations.

In this context, the Commission has proposed two initiatives that aim to improve tax procedures by exploiting the opportunities provided by the new technologies. A Proposal for a Council Directive on Faster and Safer Relief of Excess Withholding Taxes (FASTER) was presented in June 2023 and the proposal for a VAT in the Digital Age package (ViDA) was tabled in December 2022. The FASTER proposal has been unanimously agreed under general approach in the ECOFIN that took place 14 May 2024, so its formal adoption is expected soon. Meanwhile, the proposal on ViDA was still under discussion in the Council at the time of writing.

a) Council Directive on Faster and Safer Relief of Excess Withholding Taxes (FASTER)

Current withholding tax procedures across the EU are divergent, cumbersome and prone to fraud.

Investors that invest in Member States that have a domestic WHT rate for cross-border dividend or interest payments that is considerably higher than the WHT rate stated in double tax treaties are faced with inefficient withholding tax refund procedures. The public consultation (European Commission, 2022b) showed that 89% of all valid respondents strongly agree that the current functioning of WHT refund procedures in Member States hinders cross-border investment in the EU securities market. Retail investors are particularly impacted. In a recent survey ⁽³¹⁾, close to 70% of retail investors who would be eligible to a reduced WHT rate did not claim it because of these cumbersome procedures. This issue has long been identified as a serious obstacle to cross-border investment in the EU and a major impediment to the proper functioning of the Capital Markets Union ⁽³²⁾.

Existing withholding tax rules on procedures are fragmented across Member States and lead to a high administrative burden both in terms of compliance costs and lengthy procedures. The main drivers of inefficient withholding tax procedures are the divergent national rules across the EU, the lack of digitalization at the tax administration side in relation to these procedures and the lack of transparency regarding the financial payment chain that leads to costly and long refund times or even to permanent double taxation.

Existing withholding tax procedures have been proven to be vulnerable to fraud and abuse. Some Member States have experienced large-scale tax abuse schemes known as "Cum/Ex" and "Cum/Cum". With Cum/Ex schemes multiple reclaims are filed whilst only a single reclaim should be genuine. Under Cum/Cum schemes financial pre-arranged structures, such as dividend arbitrage and/or dividend-stripping, are used which aim to minimise or avoid paying taxes on dividends. An estimation made by the journalist network "Correctiv", working together with the University of Mannheim, estimated the losses from Cum/Cum and Cum/Ex at EUR 150 billion for the years 2000 to 2020 ⁽³³⁾.

These withholding tax procedures have led to significant costs for investors and subsequent discouragement of investment in the EU. In 2022, the overall cost of WHT refund procedures within the EU

31 Withholding tax on dividends, survey for investors in the European Union, Better Finance, March 2023, <https://betterfinance.eu/publication/report-withholding-taxes-EU-dividends-shareholders-2023/>

32 For further detail, see Action 10 of the 2020 Capital Markets Union Action Plan (European Commission, 2020a).

33 Correctiv, 21 October 2021, "CumEx Files 2.0: How did we calculate €150 billion in tax loss?" <https://correctiv.org/en/latest-stories/cumex-files-en/2021/10/21/cumex-files-2-0-how-did-we-calculate-e150-billion-in-tax-loss/>

was estimated at EUR 6.62 billion per year by the Joint Research Centre (JRC) (European Commission, 2023i). The need of EU action in this field was broadly confirmed by 94% of the respondent in the public consultation.

In order to address the above-mentioned problems, the Commission adopted a proposal for a Council Directive on Faster and Safer Relief of Excess Withholding Taxes, FASTER, on 19 June 2023. This legislative initiative aims to introduce more effective withholding tax procedures to reinforce the Capital Market Union and to provide Member States with tools to detect and prevent abusive schemes and therefore fight against tax fraud.

One of the main elements of the directive is the setting up of an EU-wide digital tax residence certificate (eTRC). It entails a common content, a maximum validity period and a standard technical system for validation. It seeks to make WHT procedures swifter and more secure. It should also ensure a swift procedure for the issuance of tax residence certificates to all EU taxpayers for all relevant purposes, regardless of WHT procedures.

The other main element of the directive is the establishment of common procedures for a relief at source (RAS) and/or quick refund (QRS) to non-resident taxpayers. Member States will be able to apply RAS, QRS or both depending on their risk appetite. However, all investors need to have access to any of the fast-track procedures as far as they are entitled to a reduced rate and the requirements of the Directive are fulfilled.

The introduction of fast-track relief procedures make it necessary to setting up a common reporting obligation. Large EU financial intermediaries and non-EU financial intermediaries considered as Certified Financial Intermediaries (by signing up in the national registers) will be obliged to report specific information items in a common format and through common communication channels, which will replace the national reporting obligations. Costs for financial intermediaries will be offset by cost savings stemming from the standardization of the reporting and streamlined common procedures. Overall, these standardised procedures are estimated to save investors around €5.17 billion per year and make it easier and more attractive to invest across borders within the EU and to invest into the EU from a third country (European Commission, 2023i).

An EU certified financial intermediaries Portal will be hosted by the Commission website for improving transparency and simplicity of the procedures. It will entail a single electronic portal reflecting the information provided by Member States on the financial intermediaries providing fast-track procedures. It will save costs to all stakeholders involved and will be a useful tool for investors, financial intermediaries and tax administration to check the status of relevant CFIs.

On 14 May 2024 the ECOFIN reached a political agreement under “general approach” and the European Parliament will be re-consulted on the final compromise. Since the adoption of the FASTER proposal by the Commission, the Spanish and Belgian presidencies have made a significant effort to reach an agreement. The recent agreement represents an important step towards more efficient and safer withholding tax procedures with a high level of harmonization and digitalisation. New fast-track procedures will benefit small and large European and non-EU investors alike and will encourage investments towards the EU. The Directive is expected to raise GDP by 0.025% in the EU due to second round effects leading to increased investment towards Member States and, therefore, having a major positive impact on the Capital Market Union. The European Parliament will be consulted again on the agreed text, then it will need to be formally adopted by the Council before being published in the EU's Official Journal. Following it, Member States will have to transpose the directive into national legislation by 31 December 2028 and the national rules will become applicable from 1 January 2030.

b) VAT in the Digital Age package (ViDA)

VAT is a key source of revenue for Member States' budgets. Tax revenues from VAT represent approximately 7% of GDP and 18% of Member States' total tax revenue. Safeguarding VAT revenues is therefore

vital for Member States' long-term budget sustainability. The VAT system should foster a level playing field for businesses, one of its original strengths which is just as highly relevant today as upon its introduction and should minimise its impact on economic growth by ensuring that it is an efficient tax, keeping administrative and compliance costs to a minimum. Despite its success, VAT has been vulnerable to fraud: in particular, missing trader intra-Community (MTIC) fraud, a part of the significant EUR 61 billion VAT compliance gap in 2021, i.e., the difference between theoretical and actual revenues (European Commission, 2023d).

The “VAT in the Digital Age” package aims to overhaul the EU’s VAT system under the force of digitalisation. The 2020 Commission’s Action Plan for fair and simple taxation supporting the recovery ⁽³⁴⁾ underlined the need to reflect on how technology can be used by tax authorities to fight tax fraud and benefit businesses, and whether the current VAT rules are adapted adequately to doing business in the digital age. The Action Plan announced a legislative proposal under the heading “VAT in the digital age” covering 1) VAT reporting obligations and e-invoicing 2) VAT treatment of the platform economy and 3) single VAT registration in the EU. On 8 December 2022, the European Commission proposed a series of measures to modernise the EU’s VAT system, the “VAT in the Digital Age” package (“ViDA”) ⁽³⁵⁾, aiming to update the current VAT rules, considering the opportunities offered by digital technologies. The package is expected to harmonise and promote the provision of cross-border supplies in the internal market, and to help improve tax collection, reduce the VAT compliance gap ⁽³⁶⁾ and therefore ensure sustainable revenues during the post COVID-19 recovery and the crisis following Russia’s war of aggression against Ukraine.

The “ViDA” package envisages three main changes to make the VAT system better fit for the digital age:

1. **A new digital reporting system.** The new real time and transaction-based digital reporting system (called “Digital Reporting Requirements”) is based on e-invoicing and will modernise how companies comply with VAT obligations in cross-border business, removing cumbersome administrative procedures and streamlining processes. The new system makes sure that Member State authorities are fully informed of transactions in almost real time, allowing them to immediately step in and address instances of VAT fraud.
2. **Updated VAT rules for the platform economy.** Platform economy operators in the short-term accommodation rental and passenger transport sectors will be deemed responsible for collecting VAT when service providers do not, and for remitting the corresponding VAT revenues to tax authorities.
3. **A single VAT registration for businesses selling to consumers across the EU.** It allows businesses that want to sell to consumers in another Member State to register only once for VAT purposes for the entire EU and fulfil their VAT obligations in one language, via a single online portal.

Digital reporting obligations burden European businesses with significant compliance costs. Digital reporting consists in transmitting different data sets such as periodic reports of business transactions, e-invoices in real-time, invoice data in real or quasi-real time, or the submission of tax and accounting data or VAT records. With an increasing number of Member States implementing different models of digital reporting obligations at a national level, the costs of fragmentation for multinational enterprises (MNEs) are significant, estimated at about EUR 1.6 billion per year EU-wide, of which 1.2 billion are borne by small-scale and 0.4 billion by large-scale MNEs (European Commission, 2023j, page 16). The studies estimate the total fragmentation cost for the EU at over EUR 40 billion for the period 2023 till 2032 (European Commission, 2023j, page 38) ⁽³⁷⁾.

The VAT in the Digital Age initiative aims to correct this situation and harmonise the digital VAT reporting at EU level. As the use of e-invoicing is expanding in Member States, allowing for automated

34 https://ec.europa.eu/taxation_customs/package-fair-and-simple-taxation_en

35 VAT in the Digital Age webpage is available at: https://taxation-customs.ec.europa.eu/taxation-1/value-added-tax-vat/vat-digital-age_en

36 See Chapter 3, section 3.2.4. below.

37 See also the supporting study, Annex G – analysis of impacts: detailed costs and benefits, page 202.

reporting of transactions, the new Digital Reporting Requirements will be based on e-invoicing allowing at the same time companies to further automate their business and optimise their supply chains. Digital Reporting Requirements will also go hand in hand with a new central VAT information exchange system “central VIES” or “VIES 2.0”) that will be established as an appropriate measure to strengthen cooperation between Member States in the fight against fraud and further reduce the VAT gap within the Union. The introduction of e-invoicing will help reduce VAT fraud by up to €11 billion and bring down administrative and compliance costs for EU businesses by €4 billion annually.

The changes in the VAT rules for the platform economy aim to ensure a simplified taxation of certain sectors of the platform economy, passenger transport and short-term accommodation rental sectors.

These are the most prevalent sectors using digital platforms, and the goal is to clarify the VAT treatment of services supplied via a platform, in line with the same supplies made via the traditional economy. Therefore, the proposal implies a more active role of platforms in the collection of VAT for short-term accommodation rental and passenger transport. Under the new rules, where the supplier of passenger transport or short-term accommodation does not charge VAT, the platform will charge VAT on their behalf. The platform will collect the VAT from the customer and remit it to the tax authorities, without affecting the day-to-day operations of the suppliers involved.

One-Stop Shop: a simplification of up to 95% ⁽³⁸⁾ of VAT-related obligations. When performing cross-border transactions, businesses and in particular SMEs face considerable VAT compliance burdens and costs. The obligation to register in other EU countries, require them to obtain the necessary information about the respective national VAT law, which can be time-consuming and costly. Businesses performing cross-border transactions which are taxed in other Member States face VAT registration costs ⁽³⁹⁾ of EUR 1,200 on average and ongoing yearly compliance costs of up to EUR 8,000 for an average business and up to EUR 2,400 for a small and medium enterprise (SME) ⁽⁴⁰⁾. The new 2021 rules on e-commerce simplifying the cross-border supplies of goods allowed many businesses to account for the VAT due in another Member State via a portal in their own Member State (the One-Stop Shop). Almost EUR 20 billion VAT was collected in this way in 2022. In the Import One-Stop Shop (IOSS), EUR 2.5 billion import VAT was collected in 2022, which means a 26% increase compared to 2021 results. The VAT in the Digital Age proposal aims to further improve the existing simplification systems more, and further reduce the need to register for VAT across the EU by eliminating most instances in which a business is required to register in another Member State. Hence, an e-vehicle charging company operating EU-wide that must currently register VAT in 27 Member States will only register once in one Member State. Similarly, a small company selling on an e-commerce platform will no longer face several VAT registrations when deciding to move its stocks of merchandise. 280,000 small businesses will benefit from the measures, saving a total of EUR 7 billion (European Commission, 2023j, page 41).

Over ten years, the VAT in the Digital Age package is expected to bring between EUR 172 billion and EUR 214 billion altogether in additional benefits, including EUR 51 billion in savings for businesses (European Commission, 2023j, pages 81-82). The savings are mostly made from improving VAT reporting (removing reporting obligations) and reducing fragmentation costs. Up to EUR 500 million will also be saved from streamlining and clarifications in relation to the platform economy and EUR 8.7 billion from removing VAT registration obligations.

38 https://taxation-customs.ec.europa.eu/vat-e-commerce_en

39 Being registered in another Member State entails ongoing reporting and other obligations in that Member State, such as the obligation to complete and submit VAT returns, to pay the VAT due, or to request VAT refunds, which are included in the annual VAT compliance costs.

40 Elaboration based on the VAT in the Digital Age targeted consultation and Deloitte “VAT Aspects of cross-border e-commerce report” (2015)

2.2.3 Measures that contribute to the green transition

The European Green Deal aims to reduce net greenhouse gas emissions by at least 55% by 2030 and eventually reach climate neutrality by 2050. The agenda known as ‘The European Green Deal’ was launched in December 2019 and is one of the flagship initiatives during the legislative term 2019-2024. It sets out a new growth strategy for Europe by transforming the EU into a fair and prosperous society, with a modern, resource-efficient, and competitive economy with zero net greenhouse gas emissions by 2050, and with economic growth decoupled from resource use. Driven by this mission, the European Commission is supporting unprecedented investments in the area through the Multiannual Financial Framework and its funds and the Next Generation EU and its main instrument, the Recovery and Resilience Facility. The latter aims to rebuild a stronger and more resilient Europe in the aftermath of the Covid-19 crisis, by also providing a strong support to other EU priorities like climate change mitigation and energy transition. These investments are being accompanied by legislative actions, both at EU and at national levels. At EU level, the Commission tabled the “Fit for 55” legislative package in July 2021 to respond to the requirements of the EU Climate Law to reduce Europe’s net greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels ⁽⁴¹⁾. Some of the original elements of the Fit-for-55 package were updated when the Commission proposed increased ambition on renewable energy and energy efficiency in the REPowerEU plan to respond to Russia’s war of aggression against Ukraine and boost Europe’s energy security. The final legislative package is expected to reduce EU net greenhouse gas emissions by 57% by 2030. Some of the legislative pieces adopted in recent years as part of the “Fit for 55” package include, among others, the second EU emission trading system (EU ETS2), the Social Climate Fund and the Carbon Border Adjustment Mechanism (CBAM). The proposal for amending the Energy Taxation Directive is an integral part of the Fit for 55 Package but remains to be completed.

The revision of the Energy Taxation Directive (ETD) is an important contribution to encourage a green transition across the EU by comprehensively reviewing the way energy products (including electricity) are taxed. As part of the *Fit for 55* package the Commission adopted a proposal in July 2021 for new rules regarding energy taxation to address possible distortions in the internal market and preserve the ability of Member States to generate sufficient tax revenues. The proposal is the only one of the *Fit for 55* package that has not yet been agreed. Negotiations are ongoing at technical level in the Council.

The ETD has remained unchanged since its adoption in 2003 while energy markets, technologies and policy priorities in the EU have experienced significant developments. In the absence of an indexation mechanism, the real value of the minimum rates has eroded over time and the minimum rates no longer have a converging effect on national rates as the vast majority of Member States tax most energy products and, in some cases electricity, considerably above the ETD minima. Highly divergent national rates are applied in combination with a wide range of tax exemptions and reductions to safeguard the competitiveness of EU industries as well as to pursue other national policies. This also increases the fragmentation of the internal market and distorts the level playing field across the affected sectors of the economy. Fiscal treatment of the business sector, in particular energy intensive businesses and the manufacturing sector, varies considerably across Member States. Moreover, the current directive is not consistent with EU environmental legislation and priorities, notably on carbon pricing, and as such impede regulatory efficiency and coherence.

The revision of the ETD is based on a new structure for minimum rates. Firstly, the proposal includes a new structure for minimum tax rates based on the energy content and environmental performance of fuels and electricity, rather than on volume as it is currently the case. To that end, minimum rates are expressed in euro per gigajoules of each product and will be automatically adjusted annually based on Eurostat data to reflect price changes. This would provide clearer price signals towards cleaner, more energy efficient and climate-friendly

41 In February 2024, the European Commission recommended reducing the EU’s net greenhouse gas emissions by 90% by 2040 relative to 1990. The 2040 climate target would be an intermediate step between the 55% reduction goal by 2030 and the climate neutrality goal by 2050. The 2040 target has not yet formally adopted.

choices of businesses and consumers alike. For example, under the current rules, a lower minimum rate per volume is applied to diesel used as motor fuel than petrol used for the same purpose. Under the new proposal, this would change.

The ETD proposal also points to broadening the base to maximise its impact in driving forward the common EU green goals. Secondly, the proposal broadens the taxable base by including more products in the scope and by removing some of the current exemptions and reductions. The proposal groups energy products and electricity in general categories per type, which are ranked according to energy content and environmental performance. Thus, the new system would ensure that the most polluting fuels are taxed at the highest rates. Member States must ensure this ranking is replicated domestically. At the same time, several exemptions and rate reductions would be removed, with much less margin for Member States to set rates below the minima for specific sectors. Fuel used in intra-EU aviation and maritime transport would no longer be fully exempt from energy taxation. For the aviation sector, the minimum tax rates would start from zero and increase over a transitional period while for both sectors sustainable and advanced products and electricity would benefit from a minimum rate of zero during a transitional period.

2.3 Assessment of Performance of EU Tax Administrations

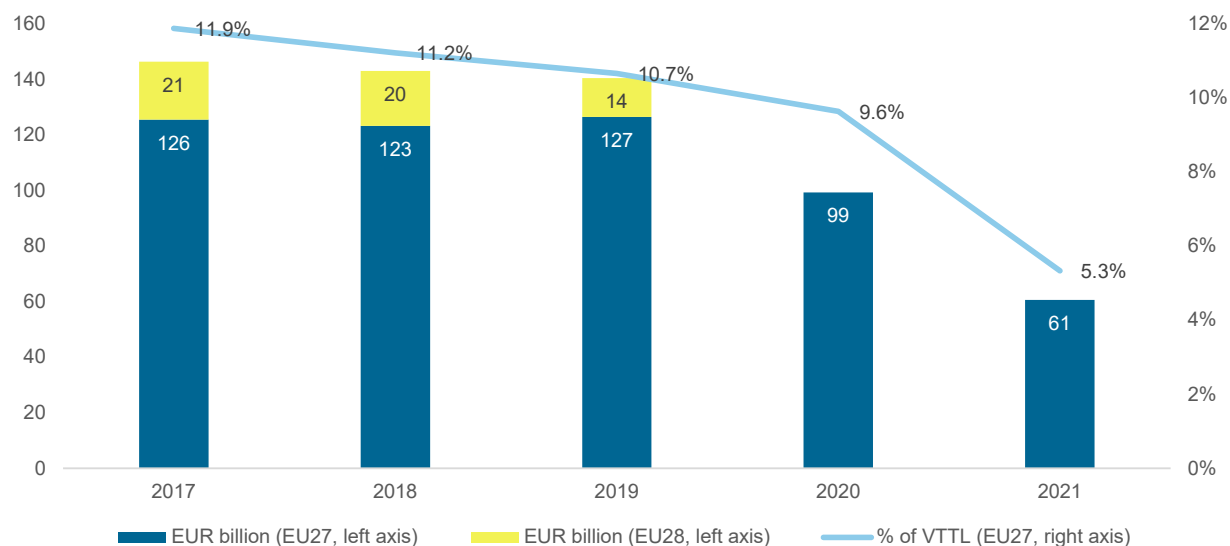
Measuring EU tax administrations' performance proved challenging in recent years notably due to COVID-19 effects. Such monitoring requires the analysis of both dimensions of tax administrations' performance, i.e. efficacy and efficiency. While efficacy describes the administration's output in terms of legally due tax collected, efficiency looks at the input, i.e. resources spent on both sides, by the tax administration and by the taxpayer. Data for more recent years have however been impacted significantly by the effects of the COVID-19 pandemic and the measures to temper those effects. The latest available data for all Member States, i.e. from 2021, still shows the effects of the COVID-19 pandemic, which makes it difficult to interpret the observed evolution.

The effectiveness (output) of tax administrations is best measured by tax compliance gaps, representing the amount of uncollected tax that is due by law. This is regardless of the fact that tax administrations' performance is affected by tax policy decisions, such as the complexity of the tax system or the data made available to administrations. However, when looking at the EU tax compliance gap, sufficiently reliable and comparable data are currently only available for VAT. For other taxes, payment rates are used to shed light on tax administrations' output. Payment indicators, notably on outstanding tax arrears, only cover the collection of tax already assessed on the basis of tax returns or as a result of audits. How much tax remained unassessed by tax administrations in the EU, though legally due, is largely unknown for taxes other than VAT. To close this indicator gap, Member States' tax administrations, with the help of the Commission, are striving to establish reliable methodologies to calculate compliance gaps for income taxes and to further refine the VAT compliance gap⁽⁴²⁾.

For 2021, the EU VAT compliance gap was estimated at EUR 61 billion, a significant decrease of EUR 38 billion from the previous year (European Commission, 2023d). Economic support measures during the COVID-19 pandemic played a role, influencing compliance positively (see further). In addition, the reduction in the compliance gap can generally be attributed to increased VAT receipts and changes in consumption patterns. Government support measures tied to tax payments, contributed not only to increased compliance but also to lower rates of bankruptcies. The development of the VAT compliance gap is depicted in Figure 24.

42 Several FISCALIS working groups are currently active under the supervision of the Tax Administration EU Summit (TADEUS), comprising of the heads and deputies of Member States' tax administrations.

Figure 24: VAT compliance gap in the EU (% of the VAT Total Tax Liability -VTTL and EUR billion, 2017-2021)



Source: European Commission (2023d).

The huge progress made in closing the VAT compliance gap in 2021 can only partially be credited to EU tax administrations. The VAT compliance gap declined in 25 out of 27 Member States. This indicates additional drivers that are exogenous to tax administrations' conduct, as it is improbable that almost all tax administrations greatly improved at the same time. As external drivers were identified: (a) Member States' pandemic support measures, which probably have reduced insolvency and bankruptcy of taxpayers and, consequently, the VAT compliance gap; and (b) the shift to online providers, whose market leaders may be more tax compliant than average, potentially coupled with card payments, which has allowed for better reporting and thus collection of VAT (European Commission, 2023d).

Digital reporting and effective audits have also played a role in reducing the VAT gap in recent years. Comparing the worst performing Member State's VAT gap (Romania's 36.7%) (European Commission, 2023k) with four increasingly well-performing Member States, which were acting under a similar economic framework over the last decade (Latvia, Hungary, Poland and Slovakia), suggests that digital reporting of VAT transactions and efficient tax audits may be necessary preconditions for closing the VAT gap (European Commission, 2023k). While introducing digital reporting obligations requires legislative action (cf. Section 2.2.2 on the ViDA proposal), improving tax audits lies in the hands of tax administrations. In this regard, ongoing reform efforts in Romania, including by digitalising the tax administration, go in the right direction.

The latest available data on outstanding tax arrears shows that half of the EU countries have ratios above pre-pandemic levels but they may still be distorted by the effects of the COVID-19 pandemic. The indicator displays how much assessed tax is due but not collected at year-end. It could be a proxy for the ability of tax administrations to collect tax due. Usually that amount is presented as a percentage of the collected net revenue. At the end of 2020 we saw a sharp increase in outstanding tax arrears for a large number of Member States but this is likely due to authorities suspending tax collection to support taxpayers during the pandemic, rather than decreasing performance (OECD, 2023b) ⁽⁴³⁾. The effect seems to be wearing off in 2021, when ratios of uncollected taxes declined in all but 5 Member States. However, roughly half of the Member States still display higher ratios in 2021 compared to pre-pandemic 2019, since many governments were still suspending tax collection in the aftermath of the pandemic (OECD, 2023b, p.114). The exceptional circumstances

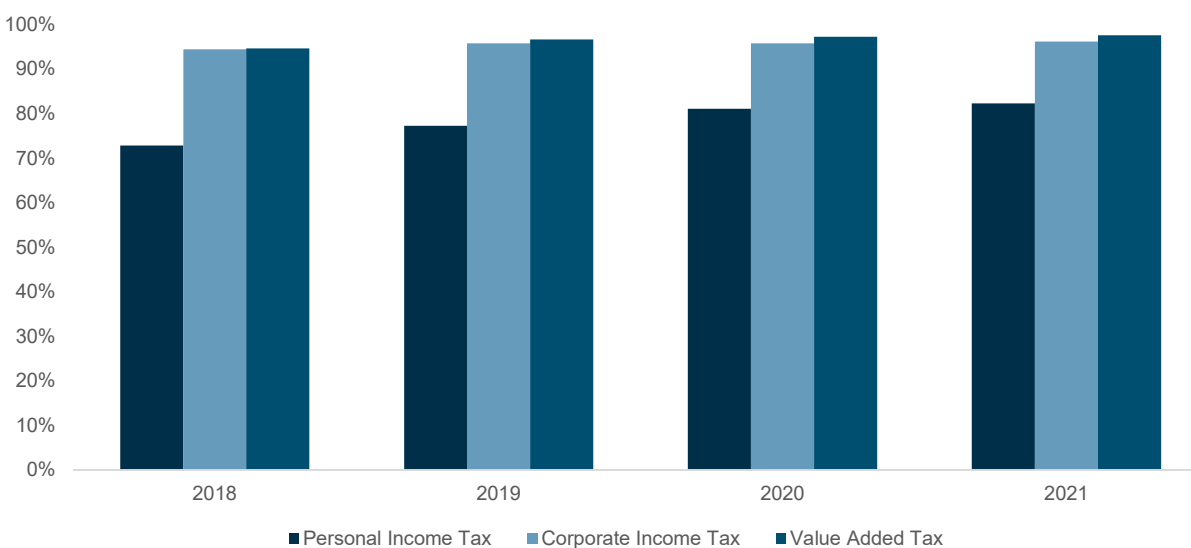
⁴³ See, p. 114 and Annex A, Arrears ratios: Closing stock and collectable arrears.

of the COVID-19 pandemic, and the way it can distort data on tax arrears, suggest that caution is needed when assessing the performance of tax administrations' output for taxes other than VAT. More data points are also needed. Even without the effects of the pandemic, data on outstanding tax arrears does not by itself indicate that a tax administration's performance is good or bad and needs to be complemented with other indicators. For example, practices to write-off tax debt differ between states, which makes comparisons among Member States difficult. Furthermore, the available tax arrear data include interest and penalties – equally not harmonised – making it difficult to cross-compare Member States and leading to overstating the amount of uncollected tax.

The calculation of tax administrations' efficiency (input by tax administrations and taxpayers) needs to rely less and less on the digitalisation proxy. Based on the assumption that making use of digital tools reduces cost of both tax administration and taxpayers, increased digitalisation has served as a surrogate for more efficiency. The cost-reducing effect of certain measures, e.g., electronic filing of tax returns, is convincing. However, such straightforward digitalisation measures will probably soon be widely implemented, thereby losing their significance for comparing tax administrations' efficiency, in time and among Member States. For other digital instruments it is yet hard to evaluate their efficiency, e.g., regarding the use of artificial intelligence by tax administrations. As soon as those instruments have proved to reduce cost or the tax gap, new proxy indicators for the efficiency of tax administrations may be available.

Cost reduction by e-filing of tax returns has largely been harvested. One of the most straightforward ways to reduce tax administrations' and taxpayers' costs has been the wide implementation of electronic filing of tax returns. This increases efficiency by allowing data processing without the need to digitalise information received on paper, leading to cost reductions on the tax administrations' side in particular. E-filing seems to have reached its peak for business taxation (97% for corporate income tax and VAT) with e-filing for personal income tax closing in (82%). It is noteworthy that, during the COVID-19 pandemic, rates did not grow in 2020 at a faster pace and even almost stagnated in 2021 (see Figure 25). Considering that EU e-filing rates for personal income tax would amount to 90% when disregarding the three Member States with the lowest values (⁴⁴), the ceiling may have almost been reached.

Figure 25: Electronic filing (EU-27 average)



Source: Own calculations (simple average) on the basis of OECD (2023b), Annex A, Electronic filing.

⁴⁴ Luxembourg (15.9%), Slovenia (25%) and Czech Republic (32.5%): [OECD \(2023b\)](#), Annex A, Electronic filing.

2.4 Recent actions at EU level to improve tax administration's performance.

2.4.1 *General measures*

The EU Compliance Risk Management (CRM) Guide was revised in 2023 to position compliance risk management in the digital era. Good risk management can improve tax administrations' effectiveness in tax collection and reveal areas where more efforts and investments by tax administrations may reduce the cost of collection and improve the collection to investment ratio. Ensuring good risk management means measures aimed at avoiding non-compliance by taxpayers, or the better targeting of corrective action. The new EU CRM guide outlines the pillars of CRM strategies to make optimum use of digitalisation, data, and technology⁽⁴⁵⁾. On the basis of this comprehensive guide, Member States' tax administrations may review their existing risk management or test new approaches.

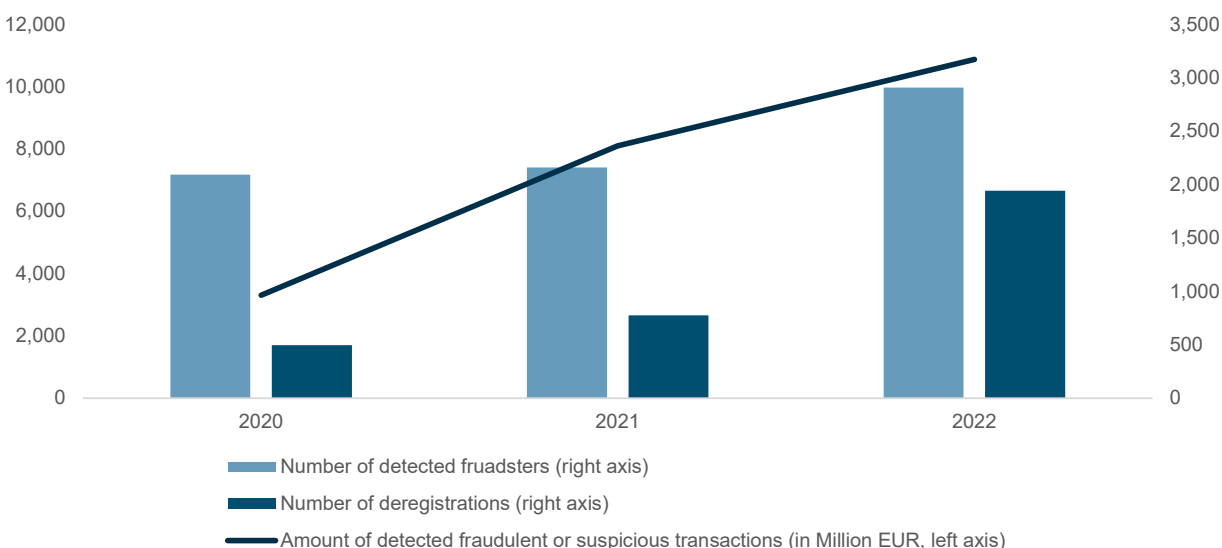
Cross-border cooperation between Member States' tax administrations will be improved by the EU Advanced International Administrative Cooperation (EU AIAC) community. As cross-border trade and mobility is ever increasing, the development, promotion, and support for the use of international advanced tax cooperation instruments among Member States can tackle cross-border tax fraud and evasion. The EU AIAC community, set up in 2022 and technically and financially supported by the Commission, brings together officials of all EU tax administrations under a single platform to support and coordinate the administrative cooperation tools available in all areas of taxation (income taxes, VAT, excise, and tax debt enforcement). The community builds on the expertise of the previous Multilateral Control (MLC) platform and has already offered numerous trainings and published communication and guidance materials to increase the number of cross-border audits and other forms of administrative cooperation.

2.4.2 *Measures for Value Added Taxes*

Joint data crunching in the "Eurofisc" network increases tax administrations' ability to detect cross-border VAT fraud. Based on Council Regulation (EU) 904/2010 tax administrations combine their transactional data to detect fraud linked to vehicles and e-commerce transactions and notably incidents of so-called missing trader intra-community (MTIC) fraud. This kind of fraud is directed at achieving unjustified VAT refunds while trading cross-border. The applied software, which is constantly being improved, is able to sort out ever more suspicious activity (Figure 26). By quickly deregistering fraudsters and other means, Member States' tax administrations can prevent them from obtaining illegal VAT refunds, thereby closing the VAT compliance gap.

45 See at https://taxation-customs.ec.europa.eu/taxation-1/tax-co-operation-and-control/general-overview/tax-administration_en

Figure 26: VAT MTIC fraud



Source: Eurofisc.

2.4.3 Measures for income taxes

Ongoing administrative cooperation continues to deliver results. The Directive on administrative cooperation in the field of direct taxation 2011/16/EU (DAC) lays down the rules and procedures for Member States' tax authorities to cooperate closely among themselves in the direct tax area, to be able to apply their taxes correctly to their taxpayers and to combat tax fraud and evasion.

The Commission with experts from the Member States have been carrying out pre-visit meetings and on-site visits to all Member States of the Union, with the objective of improving the effective implementation and functioning of the Directive on administrative cooperation (DAC). The focus of these visits is DAC1, DAC2, DAC3 and DAC4. The VISDAC Expert Team ((Visits to Member States Directive on Administrative Cooperation) is tasked with identifying areas for improvement and best practices that can be shared in the areas of data quality and use of information.

The DAC is also being evaluated. This focuses on progress made since the previous evaluation in 2019 and covers the last 5 years. The key objectives of the evaluation are to evaluate whether DAC is still relevant in its scope and purpose, whether it is effective in providing desired outcomes and impact, in line with the better regulation criteria. Since most of the tools under DAC concern the implementation of internationally agreed mechanisms, there is limited room to reduce burden or simplification. However, the public consultation will address the point to find ways to achieve this objective. The efficiency can therefore mainly be enhanced by increasing the benefit of those burdens – focusing on the quality of data exchanged and the actual use of it. A study has been carried out and a public consultation is planned. These elements will be analysed by the Commission and outcomes shall be used as input for the report to the European Parliament and Council scheduled for end of 2024.

The FISCALIS program provides the framework and the financing for the VISDAC and DATANA Expert Teams. The key objective of the DATANA Expert Team (Development of data analysis tool and other solutions for enhanced use of the tax information) is to improve the use of unmatched information received by the Member States under the DAC. In this context, the Expert Team are tasked with identifying best practices and recommending an IT solution that can support improvements in this area.

2.5 Taxation reforms supported through the Technical Support Instrument

2.5.1 *Background*

In the face of current fiscal and economic realities, EU Member States require practical reforms to enhance the quality and sustainability of public spending and revenue generation. The Technical Support Instrument ⁽⁴⁶⁾ (TSI) has provided a crucial contribution, offering tailored technical expertise to the design and implementation of tax reforms. Managed by the European Commission's Directorate-General for Structural Reform Support (DG REFORM), the TSI builds upon the success of its predecessor, the Structural Reform Support Programme (SRSP, 2017–2020). This support aligns with national Recovery and Resilience Plans, EU priorities and legislation, and individual Member State reform goals.

Support to Member States funded by the TSI is demand-driven and can include strategic and legal advice, studies, training, and expert visits on the ground, with mobilisation of the best available technical expertise in and outside of the EU. Focusing on the EU's "economy that works for people" priority, important efforts have been made regarding revenue administration aiming to strengthen administrative capacity; improve tax and customs compliance; refine tax systems; and combat aggressive tax planning, fraud, and evasion. This pertains to, for example, digitalisation of tax and custom procedures which presents enormous challenges for tax and customs authorities.

Recognising the significant needs across the Member States and alignment with EU priorities, the Commission launched the Flagship technical support projects in the area of revenue administration. Recent flagships include "Green Taxation", "Digital Transformation of Tax and Customs Administrations", and "Enhancing the quality and use of tax information exchanged between Member States in the context of the Directive on Administrative Cooperation (DAC)". Looking ahead, the 2025 "Simplifying revenue administration for business" Flagship Technical Support Project ⁽⁴⁷⁾ encourages Member States to pursue reforms that further strengthen their revenue administrations.

The TSI also facilitates multi-country projects, fostering knowledge sharing and building expert networks across Member States. These efforts are complemented by workshops, expert missions, and study visits funded through the TAIEX instrument ⁽⁴⁸⁾. TAIEX supports public administrations in the approximation, application, and enforcement of EU legislation as well as in facilitating the sharing of EU best practices.

Through both the SRSP and TSI, 25 Member States' tax and customs administrations have benefitted from support for over 160 reforms, with numerous projects still ongoing.

2.5.2 *Concrete support provided*

A significant result was achieved in supporting the establishment of the Independent Authority for Public Revenue (IAPR) in Greece. While the support started under the SRSP, it has continued through the TSI – an effort spanning over 10 years with 21 reforms still active today. As a result, the IAPR has greater autonomy reflected in strategic, administrative, budgetary, and operational independence. The IAPR is evolving towards a modern, data-driven, and taxpayer-oriented tax administration ⁽⁴⁹⁾.

Regarding the fight against aggressive tax planning, tax fraud and tax evasion, the TSI has backed 17 reforms in 11 Member States to implement the OECD Transfer Pricing Guidelines (OECD TPG). As a

46 https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/technical-support-instrument/technical-support-instrument-tsi_en

47 https://reform-support.ec.europa.eu/tsi-2025-flagship-simplification-revenue-administration-better-business-environment_en

48 https://reform-support.ec.europa.eu/support-opportunities/taix-instrument_en

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result, Poland introduced new procedures to strengthen the application of their transfer pricing rules. Revenue administrations in Hungary, Bulgaria, Greece, Romania, Croatia, and Cyprus have strengthened their capacity to conduct transfer pricing risk assessments and interventions (including audits). These Member States can now apply the international standards and are better prepared to implement the “Pillar Two Directive”⁽⁵⁰⁾. Additionally, TSI has supported the development of modernised processes for Advanced Pricing Agreements (APAs) in Poland and Slovakia. In 2024, DG REFORM continues to support transfer pricing capacity building through a multi-country engagement with Malta and Cyprus.

Furthermore, the SRSP and the TSI have supported 7 reforms in 4 Member States introducing Cooperative Tax Compliance Programmes (CTCP) for large taxpayers. In this context, the TSI has supported Poland and Belgium⁽⁵¹⁾ to expand the coverage of their respective programmes (see Box 4 for further detail), where Poland is at pilot stage, whereas Belgium is now at a full rollout of CTCP. The TSI supported Bulgaria and Romania with the introduction of CTCP with the respective national authorities subsequently launching CTCP pilots. In 2024, the Commission will continue to work with Poland to develop technical solutions to improve the efficiency of their CTCP and enable further expansion. It is expected that Member States will achieve higher taxpayer compliance, reducing tax gaps, leading to higher budget revenues and expanded fiscal space.

A critical pillar of the fight against cross-border tax fraud, evasion and avoidance is the Directive on Administrative Cooperation in the field of taxation (DAC) that obliges Member States to exchange and use specific tax data. The flagship on “Enhancing the quality and use of tax information exchanged between Member States in the context of the Directive on Administrative Cooperation (DAC)”, has supported eight reforms in eight Member States. As a result, Belgium has improved its data-driven decision and risk management platform used for the internationally exchanged information. Poland and Slovakia have improved internal processes, bettered data analytics, and introduced a more streamlined management of high data volumes. Ongoing projects in Finland, Hungary and Malta are supporting the administrations to address the challenges of data quality by improving knowledge and capacity and developing technical solutions for data matching and risk assessment. Under TSI 2024, support under this flagship further extended to Ireland and Croatia. The ultimate objective is to increase revenues by ensuring cross-border incomes and assets are taxed.

Under the SRSP and the TSI, technical support is / has been provided to 22 reforms in 9 Member States in their assessment of tax gaps and the informal and/or digital economy, developing recommendations for possible preventive and/or dissuasive measures. For instance, technical support to Poland and Sweden will help to better estimate, analyse, and counteract the informal (grey/shadow) economy. At the end of the two projects, the respective authorities will have improved tax administration processes and tools (including a dedicated model), be ready to adapt the legal framework to tackle the informal economy and have the capacity to use available data more efficiently.

Reducing the administrative burden for businesses through simplification of tax compliance remains an important priority. With tax revenues accounting for 40.4% of the EU GDP in 2022 (see section 1.2), the administration of taxes is a key element of the EU business environment. In Hungary, Slovenia, Croatia, Lithuania, and Austria, TSI has supported tax administrations to simplify procedures and automate administrative processes. Many of these tax compliance reforms aim to utilise specific forms of Digital Reporting Requirements (DRRs), the adoption of which can reduce by up to 27% the time to prepare and pay VAT⁽⁵²⁾, thus directly reducing compliance costs. The TSI has supported the simplification of tax compliance in Hungary, through the development of simplified real time reporting obligations for employers; and in Italy for implementation of new

50 https://taxation-customs.ec.europa.eu/taxation-1/corporate-taxation/minimum-corporate-taxation_en#:~:text=On%201%20January%202024%2C%20ground,active%20in%20EU%20Member%20States.

51 https://reform-support.ec.europa.eu/what-we-do/revenue-administration-and-public-financial-management/extending-uptake-cooperative-tax-compliance-programme-belgium-and-poland_en

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data-driven risk analysis approaches and IT tools to counter tax fraud and evasion. In 2024, Malta is receiving support for the introduction of real time reporting of payroll and VAT. Simplification of revenue administration will reduce administrative burden, leading to improved tax compliance, increased tax revenues and a better business environment. In 2024, the TSI will contribute to 10 reforms in 7 Member States under the 'Digital Transformation of Tax and Customs Administrations' flagship, including on reforming VAT reporting in the digital age and real time reporting of "gig economy" income. These reforms will transform tax administrations in line with EU digital goals and the OECD initiative Tax Administration 3.0.

Environmental taxation can help deliver environmental and climate objectives more efficiently by encouraging more environmentally sustainable behaviour of producers and consumers.

Recommendations issued in the framework of the European Semester and certain national Recovery and Resilience Plans (RRPs) targets are linked to the green transformation and include shifts from labour to environmental taxation. The TSI has supported green taxation reforms in Portugal, Cyprus (see Box 6 for further detail), Region of Andalusia (in Spain), and Greece, focusing on enabling legislators to introduce revenue neutral measures that will achieve environmental goals while avoiding undesirable social impacts. This support continues under TSI 2024 as Romania examines green taxation reforms, while Greece and Romania focus on the effective implementation of the Carbon Border Adjustment Mechanism (CBAM) Regulation. Technical support in this area aims to improve the institutional and operational capabilities of national administrations to analyse, assess and decide on green tax policy options and to have a comprehensive view of environmental, economic, and social impacts of green tax reforms. The goal is to drive environmentally friendly behaviours of producers and consumers.

Assessment of the distributional impact of tax-benefit reforms is a key instrument at the disposal of policymakers to fine-tune reform proposals and increase the acceptance of changes in the tax code.

In the context of the Structural Reform Support Programme (SRSP) of DG REFORM, the European Commission Joint Research Centre (JRC) provides technical assistance to a number of Member States for the development of microsimulation models for distributional impact of tax-benefit reforms. The projects allowed capacity building in the national administrations on tax-benefit modelling and the adaptation of the EUROMOD model⁽⁵³⁾, the tax-benefit microsimulation model for the EU, to the use of administrative data, allowing the Member States to answer country-specific questions. Country-specific projects include the development of microsimulation tools in Greece, Lithuania, Romania and Slovakia⁽⁵⁴⁾. This technical support contributes to strengthening the capacity of Member States to assess the impact of their fiscal and labour policies on social indicators and thereby, to improve their tax-benefit systems, making them more efficient and fairer. This supporting role is further extended as a result of the implementation of the EC Communication on Distributional Impact Assessments (DIAs)⁽⁵⁵⁾, where the Commission is providing guidance for Member States. In a TSI 2024 multi-country project, seven Member States will receive support for incorporating distributional impact assessments into their policymaking processes.

53 [EUROMOD - Tax-benefit microsimulation model for the European Union \(europa.eu\)](#)

54 [Microsimulation tool of the tax and transfer system in Slovakia - European Commission \(europa.eu\)](#)

55 Communication on Better Assessing the Distributional Impact of Member States' Policies" (COM(2022) 494 final).

Box 4: Belgium and Poland - Cooperative Tax Compliance Programme

The Federal Public Service Finance (FPSF) Belgium received support under SRSP to implement the pilot phase of their Cooperative Tax Compliance Programme (CTCP). The project responded to the need to increase the efficiency and transparency of tax systems among EU Members States, which are key to stimulating economic growth and building public confidence. The objective was to improve voluntary tax compliance and create a sustainable framework for mobilising tax revenue. The support focussed on building new relationships with large taxpayers, through strengthening soft skills in the administration and creating awareness among taxpayers; implementing a tax control framework and related cooperative compliance assessment techniques; exchanging good practices and experiences on cooperative compliance, with experts from specialised units of other EU Member States' administrations and academia. This project resulted in a successful completion of the pilot phase with participation of eight corporate groups large taxpayers), together representing around 40 to 50 companies.

The Belgian authorities continued to expand their CTCP by targeting an increase in participation by five groups annually (up to 50 groups in total) in a multi-country project with Poland who recently extended their CTCP pilot beyond 20 large taxpayers. The support enhanced the capability of both administrations for further development of their respective CTCs, while also exploring a broadening of the scope of participating entities. Both tax authorities received comprehensive guidance and tools to effectively implement the changes to the programmes, along with a strategic approach for communicating them to key stakeholders.

The FPSF has fully embraced the recommendations provided through TSI support and will publish the CTCP guidelines on their website and implement the communications action plan. Both projects have ensured the success and of the CTCP programme in Belgium and Poland. The implementation and enlargement of the CTCP is expected over the long term to contribute to a more efficient and effective tax administration, improved tax collection, enhanced tax certainty and improved economic environment for large businesses.

Box 5: Bulgaria - Simplification of tax compliance

A recently closed project in Bulgaria supported the simplification of tax compliance through the introduction of the Standard Audit File - Taxation (SAF-T)⁽¹⁾ for exchange of electronic information between the National Revenue Agency (NRA) of Bulgaria and large- and medium-sized taxpayers. These taxpayers generate a major part of the national revenues. As a tool for digital reporting of accounting data, SAF-T will provide for automated risk management and will significantly simplify tax audits by reducing manual checks and paper exchange between the Agency and taxpayers.

The project supported the NRA in a comprehensive manner to design and prepare all prerequisites for implementation of SAF-T in Bulgaria: through analysis of the current internal and external environment for implementation of SAF-T, elaboration of a national specific action plan, development of an implementation plan and designing technical specifications for the audit file. In addition, the project supported the development of a manual for e-audit based on SAF-T data, with a methodology and criteria for automated risk analysis. Furthermore, the project delivered an extensive communication campaign for promoting SAF-T implementation amongst all stakeholders, focusing on the benefits from the digital exchange of information for all.

The project resulted in full preparedness of the Agency to implement the standard, strengthened capacity to perform e-audits with SAF-T data, and enhanced awareness and involvement of the stakeholders in SAF-T implementation. In the long run, the project will contribute to increasing efficiency and effectiveness of tax audits, reducing the administrative burden for large and medium taxpayers, strengthening tax compliance, and increasing trust in the tax system.

⁽¹⁾ SAF-T is an international standard for electronic exchange of reliable accounting data between businesses and national tax authority or external auditors, developed by the Organisation for Economic Cooperation and Development (OECD).

Box 6: Cyprus - Green tax reform

The Ministry of Finance of Cyprus received support under TSI to address major environmental challenges through a green tax reform focusing on three areas: (i) air pollution/climate change, (ii) waste management/circular economy and (iii) water usage/pollution. DG REFORM provided technical support to design a green tax reform in line with EU priorities while taking account of eventual negative social or economic effects on vulnerable groups, accompanying the Cypriot authorities towards achieving a milestone under the national Recovery and Resilience Plan.

The project supported Cyprus to implement environment taxation measures by: providing them with a review of best practices in the three environmental areas, an assessment of tax bases and revenues, a review of the economic, environmental, and social impacts on the three environmental levies/taxes, and guidance for legislative changes. This was supported by intense stakeholder engagement through consultation events with various stakeholders.

Following an assessment and consultation with stakeholders, the Ministry of Finance introduced legislative changes for a revenue-neutral green tax reform to tackle air pollution and climate change. Additionally, measures to mitigate undesirable effects of the reform on households and businesses were discussed, selected, and implemented. The expected long-term impact of these measures includes a reduction of CO₂ and other greenhouse gas (GHG) emissions, environmentally friendlier consumers' and producers' behaviour, and sustainable development.

3

Main Trends and Developments in Taxation by Type of Tax: a cross-country analysis

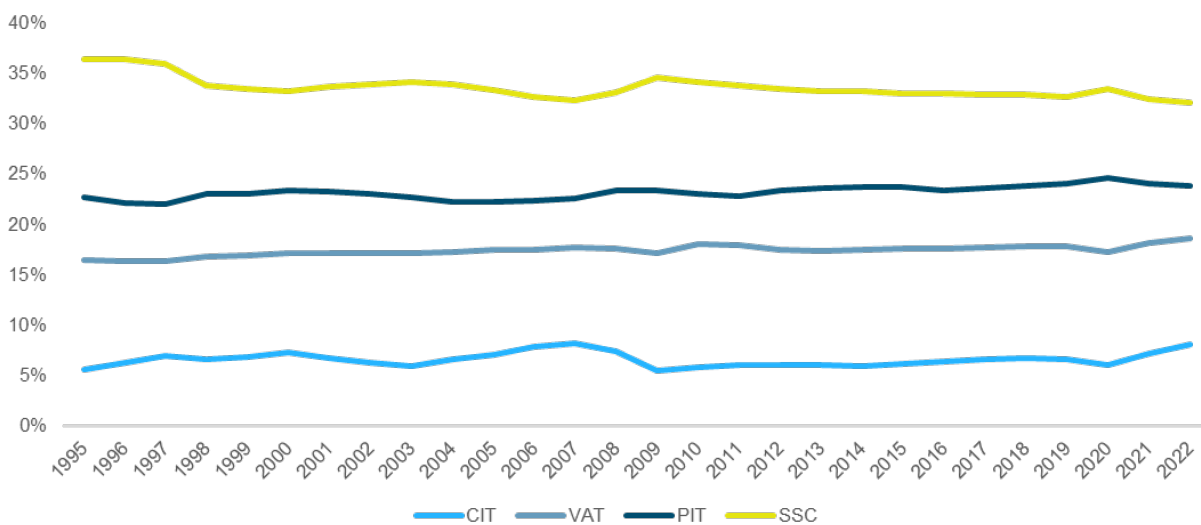
3.1 A survey of main tax types and their role in the tax mix

The discussion of the tax mix in Chapter 1 analysed the taxes per economic function. This allowed for a general understanding of the tax burden falling on labour, capital, and consumption. The present chapter will take a more detailed look at the different type of taxes levied in EU Member States. How important are they for revenues? What are their policy objectives beyond revenue generation? What are potential issues with a given type of tax and what do we know about revenue losses due to tax expenditures, tax avoidance and tax evasion?

Taxes on individual income (personal income tax, PIT), corporate income (corporate income tax, CIT), and value added tax (VAT), along with social contributions (SC) are the primary revenue sources for most governments. PIT, with its progressive nature, is based on personal earnings, while CIT is levied on business profits. SC can be levied on employers and employees alike and are an important element of labour costs and used to finance public welfare programs (such as pensions and healthcare). VAT, the main tax on consumption, complements these direct taxes on incomes.

The relative importance of different types of taxes for revenue generation has changed relatively little in the EU over recent decades. The overall tax burden has increase from 39% of GDP in 1995 to 40.2% of GDP in 2022. The tax structure in the EU-27 has remained relatively stable (see Figure 27). A large part of the burden is borne by PIT (23.9% of total revenues) and SC (32.1%), together representing about 56% of the total revenue in 2022. The next most important revenue sources are VAT (18.6%) and CIT (8.1%).

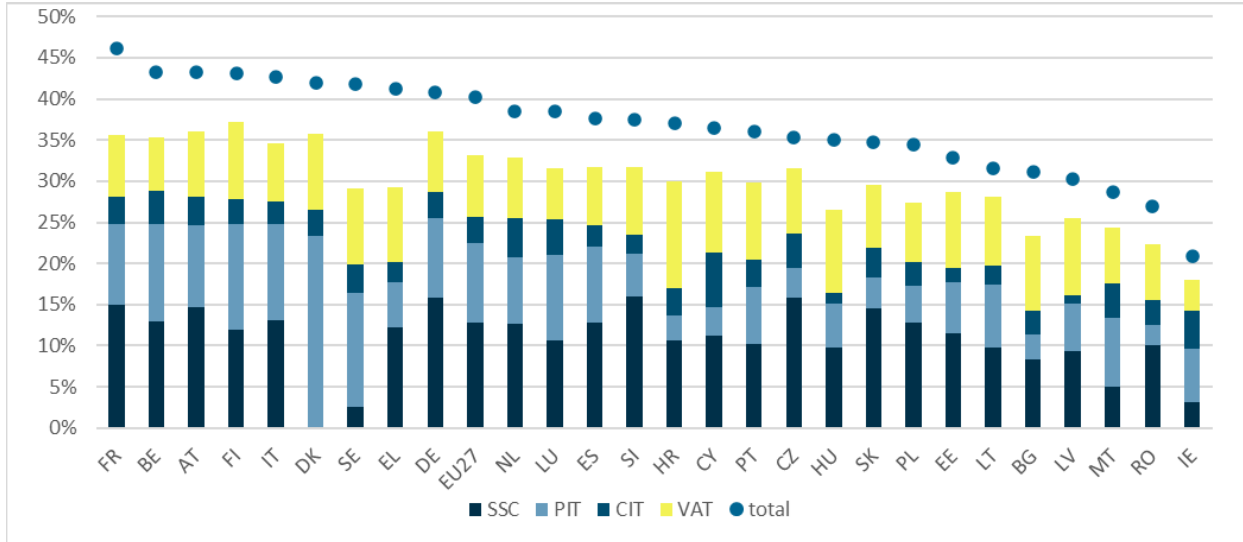
Figure 27: Evolution of EU-27 revenue share by tax type (% of total)



Source: TAXUD database – [Statistics | Taxation and Customs Union | European Commission \(europa.eu\)](https://ec.europa.eu/taxation-customs/statistics/)

But the role and importance of different taxes varies considerably across Member States. Figure 28 depicts the relative importance of different taxes for revenue generation. As already discussed in Chapter 1, it is noteworthy, that total tax together with social security revenues range from about 20.1% of GDP in Ireland to 46.2% of GDP in France. PIT is very important for Denmark, which collects barely any SC. By contrast, SC make up the largest share of revenues for Slovenia, Czechia, Germany, and France. Croatia stands out with its reliance on the VAT, while CIT is relatively important for Cyprus.

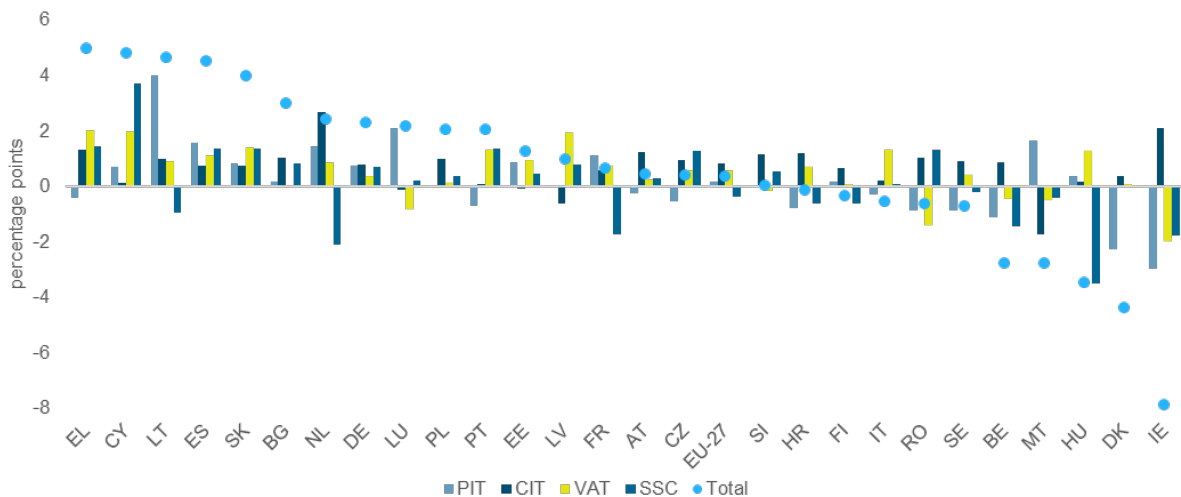
Figure 28: Most important revenue sources in % of GDP, 2022



Source: TAXUD database – [Statistics | Taxation and Customs Union | European Commission \(europa.eu\)](https://ec.europa.eu/economy_finance/taxud/)

Notes: Shown are revenues as share of GDP for general government and the EU. Data is sorted by total revenues as share of GDP.

Figure 29: 10-year changes in percentage points for most important revenue sources in % of GDP, 2013-2022



Source: TAXUD database – [Statistics | Taxation and Customs Union | European Commission \(europa.eu\)](https://ec.europa.eu/economy_finance/taxud/)

Notes: Shown are revenues as share of GDP for general government and the EU. Data is sorted by total revenues as share of GDP.

The dynamics of the tax mix is similarly varied and heterogenous across EU Member States as the tax mix itself. Figure 29 depicts the changes in tax revenues per tax type compared to ten years ago. 13 Member States have increased their revenues by more than 1 pp of GDP. Five Member States have decreased their revenues by more than 1 pp and the others have kept the revenue to GDP ratio largely stable. The figure

also indicates that overall tax revenue changes have been caused by different changes to the tax mix across countries. Hungary, the Netherlands, and France stand out for reducing their SC revenues, while Cyprus saw a considerable increase in SC revenues. For revenues from PIT as a share of GDP, Ireland and Denmark exhibit the largest decrease, while Luxembourg and Malta show the largest increase. Similar variation can be observed for CIT and VAT. It is however important to note that the picture would change dramatically if another timespan would be observed. Future analysis will aim to reveal if there are any discernible patterns in the dynamics of the tax mix within the EU. In order to get a first understanding of the developments after the great recession of 2008-2009 until today, this chapter will extend the description of the latest data of 2022 to also look at developments over the past ten years.

3.2 The impact of personal income taxation and social contributions

Tax systems can be differentiated based on how they treat various types of income. In an integrated tax system, all income sources are taxed together under a unified system. Under a schedular approach, different income types are treated separately. In a dual income tax system, labour income is treated differently from capital income (e.g., interest, dividends, capital gains). Capital income is generally taxed at a flat rate, while labour income is taxed at progressive rates. Each method has its implications for simplicity, equity, and economic behaviour.

The tax base for PIT comprises different types of taxable income, with labour income being the most significant one. The definition of categories for income sources differs across Member States. Employment or labour income is the most common income source for the majority of taxpayers, with taxes generally withheld at source. One important feature of PIT systems is that investment income from dividends, interest, and capital gains (so-called passive income), is often taxed differently (less or not at all) than regular employment income (dual income tax system). The traditional argument for this preferential treatment is that it can incentivise savings and investment, acknowledging the role of capital formation for economic growth, and the mobility of capital. However, it also raises debates about fairness, as wealthier individuals are more likely to benefit from such policies as the share of capital income in total income tends to increase with overall income and wealth. Rental income is derived from property rentals and is often tax privileged. To promote real estate investments, property-related expenses can often be deducted. There is substantial variation in the tax treatment of other miscellaneous income sources, such as alimony, royalties, or lottery winnings. Pension and retirement benefits, when taxed, are often only taxed at withdrawal while pension contributions are often deductible from current income. Delayed taxation aims to encourage retirement planning.

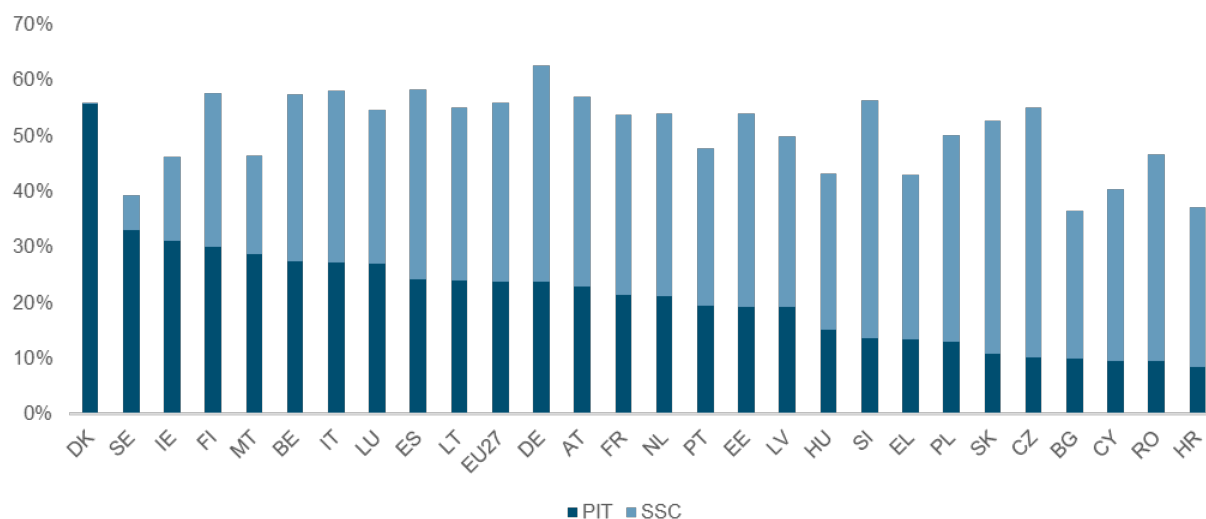
The PIT system can contribute to other policy objectives besides revenue generation, but there may be trade-offs to consider. The differential treatment of different income types within PIT systems allows for a nuanced approach to fiscal policy. Besides the objective of revenue generation, differentiated tax provisions have been used to serve various goals: to increase equity or incentivise certain behaviours like saving and investments or human capital formation or even family formation, among others. Tax policy can thus take account of evolving economic conditions and personal circumstances. However, the use of PIT to pursue a varied set of policy objectives comes at a cost, as these measures increase tax complexity, which in general increases compliance costs and tax administration costs. Where tax expenditures like deductions, allowances and tax credits are used, there is the additional risk of decreasing transparency, since such measures, which lead to *de facto* tax revenue reductions, do not necessarily show up in the government's budget.

3.2.1 Revenues from personal income taxes and social contributions

The significance of PIT is heterogenous across Member States. Revenues from PIT and SC as share of total revenues are depicted in Figure 30. In contrast to taxes, which are typically not earmarked, SC directly contribute to the financing of specific social security programs. In fact, 75% of SC on average are dedicated to pensions, old age, and retirement programs. SC still need to be considered here since, together with the taxation of

employment income under PIT, SC strongly affect labour costs and the incentives to hire, take up a job or extend employment. In some countries SC revenues represent a high share of total tax revenue (in the Czech and Slovak tax systems they represent 46% and 43.3%, respectively). By contrast, Denmark collects almost no SC and finances welfare state services mostly through general taxes, with PIT making up more than 55% of all tax revenues. In Croatia, Romania, Cyprus and Bulgaria and Czechia, PIT make up only 10% or less of total revenues.

Figure 30: PIT and SC revenues as share of total tax revenue (%), 2022



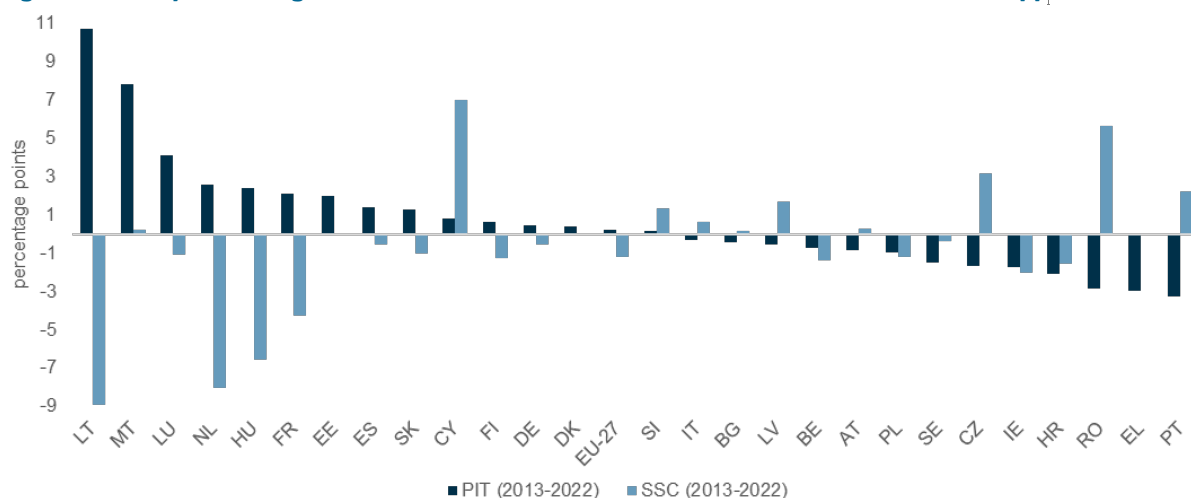
Source: TAXUD database – [Statistics | Taxation and Customs Union | European Commission \(europa.eu\)](https://ec.europa.eu/taxation-customs/statistics/)

Note: Countries sorted by PIT share of total tax and SC revenues.

The changes in overall EU values hide considerable heterogeneity in the development of PIT ⁽⁵⁶⁾ and SC revenues over the past ten years. Average revenues from PIT in the EU have hardly changed while revenues from SC have slightly declined. Figure 31 however shows that in some countries the importance of PIT has considerably increased (Lithuania, Malta, Luxembourg) while it has declined in some others (Romania, Greece, Portugal). For SC, it can be observed that Lithuania, Netherlands, Hungary, and France are now relying less on them while Cyprus, Romania, Czechia and Portugal are now relying more on SC compared to ten years ago. The simple country average of PIT revenue shares has slightly increased over the past 20 years, while SC revenues slightly decreased.

⁵⁶ Historic PIT top statutory tax rates are available in Table A2.1 in the Annex 2.

Figure 31: 10-year change in PIT and SC revenues as share of total tax revenue (in pp)



Source: TAXUD database – [Statistics | Taxation and Customs Union | European Commission \(europa.eu\)](https://ec.europa.eu/economy_finance/taxation-and-customs-unit)

Note: Countries sorted by PIT share of total tax and SC revenues.

Tax expenditures (TEs) can harm the level playing field among taxpayers. Tax expenditures are preferential tax treatments granted to specific taxpayers to achieve specific policy objectives by reducing the tax burden conditional on certain behaviours, types of incomes, income levels or taxpayer characteristics. Tax expenditures in PIT are widely used across the EU to pursue a variety of economic and social aims, such as home ownership, retirement saving and education. While tax expenditures related to family and employment often can reduce inequality of disposable income, others, such as those focused on housing are often regressive. Tax expenditures are hard to quantify, not necessarily shown in the annual budget, increase the complexity of taxation and distort equal treatment of taxpayers (i.e. horizontal equity).

TEs can considerably reduce the revenue potential of PIT. Aside from the negative impact on tax complexity and transparency already discussed, TEs can have considerable budgetary implications. To quantify TEs, they need to be evaluated against a benchmark. The choice of the appropriate benchmark can differ across tax systems with potential problems in comparability and aggregation of TE estimates across categories and countries. Barrios et al. (2020) have used a common method to evaluate social TEs across Europe making use of EUROMOD, the EU-wide microsimulation model for tax-benefit policies⁽⁵⁷⁾. Based on data for 2013 they find that TEs range from below 2% of potential personal income tax revenue in half the countries to more than 17% in the Netherlands. In Portugal, Belgium, and Italy, social TEs (i.e. TEs related to housing, education and health) imply a reduction of between 4% and 5% of PIT revenues, reductions are around 8% in Luxembourg and Spain, and almost 14% in Denmark. In addition, some of these policies can also reduce the progressivity of the PIT system, especially if not targeted or capped. Therefore, TEs should be regularly monitored and assessed in terms of their effectiveness (are they doing what they set out to do and targeting the right beneficiaries) and their cost-effectiveness (i.e. are they the most efficient way to achieve the objectives).

3.2.2 PIT and income redistribution

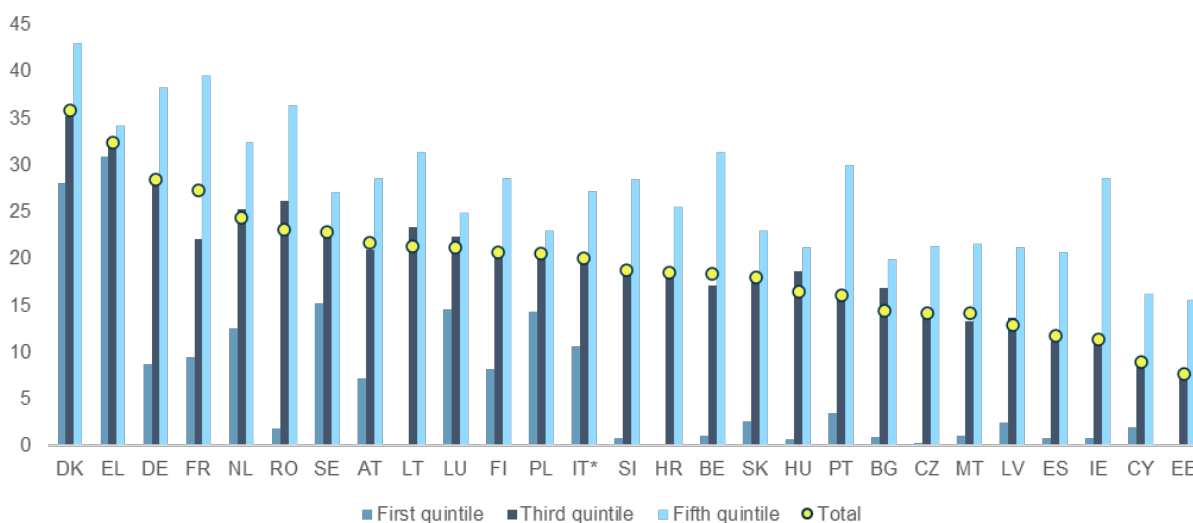
Progressive taxation of all forms of personal income increases the redistributive capacity. Income from labour constitutes a large share of overall personal income at all income levels, though its relative importance tends to decline for higher income levels. As incomes rise, capital income becomes increasingly more

⁵⁷ For a general discussion see Kalyva et al. (2014): Tax expenditures in direct taxation in EU Member States - European Commission (europa.eu)

important as a source of income. In this context, the taxation of all personal income by way of progressive income taxation can be a major tool for redistribution and contribute to more equally distributed disposable income. Most EU Member States have a progressive personal income tax system based on tax brackets. Progressive income taxation implies that the tax burden increases more than proportionally with income. The size of the brackets and the marginal personal income tax rates that apply to each bracket are important parameters of progressivity.

Households with higher incomes contribute relatively more direct taxes in all EU Member States. One aspect of redistributive taxation is that higher incomes contribute a higher share of their income to taxation. When considering all direct taxes, this is the case in all Member States, albeit to a different degree. As indicated in Figure 32, the median of the 20% of households with the highest incomes (the 5th income quintile) pays the highest share of their gross income on direct taxes. The difference in tax payments as share of gross income between the 1st and 5th quintile is especially pronounced in Romania (34.5 pp), Lithuania (31.4 pp), Belgium (30.2 pp), France (30.1 pp) and Germany (29.5 pp). The 20% poorest households pay a relatively high share of their gross income in Greece and Denmark.

Figure 32: Direct taxes paid by households as a % of their gross income by income quintile



Source: Eurostat (online data code icw_tax_06), own elaboration.

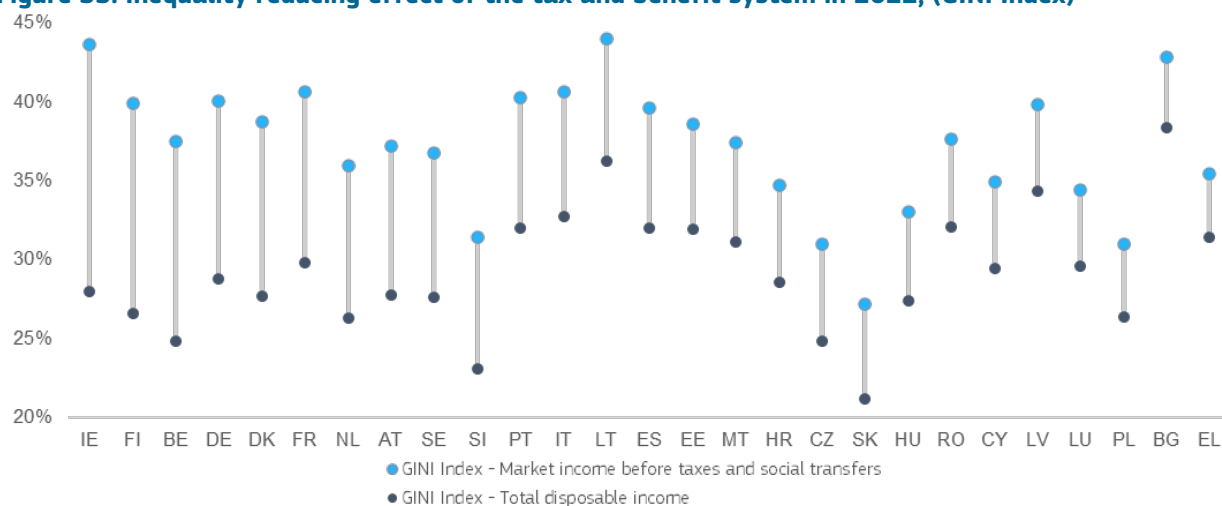
Notes: Direct taxation refers to taxes on income, SC, taxes on wealth and tax on valuables. Data is from 2020. Italy values are from 2018 since no later observations are available. Data sorted by total share of gross income paid for direct taxes.

The redistributive capacity of social contributions arises from the interaction between contributions and benefits. Pensions, income support and unemployment benefits are the most important benefits in that regards. Pensions represent almost 75% of SC and are often the only source of income for many individuals who have left the labour market. In addition, benefits may also be capped and not directly related to the value of contributions. The progressivity on the contribution side of SC is limited as they are often based on a fixed rate and contributions are sometimes capped for a certain level of income. The redistributive effect of SC thus arises on the benefit side.

In 2022, the tax-benefit systems in the EU significantly reduced income inequality. Figure 33 shows the effect of taxes and benefit transfers on income inequality in EU Member States as the difference between the Gini index of market income (pensions excluded) and disposable income. The capacity of reducing inequality varies across countries from 4 pp in Greece to 16 pp in Ireland. The redistributive capacity is not related to the level of income inequality. For example, in Bulgaria a relatively high inequality of market incomes comes with low levels of redistribution while Slovenia exhibits relatively low inequality of market incomes and still ranks high on

redistributive capacity. However, in terms of inequality of disposable income after taxes and benefits, Bulgaria and Lithuania have the highest Gini, while Slovakia and Slovenia show the lowest Gini (⁵⁸).

Figure 33: Inequality reducing effect of the tax and benefit system in 2022, (GINI Index)



Source: Eurostat and COM calculations based on EU-SILC survey data

Notes: Countries sorted by redistributive capacity as measured by the difference between the Gini index for market income before taxes and social transfers (except private pensions, old-age and survivor benefits) and the Gini index for total disposable income.

Labour taxation contributes to shape labour market outcomes. Labour taxation, including SC, and the interaction between personal income taxes and benefit entitlements can affect decisions of businesses and employees with impacts on employment and ultimately economic growth. The interaction between tax obligations and benefit entitlements influences the decision to take up work and/or to work more (⁵⁹). The wage tax wedge, i.e., the difference between employers' labour costs and employees' net pay, expressed as a ratio to total wage cost, and marginal and average employment income tax rates are decisive determinants for labour supply and demand decisions.

Incentive effects and the interaction of benefit withdrawal and taxation are especially pronounced for lower incomes. Some population groups are considered particularly responsive to changes in after-tax wages, e.g., low-income earners and second earners, with important implications for labour markets and social inclusion. Second earners (typically women), disadvantaged groups and low-skilled workers are more often concentrated in the low-income earning brackets, which show below average employment rates and a higher incidence of part-time or reduced working patterns (OECD, 2024).

Rising pressure on social security systems may require some reconsideration of SC models. Options to make the financing of social security institutions more progressive could entail increasing caps on SC for higher incomes or applying a progressive contribution rate. Some countries have chosen to finance social protection systems through general income taxes only. Such an approach allows for a reduction of SC related additional wage costs and could help reduce the disincentives to work, both on the demand and supply side for lower income and second earners. Any modification of SC however would need to involve the social partners and consider the implications for benefit entitlements.

58 Due to data limitations, historical evidence on the redistributive capacity of Member states is only available for the years 2008 and 2015. The inequality reducing capacity of the tax-benefit system has declined in all countries but Belgium and Ireland. Belgium saw a large increase between 2008 and 2015 and has since somewhat reduced the level of redistribution, albeit still at higher levels than 2008.

59 The Commission's [Employment and Social Developments in Europe 2023](#) report provides details on how targeted reforms of PIT can increase labour supply (Chapter 3, Section 2.1).

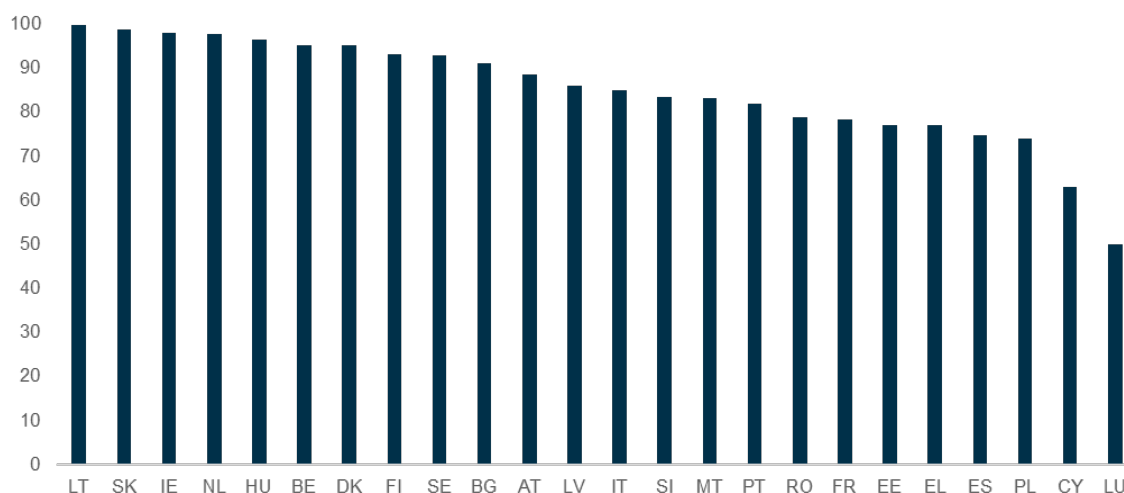
Policy priorities and long-term trends suggest re-thinking PIT. The design of PIT together with the benefit system is a key tool in most EU Member States for redistributing income, but structural challenges may constrain any further use of PIT for such purposes. Specifically, several megatrends such as ageing, globalisation and digitalisation threaten to reduce the tax base, undermining the revenue generation and redistribution functions currently provided through labour taxation. In addition, increasing SC and labour tax rates to compensate for a smaller tax base may not be effective as it could disincentivise labour market participation. In parallel, a rising focus on inequality has led to calls for stronger redistribution in society, or, as it is often put, that everyone pays their fair share of taxes. Some measures are already subject to national discussions in Member States. Revenue losses could be compensated by shifting part of the tax burden to other tax bases (e.g., consumption or personal capital income), increasing overall tax compliance (i.e., reducing fraud, evasion, and avoidance) and considering a re-assignment of taxing rights (e.g. a re-allocation of taxing rights as foreseen for Pillar 1).

3.2.3 Tax avoidance and evasion of personal income tax

Underreported income and undeclared work are an important source of PIT revenue loss in EU Member States (60). A 2017 study led by the Commission, estimated that 9.3% of total labour input in the private sector or 14.3% of gross value added remain undeclared (European Commission, 2017a). A Special Eurobarometer survey carried out in 2019 showed that 10% of Europeans would freely admit that they have purchased goods or services that might include undeclared work, especially for home repairs or renovations. One third of Europeans know someone who works undeclared. Half of Europeans perceive the risk of being detected by authorities as low (61).

Withholding labour taxes at the source is a widespread measure to increase tax compliance and facilitate tax collection. Figure 34 shows that the share of PIT withheld at the source varies between 50% in Luxembourg and almost 99.7% in Lithuania. For some forms of income, like self-employment income, withholding at the source seems technically difficult (62).

Figure 34: Share of PIT withheld at the source in 2021 (in %)



Source: ISORA data 2022, own elaboration. Notes: No data available for CZ, HR, DE.

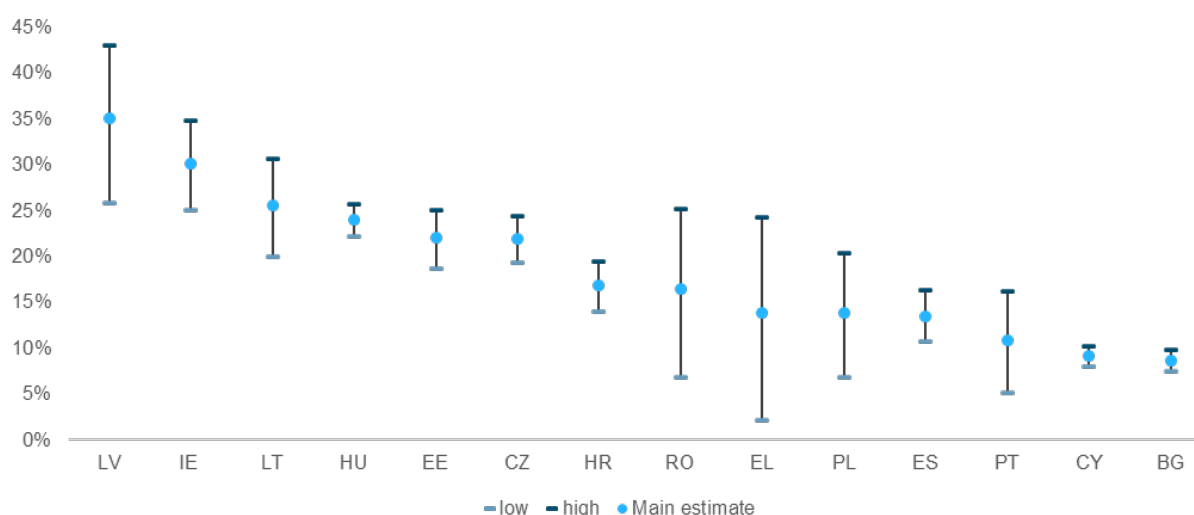
60 The European Platform Undeclared Work has published a report on common strategies to evade taxes and social contributions. See [Mineva, D., & Stefanov, R. \(2018\). Evasion of taxes and social security contributions. European Platform Undeclared Work.](#)

61 [Special Eurobarometer 498 – September 2019 “Undeclared Work in the European Union” Report.](#)

62 Lithuania for example has a schedular approach, treating income from different sources differently. It is however reported that all Class A income, including employment income but also some self-employment income and capital gains income is withheld at the source (IBFD, 2024).

Estimates suggest that 10% to 30% of income from self-employment is underreported. Traces of income methods try to establish underreported income by comparing consumption, donations or other expenditures across different groups. Most commonly the self-employed are compared to employees in the private economy or to employees in public service. Many variations of these methods, based on different datasets, have been employed since the method was originally proposed by Pissarides and Weber (1989). In general, there is an indication of considerable underreporting of self-employed income but also of business income, especially from unincorporated businesses. Estimates are available for several countries and range between 10%-30% of income underreported (Figure 35). Some estimates point to even higher shares of underreported income (Kukk et al., 2020). Underreporting of income by the self-employed can have important budgetary losses and distributional implications ⁽⁶³⁾.

Figure 35: Estimated share of non-reported income from self-employment



Source: Kukk et al. (2020).

Notes: The figure depicts the main estimates as well as high and low estimates. Not all point estimates are statistically significant. For CY and BG the underlying sample is quite small and none of the three estimates is statistically significant.

Traditionally, incomes from capital, especially from investments abroad have been a compliance risk. Most capital incomes for most individual taxpayers are handled by banks. Often banks either directly withhold some PIT on capital incomes or at least provide third party information to tax authorities. However, national tax legislation did not apply to banks and investments abroad, creating the opportunity for considerable underreporting of capital incomes, which has nonetheless improved with the Automatic Exchange of Information (AEOI).

Higher levels of tax compliance could potentially lead to higher tax revenues from an increased tax base. Evidence suggests that tax avoidance is more prevalent among richer individuals (Alstadsæter et al., 2019). As a result, stronger compliance within income taxation could potentially contribute to ensuring progressivity and could potentially also facilitate more rigorous taxation of capital income.

Tax transparency appears essential to effectively decrease tax evasion within PIT. A recent study of Swiss taxpayers that used the possibility of a tax amnesty (Baselgia, 2023) shows that more than two thirds chose the amnesty due to the AEOI that entered into force in 2017. Over half of all hidden assets disclosed under the amnesty can be attributed to the AEOI (i.e., 35.2 billion Swiss francs or more than 5% of GDP). The taxpayers who participated in the amnesty due to the AEOI come from lower parts of the wealth distribution than

63 See the JRC policy-brief: [The fiscal and social cost of tax evasion: the impact of underreporting of income by the self-employed \(europa.eu\)](https://ec.europa.eu/economy_finance/policy-briefs/the-fiscal-and-social-cost-of-tax-evasion-the-impact-of-underreporting-of-income-by-the-self-employed)

participants prior to 2017 and they sometimes disclose hidden wealth from real estate, which is not covered by AEOI. AEOI thus has improved compliance, both for PIT and for other taxes, such as wealth taxes.

Tax transparency at the national level is lacking compared to international transparency. While AEOI today provides tax authorities with abundant information about capital income received in accounts abroad, in many Member States there is no automatic access to domestic bank data. This hinders enforcement of taxation of capital income nationally and might facilitate underreporting. Several Member States have implemented tax withholding of capital income at the source domestically, mitigating the problem of tax evasion. It is however not clear if all relevant forms of capital income are covered by these rules. National authorities can of course always request information about specific taxpayers. However, they do not have always wide-ranging information on capital incomes for risk-analysis readily available.

High Net Worth Individuals (HNWI) are responsive to special tax regimes that may facilitate tax avoidance behaviour. The sensitivity of the location choice of HNWI to a preferential tax scheme, under which wealthy foreigners are taxed on their expenses and not on their income or wealth, has been assessed in Switzerland. The sample are the 0.01% wealthiest foreigners in Switzerland (300 wealthiest from “Bilanz list”), 60% having inherited their wealth (compared to 31% in the United States in the Forbes 400 list). About 50% of the wealthiest Swiss tax residents are foreign born, compared to a share of foreigners in the total population of 30%, and they are richer on average than their wealthiest Swiss-born peers. Some cantons abolished the expenditure-based regime in 2010 ⁽⁶⁴⁾ and the number of HNWI dropped by 30% consequently (Baselgia and Martinez, 2023). Such a result is particularly relevant at a time when preferential personal income tax regimes are appearing in some EU countries to attract HNWI. Such schemes are assessed as harmful by the EU Tax Observatory as reported in the Global Tax Evasion Report 2024 (Alstadsæter et al., 2023).

The digitalisation of work has brought new challenges to tax administrations. New forms of remote work have appeared with technological developments and have increased during the COVID-19 pandemic. According to Eurostat ⁽⁶⁵⁾, in 2021 13.5% of the people employed in the EU usually worked from home. This is not only true for the EU but globally. As a point of reference, data from the U.S. Bureau of Labour Statistics ⁽⁶⁶⁾ indicate that 27.5% of private sector establishments in the US had employees telework some or all the time.

New ways of working from abroad as well as preferential tax regimes may give rise to tax underreporting, -evasion and a reduction in tax revenues. Digital nomads are individuals who work fully remotely and are not bound to a specific location. They can be employed or self-employed individuals working online from a jurisdiction which is different from their employer's or from where their clients are located. Member States have increasingly implemented digital nomad visas. Where tax benefits are attached to these, they may increase the risk of tax evasion and avoidance due to potential issues with tax planning, monitoring and identifying the tax due and where it should be paid. Preferential tax regimes are used by some Member States to attract talented/ highly educated or specialised individuals to work on specific jobs and therefore foster economic growth. As such schemes often come with a special tax treatment (e.g. lower rates) they can result in lower revenues and a different treatment of taxpayers in otherwise similar situations. Preferential regimes and digital nomad visas may result in harmful tax competition within the internal market and may contribute to existing challenges in destination regions such as limited availability and affordability of housing in many urban centres.

Stronger labour mobility and new forms of work may challenge the residency principle of taxation. Taxing obligations are generally linked to the residency principle, i.e., the jurisdiction where the taxpayer resides

64 The tax is calculated on total annual cost of living expended by the taxpayers in Switzerland and abroad for themselves and their dependents. Regular tax rates are applied in calculating the tax amount. This form of taxation is available to foreign nationals who make Switzerland their tax domicile for the first time or after at least ten years spent outside the country, and who are not gainfully employed in Switzerland.

65 Eurostat based on European Labour Force Survey. <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20221108-1>

66 US Bureau of Labour Statistics (BLS), Telework, Hiring and Vacancies News Release – 2022 A01 Results, <https://www.bls.gov/news.release/brs1.htm>

has the right to tax ⁽⁶⁷⁾. In the context where no adjustment is made, high labour mobility and free movement, while important, could lead to potential losses of tax revenue for the Member State of origin. Technical discussions between the Commission and Member States are ongoing to better identify the challenges and possible solutions.

3.3 Wealth taxation

The taxation of wealth is gaining traction globally, exemplified by the recent G20 discussions in Sao Paulo ⁽⁶⁸⁾, as governments need additional resources to improve their fiscal situation, as a growth- and employment-friendly revenue source to substitute high labour taxes, and as wealth inequalities are widening in Europe and the US. Wealth taxation can have complementary objectives: generating revenues to finance additional spending needs or a shift in tax systems away from labour taxes, reducing wealth inequality, and ensuring a fairer sharing of the tax burden across individuals.

Wealth taxation can take several forms ⁽⁶⁹⁾. One possibility is a “net wealth tax”, which uses the sum of all capital assets minus debts as a tax base, applied by Norway, Switzerland and Spain currently. A wealth tax can also apply to a certain type of assets only, such as immovable property (housing, land, other natural resource taxes) or other type of assets (financial assets taxes, excise on luxury goods) as it is the case e.g., in Belgium, France, Italy and the Netherlands. Another type of wealth tax are taxes on wealth transfers, which differ from other wealth taxes in that they are not levied on an individual’s stock of wealth but on a wealth transfer (gifts and inheritances, sales of assets).

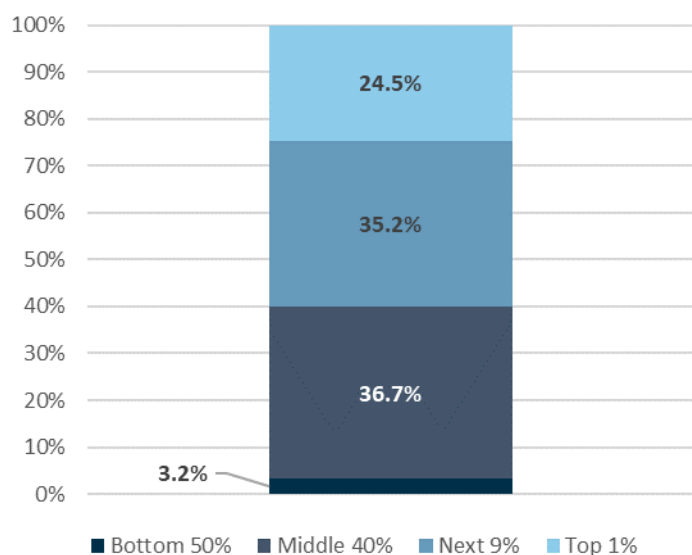
Wealth is extremely unequally distributed, more so than income. As shown by the data of the Wealth Inequality Lab, the top 1% income earners in the EU receive 11.6% of all income accruing in the EU, while the top 1% wealthiest individuals hold 24.6% of net personal wealth (see Figure 36). The data also shows that the proportion of wealth compared to income is increasing, with wealth to income ratios in the EU rising from 549% to 626% over the past ten years, an increase of 14%. This increase is higher than in Latin America (+5%), or Japan (+3%), but lower than in China (+36%) and the United States (+39%). Furthermore, increasing current wealth inequality reinforces income inequality through capital income.

67 Most double taxation treaties however rule that employment income is taxed at the place where the work is physically performed.

68 [Economist Gabriel Zucman proposes that billionaires pay at least 2% in annual taxes on their fortunes \(q20.org\)](https://www.economist.com/gabriel-zucman-proposes-that-billionaires-pay-at-least-2%-%20in-annual-taxes-on-their-fortunes-%28q20.org%29)

69 For an overview see Hebous et al., How to tax wealth. IMF 2024. <https://www.elibrary.imf.org/view/journals/061/2024/001/article-A001-en.xml>

Figure 36: Share of net individual wealth in the EU across population, 2022

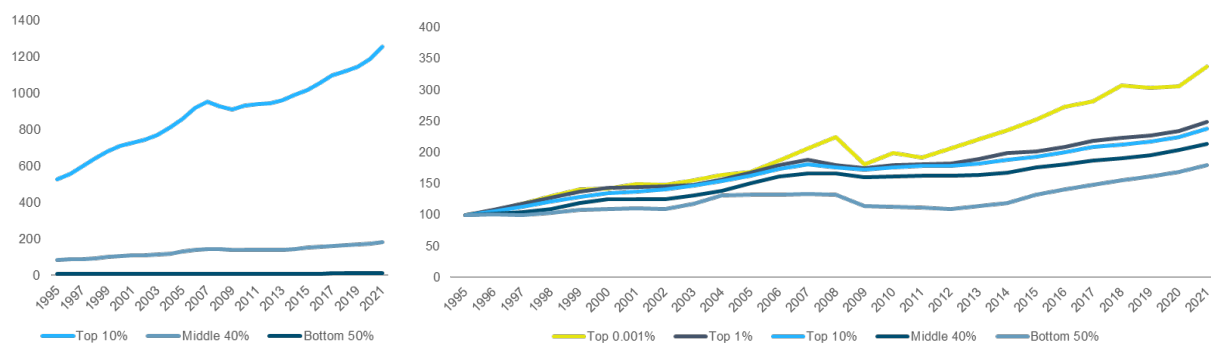


Source: World Inequality database.

Notes: Expressed in % of total net individual wealth in the EU.

Net personal wealth in recent years has been rising faster for richer individuals. Figure 37 shows that between 1995 and 2021, the average personal wealth of the bottom 50% of the EU population increased by +80% (from EUR 6 754 to EUR 12 148 – in real terms), while that of the middle 40% increased by +114% (from EUR 86 081 to EUR 183 926) and that of the top 10% by +138% (from EUR 527 200 to EUR 1 253 874). The personal wealth of the ultra-wealthy adult Europeans (top 0.001% - roughly 3 560 individuals) rose over the same period from an average of EUR 145.2 million in 1995 to EUR 489.2 million in 2021, an increase of +237%. The higher wealth categories enjoyed a higher growth of their wealth over the period, consistent with recent empirical findings regarding heterogeneous returns to wealth (Bach et al., 2020; Fagereng et al., 2016). This result is also true for other regions or countries, where the average personal wealth of the bottom 50% of the population increased between 1995 and 2021 by 15% for Japan, 70% for USA, 116% for Latin America and 463% for China, while that of the middle 40% increased by 17% for Japan, 108% for USA, 156% for Latin America and 690% for China and that of the top 10% by 22% for Japan, 162% for USA, 160% for Latin America and 2 150% for China. The personal wealth of the ultra-wealthy rose also more in those regions or countries than for other parts of the population with an increase of 40% for Japan, 330% for USA, 243% for Latin America and 5 548% for China.

Figure 37: Evolution of average net personal wealth per wealth category in the EU, 1995-2021 (left in thousands EUR, right 1995 is 100%)

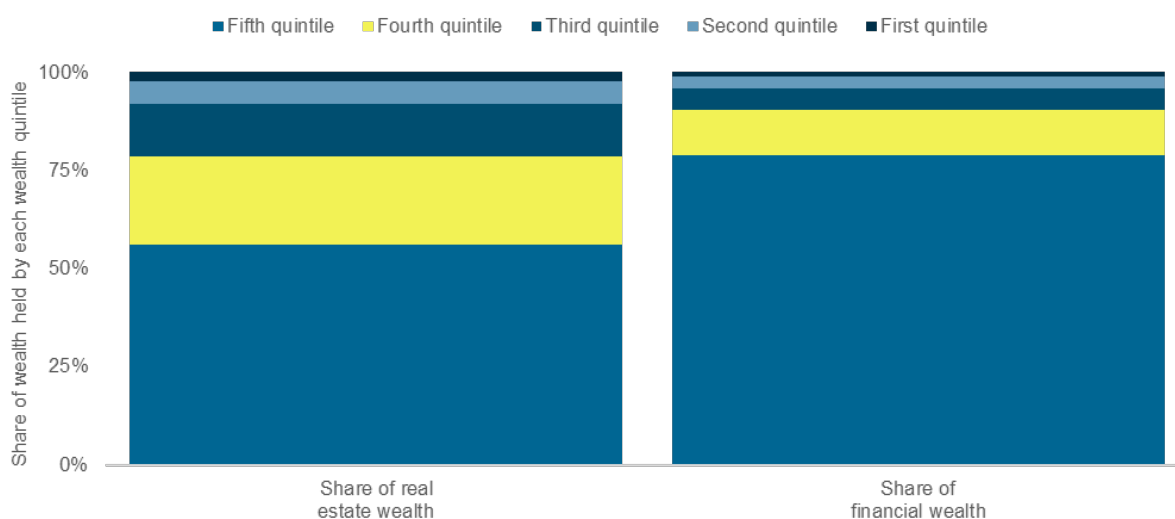


Source: World Inequality database (wid.world)

Notes: The data represents average net personal wealth among adults (all individuals over age 20). Currency conversion is based on market exchange rates. This results in higher figures compared to using purchasing power parity.

Both, financial and housing wealth are concentrated among wealthier households, but the composition of wealth varies by wealth level. Figure 38 shows that households in the top wealth quintile on average over 28 OECD countries own more than half of all real estate wealth and nearly 80% of all financial wealth. Households in the lowest wealth quintile own just 1% of financial wealth and 2% of real estate wealth. According to the OECD, real estate forms a larger share of assets for middle households (over half of the wealth of the middle wealth quintile across 28 OECD countries) than it does for poorer or wealthy households. For poorer households, access to housing property is more restricted and their assets mostly comprise of consumer durables, such as valuables and vehicles. At the top of the wealth distribution on the other hand, financial wealth is a large component of household's assets: financial wealth accounts for 39% of net wealth for the top quintile, compared to 16% and 15% for the bottom and middle quintiles, respectively. As a result, taxing distinct types of assets affects households across the wealth distribution differently.

Figure 38: Share of financial and real estate wealth held by each quintile, average for 28 OECD countries



Source: OECD Wealth Distribution Database, [oe.cd/wealth. https://stat.link/swzy9t](https://stat.link/swzy9t)

Notes: Data is from 2015 or last available year

Recurrent taxes on immovable property are sometimes considered growth-friendly compared to other tax categories (70). Recurrent immovable property taxes represent a stable revenue source with very limited distortions since properties cannot be moved. However, their design is crucial to avoid a regressive distributional impact (71) and a negative impact on building and renovation activities (Gemmel et al., 2016). At the same time, transfer taxes on immovable property are considered to increase the transaction costs of housing and property taxation thus resulting in fewer transactions and a less dynamic housing market (Fritzsche and Vandrei, 2019). Land taxes, appear to have less behavioural impact because, due to the fixed supply of land, they tax economic rents (Hoj et al., 2019; Murray and Hermans, 2019). In several countries owner-occupied properties are exempted from recurrent property taxes. All Member States except Malta levy a property tax (Mengden, 2023).

70 For a detailed discussion see Leodolter et al. (2022) and Kiss et al. (2024)

71 Housing wealth is the most common form of wealth-holdings of the middle class. With increasing wealth levels, the share of property wealth decreases. Property taxes thus put a relative higher burden on lower wealth levels.

Revenues from property taxes have declined in most Member States. Figure 39 depicts revenues from recurrent property tax and other property taxes as defined by the methodology underlying the taxation trends data ⁽⁷²⁾. Compared to ten years ago, revenue from property taxes (i.e. several taxes on wealth assets and transfers, including inheritances) related to total tax revenue has fallen in all but five Member States. Luxembourg experienced an increase of the property tax share by more than three percentage points. The Netherlands, Portugal, Finland and Germany have seen more limited revenue increases. The decline in the revenue share of property taxes is especially pronounced in Greece, Cyprus and Ireland. The contribution of recurrent property taxes to overall tax revenues is very low in Luxembourg, Cyprus, Austria, Czech Republic and Estonia.

Figure 39: Property taxes as share of total revenues in %, 2022



Source: TAXUD Taxation Trends Data, [Tax revenue by economic function](#).

Notes: Data sorted by share of all property taxes. Recurrent property taxes are defined as current taxes on capital, excluding wealth taxes (D.59a in ESA 2010 and Taxes on land, buildings, or other structures (D.29a in ESA 2010). Other property-related taxes include taxes on net wealth, inheritance, gifts and other property items and on financial and capital transactions. Data does not include personal income tax on imputed rent. For details see the taxation trends methodology as provided in footnote 21.

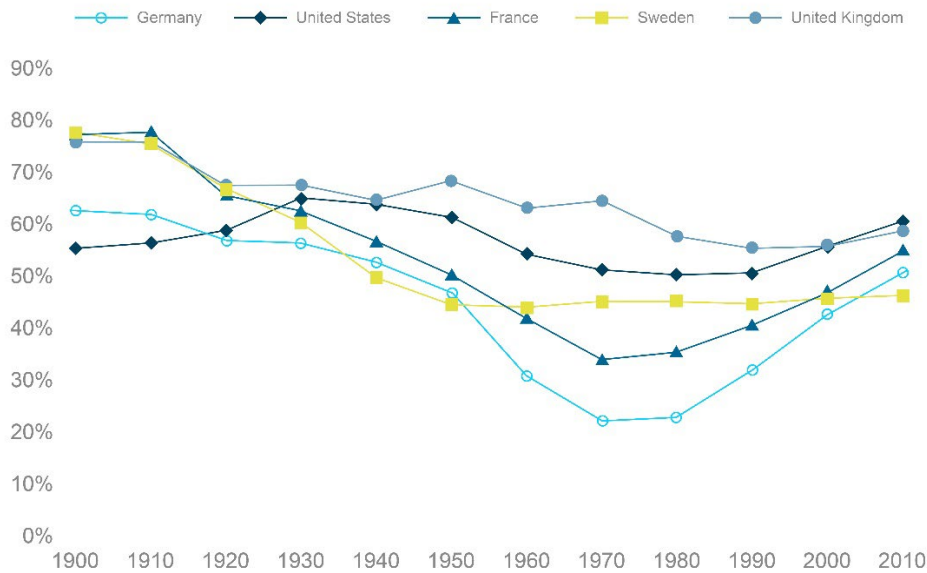
Ever more wealth is inherited and not self-acquired during lifetime. According to Alvaredo et al., (2017), more than half of all wealth holdings in large western European countries (France, Germany and the UK) and in the US, and close to half in Sweden, have been acquired through inheritance, as shown in Figure 40. The share of inheritances in private wealth is returning to the high share seen at the turn of the 20th century in some countries (see Figure 40). Inherited wealth is usually concentrated among the ultra-high net worth individuals (UHNI), defined as having a wealth of US\$ 30 million or more. According to Forbes ⁽⁷³⁾, the ultra-UHNI (holding a wealth of US\$ 100 million or more) are responsible for more than 60% of expected wealth transfers by 2030 ⁽⁷⁴⁾. Moreover, the significance of inherited wealth is expected to increase further due to ageing societies, as shown by projections for the next 30 years based on the most recent data from the ECB's Household Finance and Consumption Survey, which models the future household-level wealth distribution in five selected EU member countries (Finland, France, Germany, Ireland, and Italy) (Krenek et al., 2022).

72 See the [Taxation Trends Report Methodology](#).

73 [Inherited Wealth Concentrates Among The Ultra-Rich \[Infographic\] \(forbes.com\)](#)

74 The source article refers to wealth transfers in Europe and Asia, without providing further geographical breakdowns.

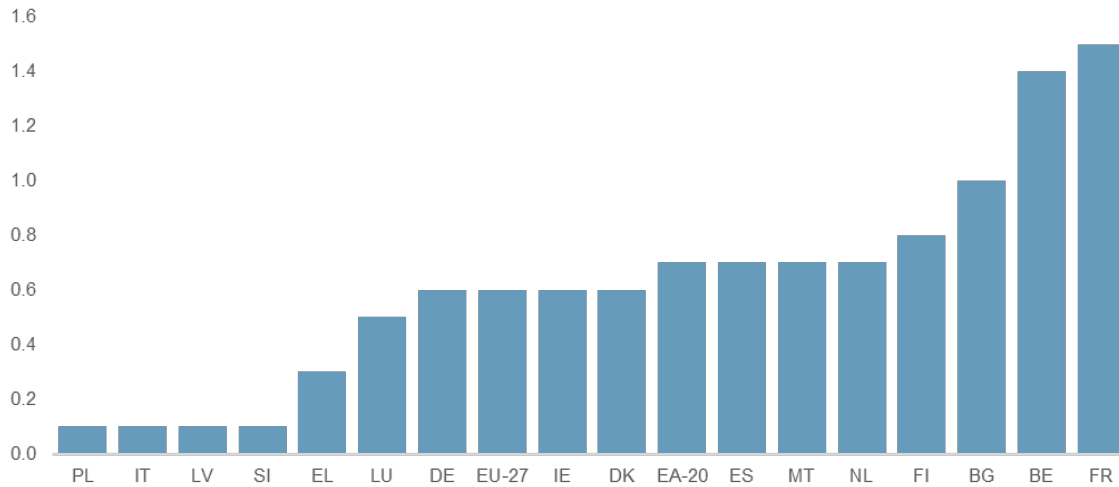
Figure 40: Share of inheritance in aggregated wealth in selected countries



Source: Alvaredo, Garbinti and Piketty (2017).

Inheritance and gift taxes represent a very small share of the total tax revenues in the EU. In 2022, the share of inheritance, estate- and gift taxes in the tax mix of those Member States, levying such taxes was 0.6% of total tax revenues, as shown in Figure 41. Only one EU Member State, Spain, currently levies a net wealth tax. Wealth taxes have been repealed or decreased in the EU during the past decades, notably because of the issue of capital flight and the cost of administering the tax itself (Saez and Zucman, 2022).

Figure 41: Revenues from capital transfers (inheritance and gift taxes) as a share of total tax revenues 2022



Source: Eurostat (gov_10a_taxag)

Note: EU countries with zero tax revenue from capital transfers and without data are excluded from this graph.

Inheritance taxation is seen as a way to limit inequality at birth and increase labour supply ⁽⁷⁵⁾.

Inheritance is one of the main drivers of wealth reproduction and inequalities. Moreover, inherited wealth can stand in the way of social mobility and, with the increasing concentration of wealth at the top of the distribution, is likely to increasingly constrain social mobility in the future (Bourquin et al., 2021). Two thirds of the Member States apply an inheritance tax, although the rate and design vary considerably, with the rates applied depending on the size of inheritance and the distance between donor and heir (from 0% bottom rate to 87.6% top rate). Some Member States apply special regimes to family-owned business in certain cases. Inheritance taxation might also induce further revenue increases beyond the direct revenues from taxing bequests. Kindermann et al. (2020) show that lower wealth levels of recipients due to bequest taxation can increase labour supply of bequest recipients, which then leads to higher income taxes. They estimate that for each Euro of bequest tax collected, the income tax increases by nine cents. Again, the design of such taxes is important to avoid unwarranted negative implications, notably at the lower end of the wealth distribution (for example liquidity issues).

A wealth tax can be seen as a tool to increase the progressivity of the tax system. A sizeable portion of wealth – especially at the top of the wealth distribution – stems from capital income, which is usually taxed at a lower rate than labour. In the countries that tax personal capital income at a flat rate, wealth taxes have been justified as a way of adding progressivity to the taxation of capital (Silfverberg, 2002). Data for Norway shows that the net wealth tax makes the overall tax system progressive at the top of the income distribution (Norwegian Ministry of Finance, 2017).

Estimates point to a substantial revenue generation potential for wealth taxes ⁽⁷⁶⁾. Before it was modified in 2018, the French “Impot Sur la Fortune” generated about EUR 5 billion in 2017. According to estimates from the Spanish government, the recently implemented “Impuesto Temporal de Solidaridad” will generate about EUR 1.5 billion in additional revenues. Oxfam estimates that an annual net wealth tax of up to 5% on Europe’s billionaires could raise EUR 250 billion a year ⁽⁷⁷⁾, while the EU Tax Observatory estimates that a 2% tax on the global wealth of billionaires – representing less than 3 000 individuals worldwide – could raise US\$ 250 billion annually (Alstadsæter et al., 2023). The impact of a wealth tax on the behaviour of individuals and its revenue potential depends on its design including the rates and the threshold used, as well as further policy choices particularly regarding the institutional set up (Advani and Tarrant, 2021).

However, the main challenge to wealth taxation is the risk of capital flight. Capital, particularly financial assets, is very mobile, and its mobility has increased over the last decades with the globalisation and digitalisation of economies. Taxing wealth carries the risk of inducing very wealthy individuals to migrate and/or shift their wealth to other low- or no-tax jurisdictions. Evidence on the behavioural responses of wealthy taxpayers is however limited and not clear-cut: Young et al. (2016) and Advani et al. (2022) find that behavioural response is limited. Some claim that this may be explained by the fact that family and social connection weight on relocation decisions. However, a recent study conducted on Swiss HNWI, which looks at variations of wealth rates between Swiss cantons, shows that a reduction in the top marginal wealth tax rate by 0.1 pp in a given canton increases the wealth share of the top 0.1% wealth holders by 1.2 pp five years later (Marti et al., 2023). This is an indication that wealth taxation can lead to some reallocation of wealth.

Another challenge lies in identifying the assets and their ultimate owner that will be subject to the tax. Without a proper identification of assets and their beneficial owner, there is a risk of under-estimating the tax base and allowing tax avoidance practices. Cross-border automatic exchange of information led by the OECD’s Common Reporting Standards and the EU’s Directive on Administrative Cooperation (DAC and its

75 This labour supply effect is discussed for example by Basiglio, S., Rossi, M.C., and van Soest, A. (2023). Subjective Inheritance Expectations and Economic Outcomes. *Review of Income and Wealth*, 69(4), 1088–1113. <https://doi.org/10.1111/roiw.12621>; and Bø, E. E., Halvorsen, E., and Thoresen, T. O. (2019). Heterogeneity of the Carnegie Effect. *Journal of Human Resources*, 54(3), 726–759. <https://doi.org/10.3368/jhr.54.3.0915.7366R1>

76 Recent estimates for an EU-wide wealth tax are provided by Krenek and Schratzenstaller (2022) and Kapeller and Wildauer (2023)..

77 [Economists, activists, and millionaires register landmark ‘European Citizens’ Initiative’ calling for a European wealth tax on the richest 1% | Oxfam International](#)

amendments) could further increase the transparency and traceability of beneficial assets ownership across the EU – increasing tax compliance and fighting tax avoidance and money laundering.

Another related challenge is the valuation of assets that will be subject to the tax: as assets can take various forms, recurrently and consistently assessing the value of multiple assets, such as pieces of art or investment held through various subsidiaries, especially when there is no easily identifiable benchmark to value them against, can become very challenging for tax administrations and costly for the taxpayers. In the context of immovable property, cadastres need updating and reform. The rise of the digital era and new classes of assets, such as crypto and other blockchain-based assets, add new complexity to correctly valuating wealth. However, digital developments can bring along new tools to more efficiently value assets on top of increasing transparency.

Finally, a wealth tax also poses liquidity constraints. In the case of passing a family business down through inheritance, taxing imputed cash flows can lead to liquidity problems and oblige individuals to sell the business. Someone with high wealth at a given point in time is not necessarily better off over their lifetime than someone with lower wealth at the same point in time (Adams and Miller, 2021). Differences in wealth can also reflect differences in the timing at which an amount of money is received and spent, and therefore the desire to save.

Despite these issues, the debate about taxing wealth is gaining momentum at international and EU levels. In the US, wealth taxation was an important topic of the 2020 Democratic Party presidential primaries. A February 2020 poll found that 67% of registered American voters supported a wealth tax on billionaires, with support at 85% of Democrats, 66% of independent voters, and 47% of Republicans. Wealth taxes have also been introduced in a number of Latin American countries: Argentina and Bolivia introduced such a levy in 2020, Colombia in 2023. At EU level, the Commission recently registered a European Citizen Initiative on taxing great wealth in the EU to finance the ecological and social transition ⁽⁷⁸⁾.

A growing number of very wealthy individuals are calling for higher effective taxation of their wealth. Several organisations of millionaires and billionaires, such as the US “Patriotic Millionaires” ⁽⁷⁹⁾, the “Millionaires for Humanity” ⁽⁸⁰⁾ and the collective “TAX ME NOW” ⁽⁸¹⁾ are calling for better and increased taxation of their wealth to address rising inequalities. During the 2023 World Economic Forum gathering at Davos, the campaign “In Tax We Trust”, gathered the signature of over 100 millionaires and billionaires from nine countries, calling for permanent annual wealth taxes on the very richest to help reduce extreme inequality and raise revenue for sustained, long-term increases in public services like healthcare.

3.4 Corporate Income Taxes: striking a balance between competitiveness and fiscal capacity

3.4.1 Corporate income taxation: trends in tax revenue and statutory and effective tax rates

Corporate income tax (CIT) represents a relatively important component of tax revenues, which has been steadily growing in recent years. At the EU-27 level, between 2021 and 2022, the CIT-to-GDP ratio increased from 2.9% to 3.3%, while, as share of total revenues, it increased by 0.9 pp (Figure 42). CIT revenue appear to have resumed the growth pattern observed up to the pandemic and has now reached its highest level as seen in 2007 prior to the Great Recession of 2008/09. Since the economic recovery that immediately followed the end of the pandemic crisis, the share of tax revenues from CIT has been increasing significantly.

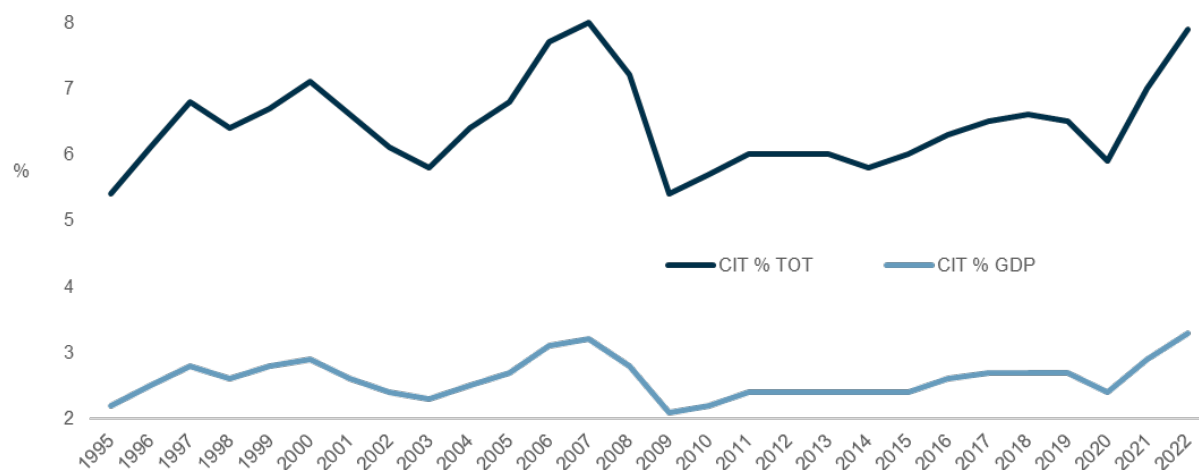
78 [New initiative registered: 'Taxing great wealth to finance the ecological and social transition' | European Citizens' Initiative \(europa.eu\)](#)

79 [Patriotic Millionaires – The Patriotic Millionaires is a group of high-net worth Americans committed to building a more prosperous, stable, and inclusive nation.](#)

80 [Millionaires for Humanity](#)

81 Initiative of wealthy taxpayers in German-speaking countries. [Taxmenow](#)

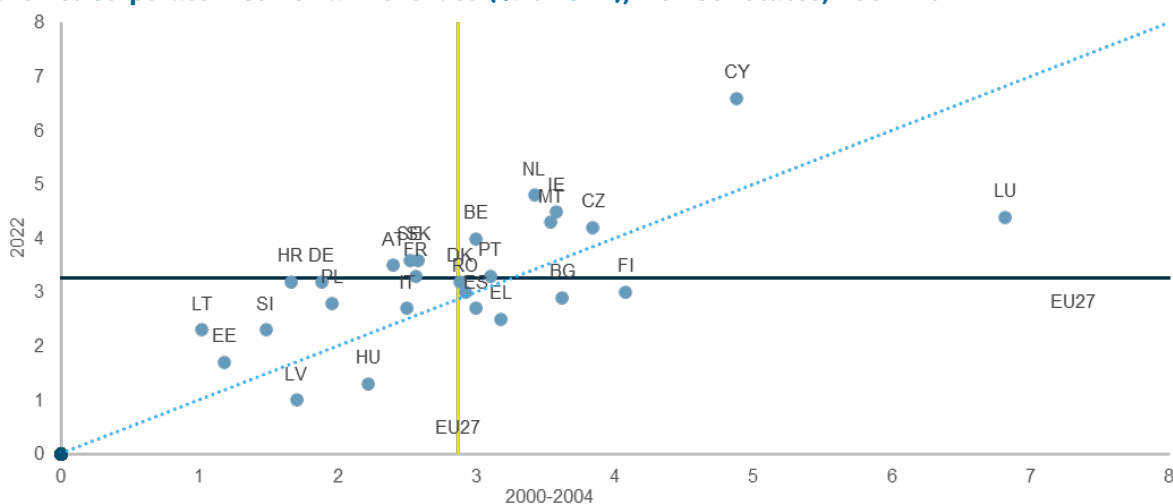
Figure 42: Corporate Income Tax Revenues (% of GDP and % of total revenues), EU-27, 1995-2022



Source: European Commission, DG Taxation and Customs Union

The aggregate growing trend hides some important dynamics at country level. Figure 43 divides Member States in two groups. The first one, above the line, shows the countries where, in % of GDP, the CIT revenue has increased in the last 20 years (2002-2022), while it has decreased in the countries below the line. Revenues from CIT have increased in most Member States. Differences among the countries could be the result of changes to the corporate income tax affecting statutory and effective tax rates.

Figure 43: Corporate Income Tax Revenues (% of GDP), Member States, 2002-2022



Source: European Commission, DG Taxation and Customs Union, based on Eurostat data

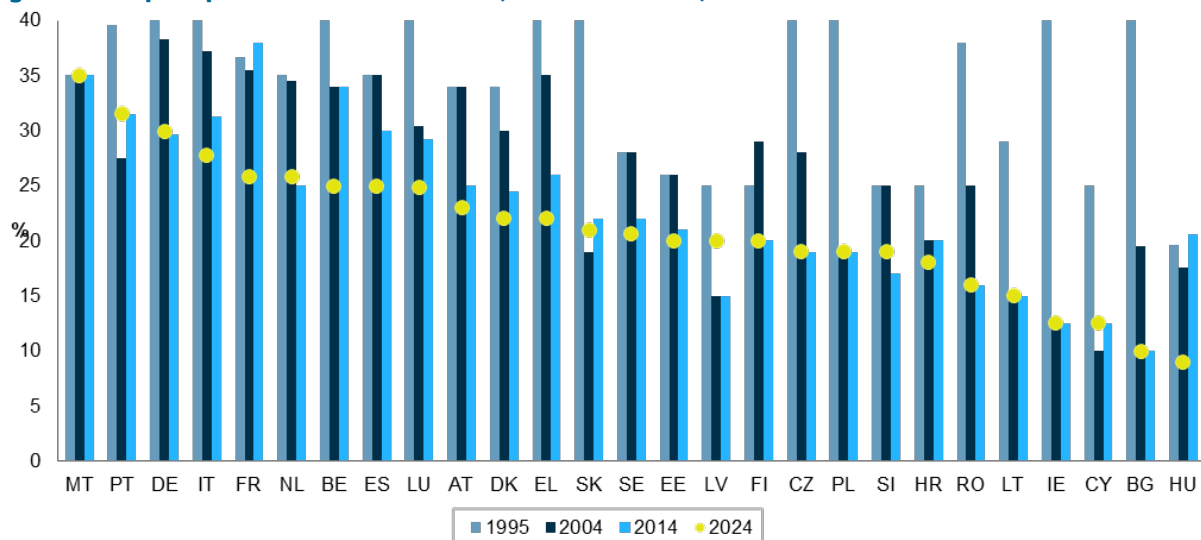
Notes: On the X-axis the average of revenue shares from 2000 to 2004 are shown.

Country level data (Figure 44) show that the highest top statutory CIT rates are in Malta (35%), Portugal (31.5%) and Germany (29.9%), while the lowest can be found in Bulgaria (10%) and Hungary (9%)⁽⁸²⁾. From a historical point of view, compared to 1995, the largest decreases are observed in Bulgaria (-30 pp), Ireland (-27.5 pp) and Germany (-26.9 pp). The top statutory CIT rate of course masks all possible other lower rates across regions of a country or across businesses depending on size or sector, for

⁸² Historic CIT rates are depicted in Table A2.2 in Annex 2.

example ⁽⁸³⁾. This is why it is important to also look at the effective tax rates (ETRs), which represent the potential de facto cost that taxes represent for an investment decision. Spain (32.4%) and Germany (28.2%) report the highest forward-looking model based ETRs ⁽⁸⁴⁾, while Hungary (19.3%) and Bulgaria (9.0%), together with Estonia (16.5%), confirm their low level of effective taxation (Figure 45). Over the last ten years, almost all the Member States have decreased or left unchanged their ETR with exception of Greece (+3.6 pp), Slovakia (+1.9 pp) and Cyprus (+1.4 pp). By contrast, the largest decreases are observed in Malta (-8.9 pp), France (-8.2 pp) and Hungary (-8.2 pp).

Figure 44: Top corporate income tax rates, Member States, 1995-2022



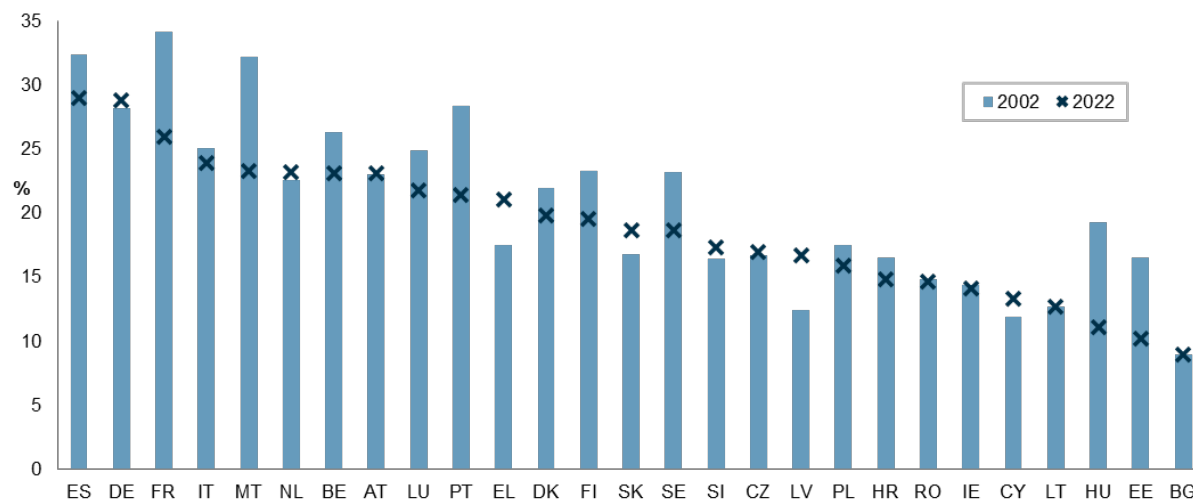
Source: European Commission, DG Taxation and Customs Union, based on Eurostat data

Notes: Sorted by top rate 2024

83 For example, Malta taxes at 5% the corporate profit if companies are owned by non-residents or by residents without domicile in Malta. Moreover, new rules for consolidated group income tax were introduced in 2019. Subject to some conditions, companies forming a group can submit a single tax declaration and pay only the 5%.

84 Effective tax rates can be calculated ex-post, i.e. backward looking by considering actual taxes paid over actual tax base. Investment decisions however have to be made considering the future. Economists have thus set out to develop models which allow to estimate what ETRs would result for an investment project of a given size for a taxpayer of specific characteristics in a specific interest environment. Estimates are available from the OECD as well as from ZEW, among others.

Figure 45: Forward-looking effective average tax rates (%), Member States, 2002-2022



Source: European Commission, DG Taxation and Customs Union, based on ZEW data

Notes: The values presented are the Effective Average Tax Rates, for large corporations in non-financial sector, computed at corporate level, for average asset composition and funding sources, using the Devereux/Griffith methodology.

The reductions in both CIT rates and ETRs have not resulted in a reduction of CIT revenues as share of GDP. The economic literature has investigated this rate-revenue puzzle finding that the decrease in tax rates has been largely offset by an increase in the corporate tax base and to a lesser extent by the increasing size of the corporate sector in the economy (Nicodeme et al., 2018).

3.4.2 Tax avoidance, evasion and aggressive tax planning

In 2016, the “Panama Papers” unveiled the extent of worldwide tax evasion and avoidance via offshore entities in low-tax jurisdictions. Information was disclosed about more than 200 000 such entities. It showed that ownership links between onshore and offshore entities are often (deliberately) non-transparent, and that offshore structures are often used by natural or legal persons to engage in both tax evasion and undesirable aggressive tax planning (ATP) (European Parliament, 2017). Subsequent investigations by tax administrations have led to the recovery of more than EUR 1.36 billion in unpaid taxes, fines and penalties ⁽⁸⁵⁾, according to the International Consortium of Investigative Journalists.

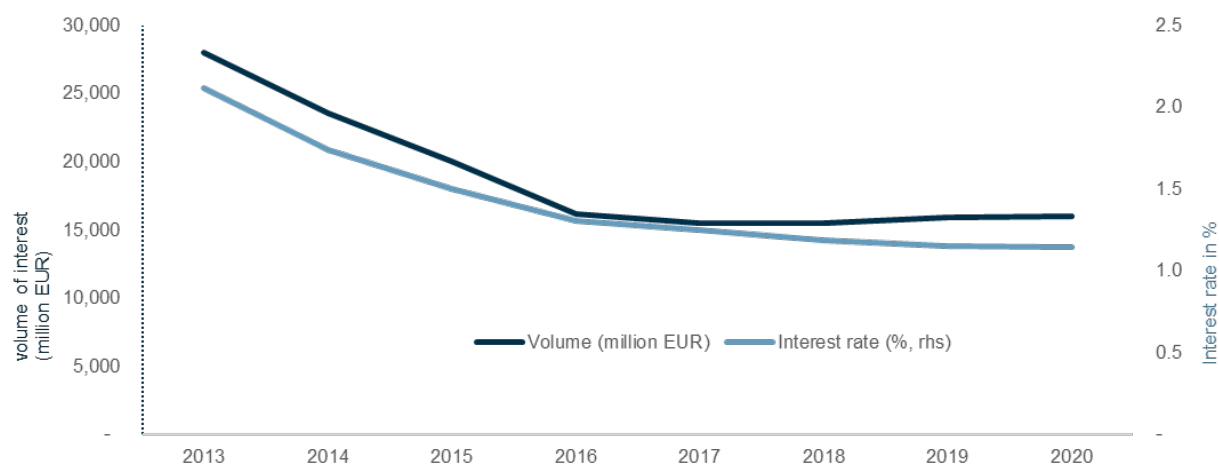
After the Panama Papers, studies have since confirmed that shifting profits to offshore entities leads to massive tax avoidance by both firms and individuals. Econometric analysis by the European Commission suggests that many multinational groups are likely to use outbound payments to low tax jurisdictions as a vehicle for reducing the tax base in the EU. As a result, payments to third-country structures help EU-based entities to pay significantly less taxes than other EU entities that do not have these structures in place. **Annex 1** lays down these analytical findings. It is shown that MNE group members located in EU countries with low or non-existing withholding taxes on outbound payments pay significantly less taxes than comparable firms if the respective MNE is also present in offshore low-tax jurisdictions. This is because outbound royalty or interest payments are used to shift profits to offshore tax havens. These payments may thus remain untaxed both in the EU and in those target jurisdictions (“double non-taxation”).

Excessive payments used to shift profit overseas became visible in raw data when interest rates were almost zero. One example of Aggressive Tax Planning is when the level of royalty or interest paid between two associated enterprises exceeds the amounts that would have been due on the market, i.e., between

85 [Panama Papers revenue recovery reaches \\$1.36 billion as investigations continue - ICIJ](#), ICIJ, April 2021.

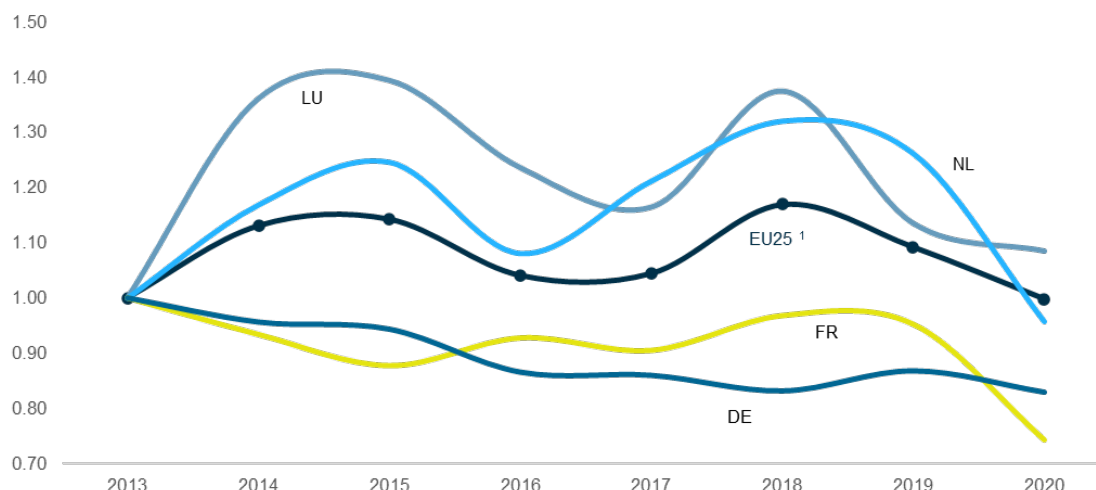
independent enterprises ⁽⁸⁶⁾. While it is very hard to find statistical evidence for excessive payments for the use of intellectual property (royalties), in the case of interest payments the situation is more transparent. The period from 2016 to 2020 was characterised by historically low interest rates (see Figure 46). Long-term government bond interest rates were even negative in 2019 and 2020, while the interest rates for loans to non-financial corporations were moving downwards to just over 1%. In other words, borrowing via the market became extremely cheap for firms. As a result, the corresponding overall volume of interest payments from firms to banks went down almost in parallel to declining interest rates. Yet, in certain Member States, the volume of cross-border outbound interest payments does not reflect this tendency (see Figure 47). Those payments may not have been the market-based compensation for borrowing. Instead, their aim may have been the reduction of the company's tax base, using excessive interest payments to transfer profits to other countries.

Figure 46: Interest rates (%) and interest payments (million EUR) of loans to non-financial corporations, Euro Area



Source: ECB Statistical Data Warehouse

Figure 47: Cross-border interest payments from EU countries (index normalised to unity for 2013)



Source: Eurostat Balance of Payments (series bop_c6)

Notes: Primary income: direct Investment, debt instruments, interest, debit; geopolitical partner: rest of the world; Sum over EU countries (without Austria and Spain) of which Luxembourg and Netherlands represent 57% (average 2013-2020)

⁸⁶ This follows from the 'arm's length principle'. See Art. 9 of the OECD's model convention with respect to taxes on income and capital.

New data sources allow for a better a grasp of profit shifting from high tax to low-tax countries.

Foreign affiliates statistics and country by country reports, which disclosed taxes paid per country to tax authorities enable the identification as well as a better quantification of tax avoidance, a phenomenon hidden by nature. Using the difference of profitability between foreign and domestic firms, remarkably high profitability of foreign firms in certain tax jurisdictions can be reattributed to countries where the economic activity of the firm takes place, using services and interest payment flows identified between countries (Torslov et al., 2023). About 35% of foreign profits, totalling EUR 932 billion in 2022 and stable in proportion since 2015, are found to be shifted to jurisdictions where they are low-taxed.

Certain jurisdictions appear central in profit shifting schemes. According to Torslov et al. (2022), the profitability of foreign firms is particularly high in Puerto Rico, Ireland, Luxembourg, Hong Kong, Switzerland, Singapore and the Netherlands. The main destinations of profit shifted according to the same study appear to be the Netherlands, Ireland, Switzerland, British Virgin Islands, Luxembourg, Puerto Rico, Singapore, Hong Kong and Bermuda. A recent study by the Commission's Joint Research Centre uses firm-level data to corroborate these profit-shifting destinations and reveals the source and conduit countries involved (Delis et al., 2023). The European Tax Observatory highlights some tax jurisdictions as having a very high number of companies registered per 1.000 adults, which could be an indication of shell companies, i.e., companies without economic substance set up notably for tax planning purposes (Aliprandi et al., 2023). Globally, British Virgin Islands (15 672), Delaware (2 889) and Cayman Islands (2 324) are on top of the list with very high company registration density, with a tax system that imposes no disclosure rules, no reporting requirement and no CIT rate for British Virgin Islands and Cayman Islands. In Europe, the jurisdictions with the highest number of limited liability entities per adult are Liechtenstein (809), Gibraltar (619), Isle of Man (597), Guernsey (528) and Jersey (495). In the EU, Estonia (348), Luxembourg (330), Cyprus (226), Belgium (168) and Malta (168) are on top of the list.

To avoid taxes, multinational enterprises (MNEs) can use complex tax structures with entities in these jurisdictions. MNEs can use different channels to shift profits to subsidiaries where they will be less taxed: transfer prices, intra-group lending and borrowing, and the location of intangible assets (patents, trademarks, etc.) linked with royalty payments are the most common practices. Groups can set up complex layers of subsidiaries to minimise their tax liabilities. This may also involve distortion of competition in the EU. As seen above, some countries are instrumental to tax avoidance schemes. These countries have subsidiaries registered in them to channel payment flows with the objective to decrease total tax liabilities. Only complex MNEs appear to shift profits away from their high-tax subsidiaries, while MNEs with flat ownership structures do not display such pattern (François and Vicard, 2023).

Tax avoidance has direct consequences for the EU and on governments' tax revenues, lowering corporate tax revenues. The cost of corporate tax shifting is assessed by Wier and Zucman (2022) at 20% of the total corporate tax revenue collected for the European Union and at 10% globally. On a national basis, a recent study shows that German municipalities with a high exposure to MNEs that practice ATP experience a significant decline in revenues from the regionally applied trade tax. The municipalities which increase the rate to compensate the loss are suffering an even higher loss, due to increased profit shifting. No impact on the real activity of the MNE in the municipality has been identified (Bilicka et al., 2023). The tax losses may need to be compensated by finding tax revenues elsewhere in the system, potentially through taxes that may be less progressive.

A global minimum tax is likely to improve the situation. The 2021 agreement reached at the OECD Inclusive Framework over a global minimum tax (GMT) for corporations, referred to as "Pillar Two", is a landmark in international taxation to limit aggressive tax planning. Firms above the threshold of EUR 750 million of revenues will be subject to an effective GMT of 15% with the aim of levelling the playing field and put a floor to global and potentially harmful corporate tax competition. Pillar Two has been implemented in the EU since January 2024. The mechanism of income inclusion will allow the jurisdiction where the MNE is headquartered to

tax the difference between the effective tax rate paid in another jurisdiction ‘A’ where the MNE has a subsidiary and 15%, in case the jurisdiction ‘A’ does not implement the effective GMT of 15%. The expected revenue of Pillar Two has been assessed by the OECD at around US 155-192 billion globally (Hugger et al.) ⁽⁸⁷⁾.

3.5 The Value added tax – an important consumption tax with revenue potential

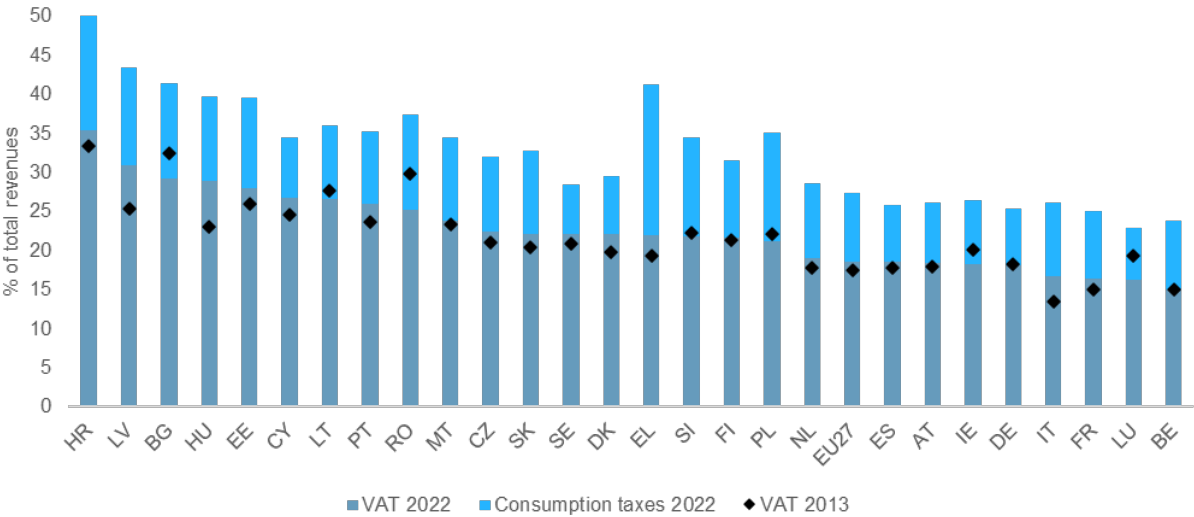
3.5.1 The Value Added Tax (VAT): Trends in rates and revenues

VAT is the most important consumption tax in all Member States. In 2022, EU-27 revenues from consumption taxes made up about 11% of GDP and 27.3% of total revenues, slightly decreasing compared to 2021. VAT is the most important consumption tax in all Member States contributing between 15% and 35% of total revenues. While revenues from the total consumption tax base have slightly decreased, VAT revenues have further increased in 2022 to 7.5% of GDP (from 7.4% of GDP in 2021) which makes up 18.6% of total tax revenues.

The importance of VAT varies across tax systems in the EU. As shown in Figure 48, the share of revenue coming from VAT in 2022 is highest in Croatia (35%), Latvia (31%) and Bulgaria (29%) and lowest in Belgium (15%), Luxembourg (16%) and France (17%). Greece is the country that collects the highest revenues from consumption taxes other than VAT. Overall consumption taxation is most important for Hungary.

VAT is a significant and growing source of revenue. In the EU, importance of VAT has been increasing slowly but steadily from 17.1% of total revenues twenty years ago, to 17.4% in 2013 and to 18.6% in 2022. At the same time the relative importance of VAT in the tax mix has become more varied across Member States. This implies that some Member States in 2022 rely more on VAT and others less, compared to ten years ago. At the country level, the share of revenues has slightly increased in most countries, while they have decreased most notably in Romania, Luxembourg, and Bulgaria.

Figure 48: VAT revenues as share of total tax revenues (%), 2022 and 2013



Source: TAXUD database – [Statistics | Taxation and Customs Union | European Commission \(europa.eu\)](https://ec.europa.eu/economy_finance/taxud).
 Notes: Data sorted by VAT revenue share in 2022.

Following a period of rate increases (2009-2015), the EU-27 average standard VAT rate stabilised and then remained almost unchanged from 2016 to 2023 at 21.5%. The lowest standard rates are

87 [The Global Minimum Tax and the taxation of MNE profit](#), update of January 2024

registered in Luxembourg at 16% in 2023 (went back up to 17% in 2024) and Malta (18%). On the other hand, the highest VAT rate is found in Hungary (27%), followed by Sweden, Denmark, and Croatia (all at 25%). VAT rates are depicted in Table A2.3 in Annex 2 ⁽⁸⁸⁾.

The implicit tax rate (ITR) on consumption in the EU in 2022 amounts to 17.2%, a decrease by 0.7 pp compared to 2021. The ITR is the ratio between the revenue from consumption taxes and the estimated base. Before decreasing in 2022, the ITR on consumption in the EU-27 increased to 17.9% in 2021 (0.8 pp more than in 2020), the highest value registered since 2009. In 2022, the ITR on consumption decreased in all Member States except Greece, Cyprus, and Sweden, remaining unchanged in Luxembourg.

Reduced rates and exemptions are important policy levers of the VAT. Some goods and services must legally be exempted from VAT. Other goods and services may be subject to reduced rates (or zero rates) ⁽⁸⁹⁾. While countries have considerable flexibility in setting rates, several exemptions have been agreed on at the EU level ⁽⁹⁰⁾. The revenues foregone due to exemptions and rate reductions are called the VAT policy gap since they result from policy decisions narrowing the tax base or reducing liability for specific sectors or specific goods and services. Reduction and exemptions aim to meet distributional objectives and incentivise consumption of specific goods and services.

The approach to reduced rates is coordinated at the EU level. A VAT rates reform came into force in 2022 (see Council Directive (EU) 2022/542). This directive made changes to the VAT Directive 2006/112/EC and provides EU member states with more flexibility in determining reduced VAT rates. It enables Member States to apply a maximum of two reduced rates of a minimum of 5%, and within certain limits a reduced rate below 5% and even an exemption with deduction of the VAT paid at the preceding stage (a so-called zero rate) to supplies of goods and services listed in Annex III of the VAT Directive. This reform took into account the European green agenda by including in the list of goods and services to which a reduced rate can apply, solar panels, electric bicycles, highly efficient low emissions heating systems, and a number of other services. Moreover reduced rates will be phased out for fossil fuel (by 2030) and chemical pesticides (by 2032).

Reduced rates are the central lever for national policymakers to determine the extent of revenues foregone. In 2021, the EU-27's average VAT policy gap was approximately 44.9% of notional ideal revenue (i.e., VAT revenues that could have been collected without any VAT rate reductions or VAT exemptions) ⁽⁹¹⁾. About 23% of this gap was caused by reduced rates, the rest is due to exemptions. However, only a fraction of about 12% of the policy gap is considered as actionable exemption gap. The actionable policy gap of the EU is thus estimated to be about 15.7% of the notional ideal revenue (or 35% of the total policy gap).

The accumulated revenue implications of reduced rates can be considerable. Figure 49 shows the estimated rate gap as share of notional ideal revenue ⁽⁹²⁾. Given overall VAT revenues of about EUR 1 079 billion in 2021 and comparing these to the notional ideal revenues, a back-of-an-envelope calculation indicates potential additional revenues of up to EUR 230 billion. Based on these estimates, actual revenues collected from VAT in the EU could be up to 20% higher if reduced rates were abandoned. Potential additional revenues as a share of revenues collected differ across countries and tend to be proportional to the policy rate gap.

88 VAT rates together with all other taxation trends data is available at https://taxation-customs.ec.europa.eu/taxation/economic-analysis-taxation/data-taxation-trends_en.

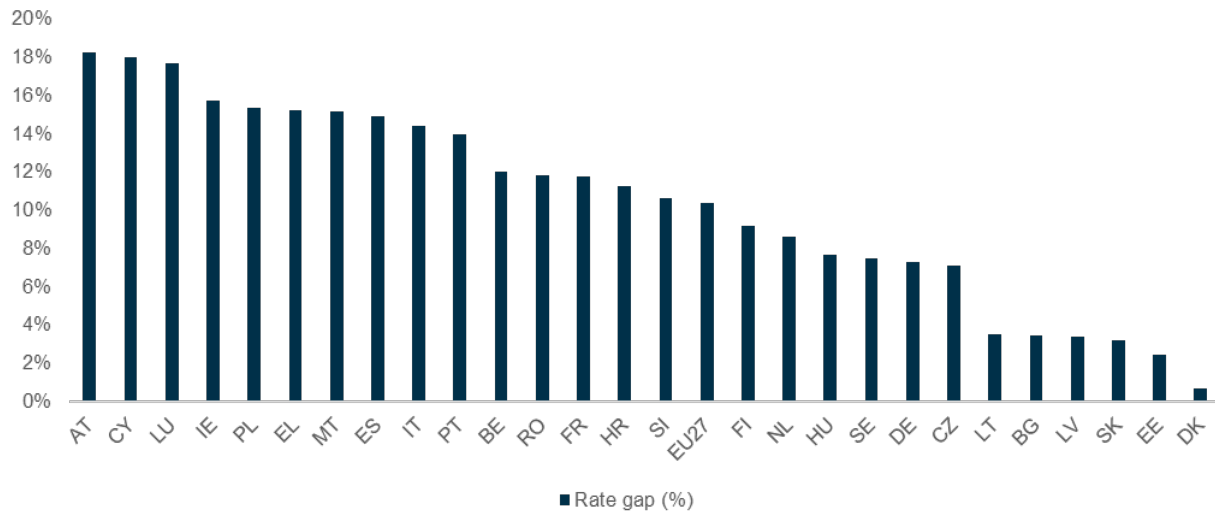
89 A supplier of goods and services with zero rate does not collect any VAT but still can reclaim the VAT she paid for inputs. In contrast, a supplier of goods and services which are exempt from VAT, is considered the ultimate consumer of inputs and cannot reclaim VAT paid on inputs.

90 The VAT Directive prescribes both, supplies that EU countries must exempt and supplies that they may choose to exempt.

91 The median policy gap reported for 2012 is about 43%. The policy gap overall has thus largely remained stable.

92 The notional ideal revenue is the theoretical revenue that could be collected in a system where all end-consumption is taxed with any exemptions or reduced VAT rates.

Figure 49: The estimated VAT rate gap as share of notional ideal revenue (2021)



Source: European Commission, CASE, VAT gap in the EU – Report 2023
 Notes: Countries sorted by size of rate gap as share of notional ideal revenues from VAT.

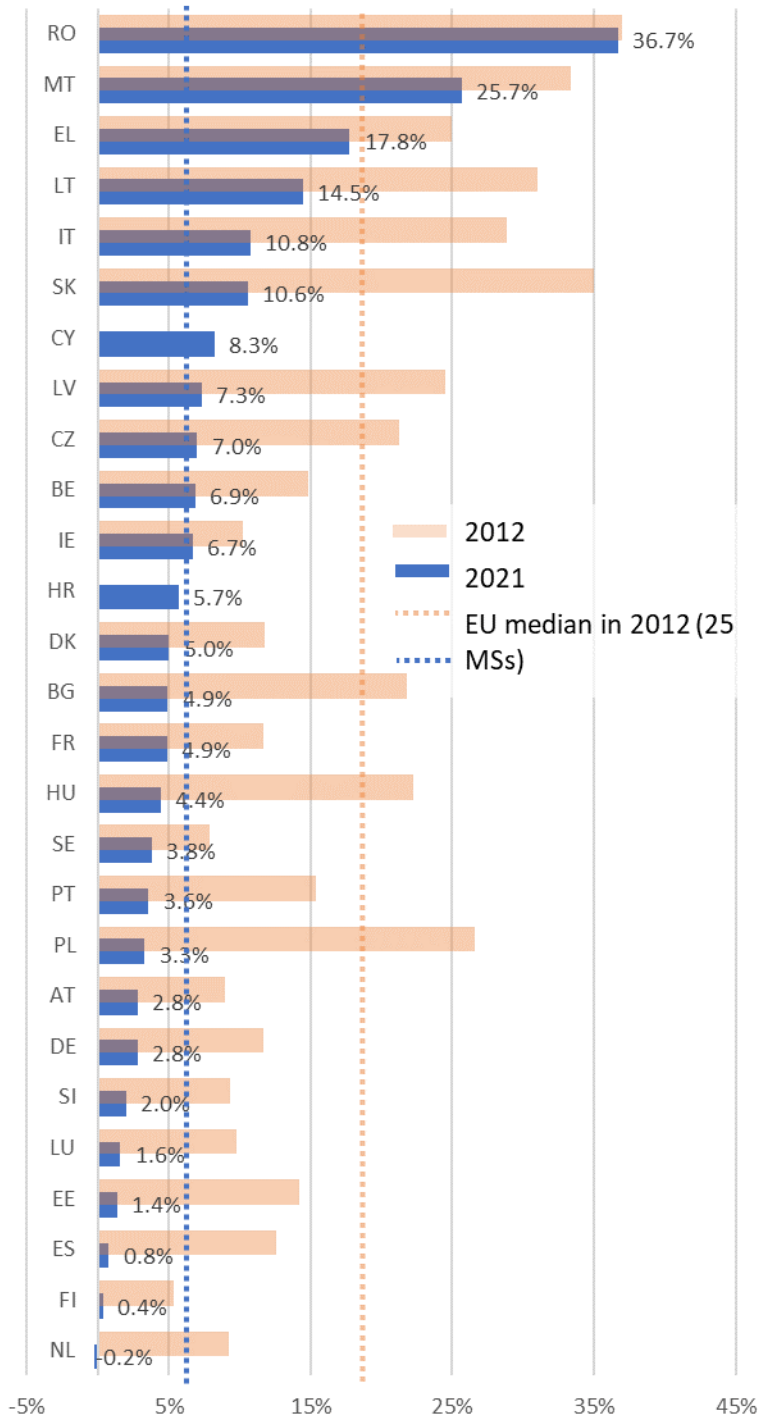
3.5.2 Tax compliance, tax evasion and fraud

The design of VAT facilitates tax collection and supports compliance, albeit at the cost of high administrative effort. The VAT is collected at each step in the value creation process by suppliers, then suppliers can reclaim the VAT paid on their inputs. This way the full value added tax is paid by the final consumer while revenues have been collected throughout the value creation process, safeguarding revenues against non-compliance. However, this process results in relatively high administrative efforts.

The VAT compliance gap measures foregone VAT revenues due to non-compliance. Specifically, the VAT compliance gap is an estimate of the difference between the expected theoretical VAT revenue, known as the VAT Total Tax Liability (VTTL), and the actual collected VAT revenue. It reflects non-compliance with VAT payment obligations and encompasses various forms of non-compliance, including legal loopholes, evasion, fraud, administrative errors, and bankruptcies.

The EU VAT compliance gap amounted to 5.3% of the VTTL in 2021 on average, but there are significant disparities between Member States. During the past 10 years, almost all Member States could significantly reduce their VAT compliance gap, albeit to varying degrees. Notable improvements in compliance between 2012 and 2021 could be ascertained, for instance, for Slovakia, Poland, Italy and Hungary. Romania, Malta, and Greece continue to register higher compliance gaps than other Member States in 2021, reflecting specific challenges in these countries. Romania retained the highest gap at 36.7%. Conversely, the Netherlands, Finland, Spain, and Estonia consistently showed lower gaps, indicating robust compliance practices and lower non-compliance levels. The compliance gap per Member State is shown in Figure 50.

Figure 50: VAT compliance gap by Member State as share of total VAT liability



Source: European Commission, CASE, VAT gap in the EU – Report 2023 (https://taxation-customs.ec.europa.eu/taxation-1/value-added-tax-vat/vat-gap_en)

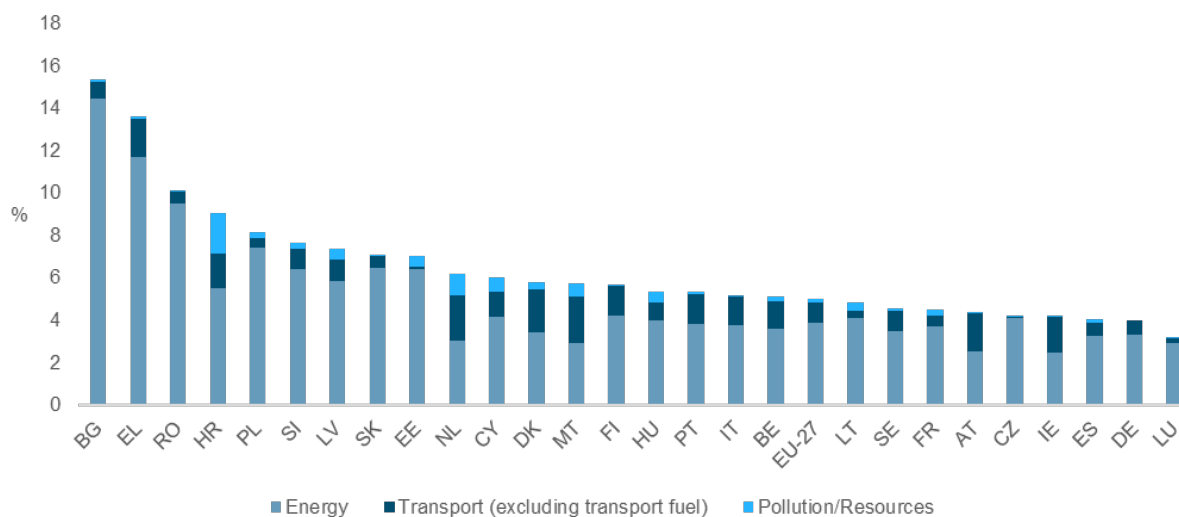
Notes: The dotted lines depict the median VAT compliance gap in the EU-27 in 2012 (orange) and 2021 (blue). Labels indicate the VAT compliance gap in 2021 in the respective Member State. For Croatia and Cyprus, there are no estimates of the VAT compliance gap for 2012. Consequently, the EU median for 2012 refers to the other 25 Member States for which the VAT compliance gap could be estimated for that year.

3.6 Environmental taxation

Environmental taxation is a powerful tool in steering the behaviour of producers and consumers towards sustainable investment and consumption choices. This can be achieved by increasing the cost of activities that cause pollution or harm the environment or by granting tax relief for beneficial activities (e.g. investment choices supporting the green transition). Taxation makes consumers and producers consider and bear the social costs or benefits of their activities, known as “negative or positive externalities”. These taxes are also known as “Pigouvian taxes” and often take the form of consumption taxes, applied for example on the use of energy products ⁽⁹³⁾. Alongside correctly pricing negative externalities, taxation can also be used to encourage positive externalities, as tax systems more broadly can integrate features that are conducive to more sustainable growth, for example in the form of tax credits incentivizing investment in more sustainable production processes.

There are substantial differences in environmental revenues ⁽⁹⁴⁾ across EU Member States. Environmental revenues come from taxes on energy, transport, pollution, and resources as well as levies and fees. As depicted in Figure 51, Bulgaria has the highest level of environmental revenues as a share of total tax revenue (15%) and Luxembourg the lowest one (3.2%). In all EU Member States, taxes on energy generate most of the environmental revenues. A larger role of transport taxes (excluding fuel taxes) is noteworthy for the Netherlands and Malta. Taxes and fees on resources and pollution play a negligible role in most Member States. Croatia and the Netherlands have the highest revenues from these. As of 2024, Finland has introduced a mining tax, which may increase the role of resource taxes in Finland in the future.

Figure 51: Composition of environmental tax revenue sources as share of total revenues, 2022



Source: TAXUD database – [Statistics | Taxation and Customs Union | European Commission \(europa.eu\)](https://ec.europa.eu/economy_finance/statistics/taxation-and-customs-union).

Notes: Data sorted by total environmental revenues as share of total revenues.

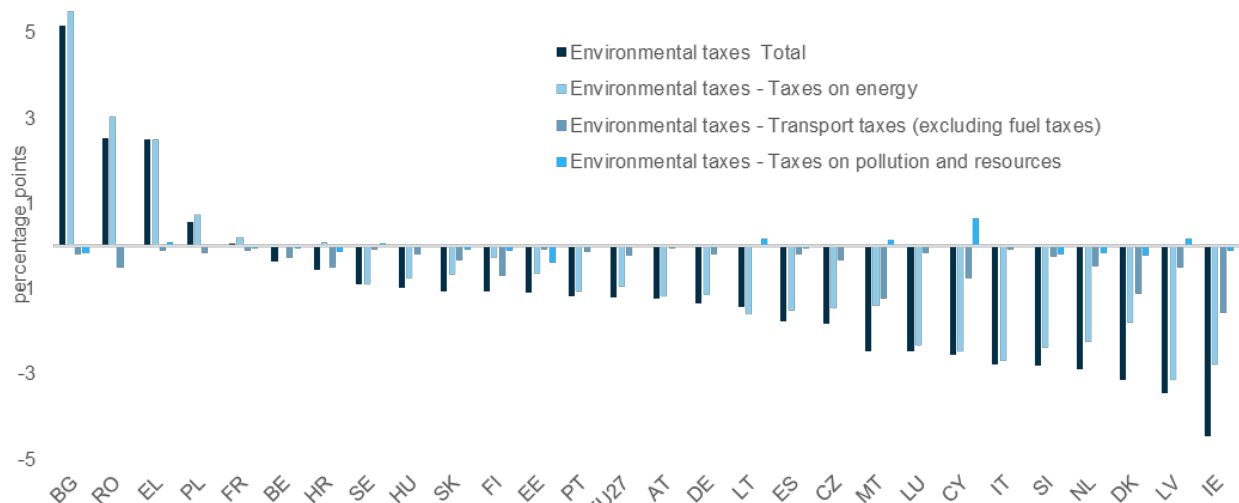
Tax revenues from environmental taxes have declined in almost all Member States. Revenues from all forms of environmental taxation have been decreasing for most Member States since 2013. This is true whether revenues are measured as share of GDP or as share of total revenues. Only in Bulgaria (6 pp increase) and

93 Poorer households spend a larger share of their income on energy than richer households. Therefore, increased use of energy taxation may warrant putting in place flanking measures cushioning their impact on those vulnerable households - without undermining the price signal - to avoid undesired distributional consequences and increase political acceptability.

94 For revenues from environmental taxation, it is important to keep in mind that a decline/increase in the revenues can be either positive or negative from the environmental perspective. A decline can be caused by shift from fossil fuels to renewables, electrification, increased energy efficiency, general decrease in economic activity or reduction of rates. Also, the change in value of the denominator (here: GDP or overall tax revenue) plays a role.

Greece (about 3 pp) were significant increases in revenue as share of total recorded. In Greece, the increase is primarily driven by the newly introduced revenue cap on inframarginal rents which was implemented across the EU based on the Council regulation 2022/1854 on an emergency intervention to address high energy prices ⁽⁹⁵⁾. The movements in aggregate numbers, depicted in Figure 52, sometimes hide diverging changes within the categories – across several Member States (e.g. DE, FR, IT), one could witness drastic decreases in the revenues from taxes on the consumption of mineral oils or electricity consumption.

Figure 52: Change in revenues as % of total from environmental taxes, percentage points, 2013-2022



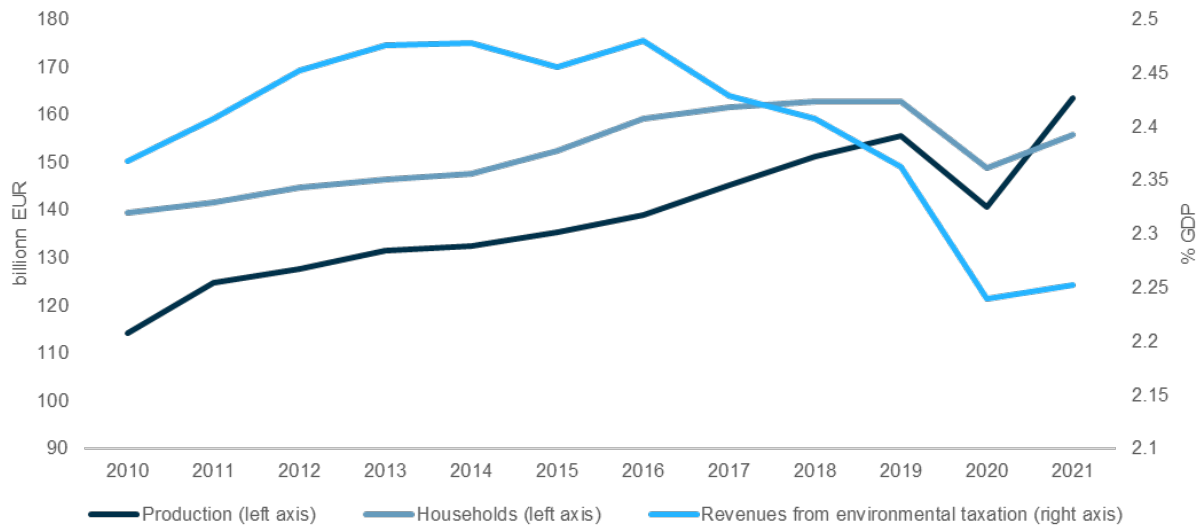
Source: TAXUD database – [Statistics | Taxation and Customs Union | European Commission \(europa.eu\)](https://ec.europa.eu/economy_finance/statistics/taxation-and-customs-union).

Notes: Revenues increase in Bulgaria by more than 6 pp, in Greece by about 3 pp. Values have been cut off to allow for representation of the smaller changes in other Member States.

Households carry a large share of the tax burden on energy. Historically, the contribution of households to environmental tax revenues in nominal terms have been larger than that from the production side of the economy (adding up the information for all NACE sectors). As seen in Figure 53, nominal revenues from environmental taxes increased until 2019, declined in 2020 due to COVID-19 and rebounded in 2021. It is important to note that tax revenues from environmental taxation as a share of GDP have been declining since 2016, albeit the decline was somewhat stopped after 2020. But it is also true that environmental tax revenues as a share of GDP declined between 2013 and 2022, similarly to the revenue shares of total revenue, as discussed above. This is in part explained by the fact that excise duties typically do not apply to the purchasing price (like VAT would do) and usually are not indexed to inflation. The pending proposal for a revised energy taxation directive envisaged to update the level of minimum rates set out in this directive for the consumption of energy products and electricity. It also proposed to automatically align every year the minimum rates taking into account the evolution of their real value in order to preserve the current level of rate harmonization.

95 Inframarginal rents are the difference between the clearing price and the marginal cost.

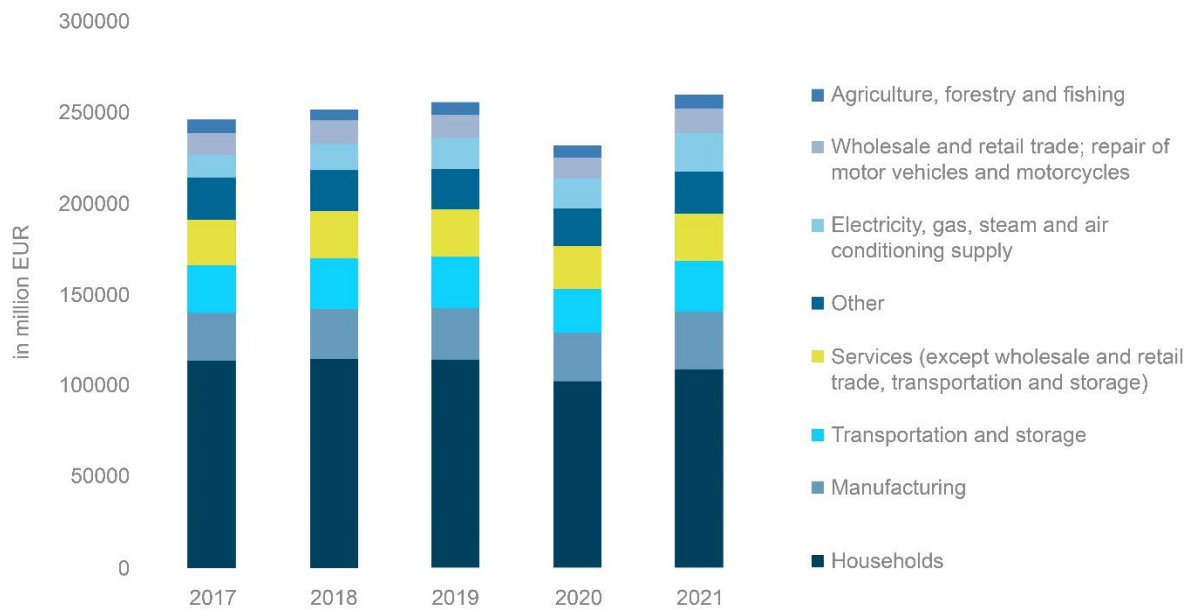
Figure 53: Nominal burden of environmental taxes in the EU



Source: Own elaborations based on Eurostat (online data code env_ac_taxind2).

Figure 54 below shows that energy taxes are primarily borne by household (more than 40% of total energy tax revenue in each of the years). The manufacturing sector bears around 10%-12% of total energy taxes in the EU (with a gross value added of about 19% of GDP), while the agricultural sector carries a rather small share of energy taxes (in line with its gross value added of about 1.7% of GDP).

Figure 54: Distribution of the energy tax burden in nominal Euro values, EU-27 ⁽⁹⁶⁾



Source: Own elaborations based on Eurostat (online data code env_ac_taxind2).

96 This analysis abstracts from the questions of tax incidence as companies might be able to pass through their costs on energy taxes.

3.7 Health taxation

3.7.1 Taxes on tobacco and alcoholic beverages

Tobacco remains a major cause of public health concern. Despite a declining trend, smoking prevalence remains high in the EU. According to the latest Eurobarometer estimates ⁽⁹⁷⁾, 24% of the population aged 15 years and over (both genders combined) were current users of traditional tobacco products (a 1% reduction from the prior Eurobarometer estimates of 2020). Among current smokers, 77% are regular users of boxed cigarettes, 23% use hand-rolled cigarettes, 3% consume cigars and cigarillos and 2% consume pipe tobacco. There are large variations across EU Member States and the proportion of adults who smoke can vary three-fold across countries, up to 34% in Bulgaria (European Commission, 2019b).

Alcohol-related harm also remains a source of concern in the EU. The total per capita consumption of alcohol in the EU amounts to approximately 11.4 litres of pure alcohol per year ⁽⁹⁸⁾ and has not changed substantially since 2010. In 2019, 8.4% of the EU adult population consumed alcohol daily, 28.8% weekly, 22.8% monthly and 26.2% never consumed or had not consumed any in the last 12 months (European Commission, 2019b). Looking more specifically at harmful alcohol consumption, which is often measured in terms of the frequency of heavy episodic drinking (HED), 37% of adults engage in HED at least once in 30 days in the EU, with a considerably higher prevalence among men than among women. The share of young people reporting weekly HED decreased from 6.2% to 5.5% between 2014 and 2019, monthly HED prevalence remained stable (around 19.5%) ⁽⁹⁹⁾.

Europe's Beating Cancer Plan notes that taxation can help with health promotion, also considering the growing issue of non-communicable diseases, which are responsible for 80% of the disease burden in EU countries. This is also in line with the third Sustainable Development Goal (SDG 3), which aims to ensure health and promote well-being for all at all ages by improving reproductive, maternal and child health; ending epidemics of major communicable diseases; and reducing non-communicable and mental diseases (European Commission, 2021).

From a fiscal perspective, the share of tax revenue from tobacco and alcohol excise duty is not increasing (Figure 55). On the ground, excise duty rates have moderately increased over time for tobacco and to a lesser extent alcohol, with diverging trends across Member States ⁽¹⁰⁰⁾. Excise duty rates increased moderately for all categories of alcoholic beverages over the past decade, in nominal terms. In general, they have increased more in those Member States where rates are higher than the EU average. However, nominal excise rate growth does not necessarily influence the affordability of the targeted products. For alcoholic beverages, when compared to inflation in the past decade, 'real' increases of excise duties occurred frequently in the case of beer, less so for ethyl alcohol, while patterns are diverging across Member States for the other products.

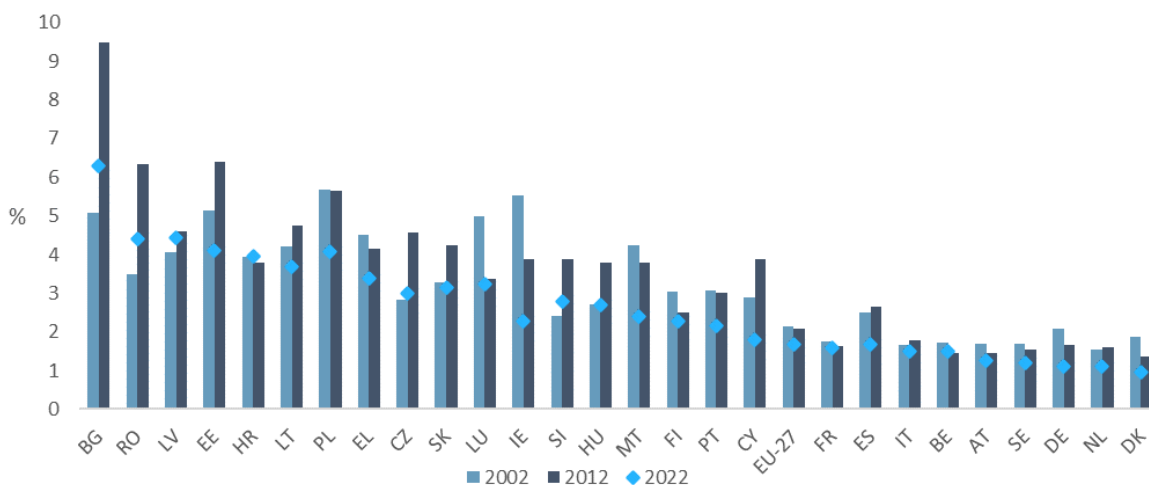
97 Eurobarometer Special Report 539, unpublished

98 World Health Organization, Global Information System on Alcohol and Health (GISAH), 2019

99 World Health Organization, Global Information System on Alcohol and Health (GISAH), 2019

100 European Commission, Taxes in Europe Database

Figure 55: Evolution of revenues from excise duties on tobacco and alcohol, EU-27, as % of total tax revenue



Source: European Commission, DG Taxation and Customs Union, based on Eurostat data.

With revenue from excise duties going entirely to Member States, unrecorded consumption may result in significant loss for national budgets and limit the effectiveness of national public health policies.

For alcohol and alcoholic beverages

In this sector, unrecorded alcohol consumption is defined as consumption that is not taxed in the country of consumption and/or is outside the usual system of government control ⁽¹⁰¹⁾. It includes non-domestic and illegally sourced products (contraband, counterfeit and illegal production), surrogate products containing alcohol not intended for drinking, and ‘homemade’ alcohol products.

According to WHO estimates, **unrecorded alcohol consumption in the EU increased** between 2010 and 2019, growing from 1.0 to 1.4 litres of pure alcohol per capita, and currently represents **13.5%** of total consumption. Of the various components of unrecorded alcohol, for instance:

- Online **distance selling** is characterised by an increasing degree of non-compliance with excise rules, however there is scope for improvement through the digitalisation of procedures ⁽¹⁰²⁾.
- **Counterfeit products** account for 4.4% of total spirits consumption and 2.3% of wine consumption, which result in a loss of EUR 739 million in excise revenue across the EU (European Union Intellectual Property Office, 2016).

Tobacco products

Illicit tobacco trade covers smuggled products, counterfeit products and “cheap” or “illicit whites” which are defined by the European Commission as products manufactured legitimately in one market, often non-branded, “either taxed for local consumption or untaxed for export and sold knowingly to traders who transport them to another country where the products are sold illegally without domestic duty paid”.

Illicit manufacturing of cigarettes within the EU, close to high-cost consumer markets, is a fast-growing issue. A record 531 million illicit cigarettes were impounded across the EU in 2022, more than twice the number of

101 WHO-GISAH, Indicator Metadata Registry List. See: <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/466>
 102 Enrico Letta - Much more than a market (April 2024)

cigarettes seized in 2019 – roughly 250 million ⁽¹⁰³⁾. About 60% of the cigarettes were from illicit production in the bloc while the rest were smuggled in. These seizures represent an estimated EUR 153 million in taxes ⁽¹⁰⁴⁾.

The magnitude of illicit tobacco trade is difficult to quantify given that tobacco contraband and counterfeiting are clandestine activities in constant fluctuation and change. Illegal products account for approximately 8% of actual cigarettes consumption. The excise duty loss from cigarettes due to illicit trade could reach EUR 7 billion across the EU, or approximately 9% of the expected revenue (European Commission, 2020b).

In parallel, the practice of purchasing tobacco and alcohol across borders has been growing, incentivized by large differences in applicable excise duty rates in EU countries. Under current rules, tax on alcohol and tobacco bought by a private individual for their own use and transported to another EU country is only paid in the country where the goods were bought. However, the own use rules are difficult to enforce in practice and are abused by some actors engaging into illicit reselling. Revealing the magnitude of the phenomenon in certain geographic areas, COVID-19-related border closures in 2020 generated an additional 9.5% tobacco sales in France (Hillion, 2024). A survey conducted by Ipsos in Ireland revealed that in 2023 15% of cigarette packs are found to be legal but non-Irish duty paid ⁽¹⁰⁵⁾. The growing level of cross border purchases is a source of concern for several countries, as it adversely affects national health policies and leads to revenue losses and economic distortions.

3.7.2 Taxes on foods high in fat, sugar and salt (HFSS)

A growing body of evidence links the consumption of foods high in fat, sugar, or salt (HFSS) to obesity and non-communicable diseases (NCDs) (Andreyeva et al., 2022). 100 million European citizens (over a fifth of the EU population) are affected by NCDs such as cardiovascular diseases, diabetes and cancer ⁽¹⁰⁶⁾. HFSS food and drink have little nutritional value and result in a significant proportion of excess sugar, salt and energy intakes, particularly amongst younger age groups who appear to consume relatively more of these products. In recent years, an increasing number of Member States have introduced HFSS taxes or reformed existing ones with the stated objective of reducing consumption of HFSS food and drink and thus decreasing associated individual and social costs.

To date, 12 EU Member States and the region of Catalonia in Spain have introduced some form of HFSS taxation (Figure 56). Of these, 10 countries (Belgium, Croatia, Finland, France, Ireland, Latvia, Netherlands, Poland, Portugal, Romania) and the Spanish region of Catalonia tax solely sugar-sweetened beverages (SSBs). Denmark taxes certain categories of HFSS food products (ice cream, chocolate, and other confectionery) and Hungary taxes both SSBs and a range of HFSS food products.

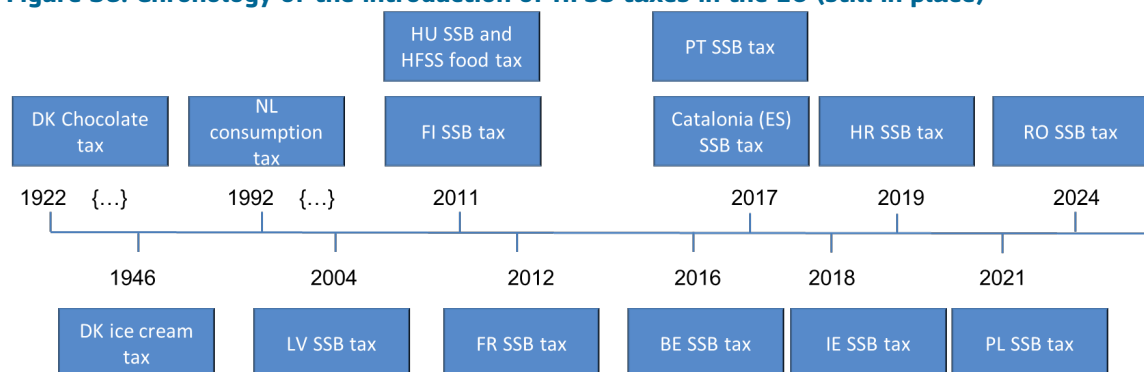
103 OLAF annual report 2022, OLAF annual report 2019

104 OLAF annual report 2022, OLAF annual report 2019

105 [Tobacco Products Research Surveys 2023 \(revenue.ie\)](#)

106 According to the Healthier Together – the EU non-communicable disease initiative (FAQs, p.6), 63 million people are living with cardiovascular diseases, 32 million were diagnosed for diabetes (with an additional 24 million non-diagnosed) and 2.7 million cancer patients are expected to be diagnosed.

Figure 56: Chronology of the introduction of HFSS taxes in the EU (still in place)



Source: Own elaboration based on Ecorys 2024 (unpublished).

While these schemes were all introduced in the form of specific excise duties, there are large variations in the tax base, the tax structure and the level of the rates adopted across different Member States. Learnings can be drawn from national experiences with HFSS taxation ⁽¹⁰⁷⁾.

Belgium

The SSB tax was introduced in 2015 and implemented in 2016 as part of a broader tax reform, with revenue generation as an explicit objective. In 2016, revenue rose to EUR 174.6 million (in 2018) and EUR 186.2 (in 2020). The figures available for 2021 indicate an annual revenue of EUR 164.1 million, however still below the estimates made at the launch of the tax.

A main feature of the SSB tax lies in the flat tax rate which remains too low at high sugar content levels to register or influence any substantial change in **consumer behaviour**. Econometric evidence shows that the Belgian retail market is highly competitive, with aggressive pricing resulting in initial price decreases although in the course of 5 years eventually close to 70% of the SSB tax was passed on to consumers. A **price elasticity of -1.2** was estimated based on Eurostat Household Budget Survey (HBS) data, taking account of differences in household income.

There is some evidence that soft drink consumption has started to reduce from 2016 after having increased in the period 2009-2015. However, it is difficult to fully attribute this decrease to the SSB tax, as an overall trend towards reduced soda consumption can be witnessed in this period also in countries without an SSB tax. Overall sugar intake of Belgian consumers through the SSB tax seems not to have reduced much. The Belgian results do not point to higher soft drink consumption per person in low-income households or households with children. The SSB tax caused households to spend EUR 9 to EUR 11 per year per household extra on soft drinks, or 0.09% of equivalised household income in the 20% lowest income households down to 0.03% of equivalised household income in the 20% highest income households.

The Belgian SSB tax appears not to have incentivised specific **product reformulation**. Limited reductions in sugar intake through soft drinks are noted, and these can be linked to the flat SSB tax design, which has not incentivised the industry to specifically reduce the sugar content level of soft drinks in Belgium. Belgian consumers substitute regular soft drinks for reduced-sugar soft drinks, but this is an autonomous trend that started well before the SSB tax was introduced and should thus not be attributed to the SSB tax.

Based on anecdotal evidence, **cross-border shopping** appears to grow over time, not only due to the SSB tax but due in main to the higher food and drinks costs in Belgium compared to neighbouring countries, especially so after the recent (2022/2023) food price inflation.

107 Based on Ecorys, Health taxes from an EU perspective, 2024, unpublished.

Denmark

Denmark has a long tradition and experience in HFSS taxes, having experimented with taxes on SSBs and saturated fat. A specific excise tax on ice cream was introduced in 1946, and the tax on chocolate and confectionery in 1968. Initially seen as “luxury” taxes with a strong focus on revenue collection, and from the years 2000 onwards, the main objective of the sugar tax has gradually shifted to health considerations. The **revenue** from sales duties on chocolate and sugar confectionery amounted to EUR 324.1 million in 2021 (0.096% of GDP) while tax revenue from ice-cream tax was equal to EUR 52.9 million in 2021 (0.016% of GDP).

The Danish sugar tax can be considered broadly effective when it comes to changing **consumer behaviour**. In line with evidence from the literature, analysis based on several data sets points to a **high-cost pass-through** for chocolate (72%-87%) and roughly twice the HFSS tax increase for ice cream (191%-228%), suggesting for the latter an over shifting of the tax to consumers. Without accounting for income changes, the **price elasticity is estimated at -0.60**, and if it were possible to account for income changes, the price elasticity is assumed to be between -1.2 and -1.8. A switch can be noticed from high-sugar processed foods and ice creams to low-sugar processed foods in the years 2010-2015, which is the period that tax increases materialised. Certain brands have introduced variants with artificial sweeteners instead of sugar, proving that **products have been reformulated**, but the causal link with HFSS taxes seems weak.

No specific findings regarding the long-term impact of these taxes on public health are available.

However, modelling studies on the former Danish fat tax suggested positive health outcomes, including a minor reduction in IHD risk and enhancement of the nutritional quality of diets (i.e. changes in saturated fat consumption).

With regard to **affordability**, no evidence could be found that Danish consumers with lower incomes would consume more of taxed products. On the contrary, households in the fifth income quintile spend EUR 120, or 71%, more on chocolate and confectionery than households in the first quintile.

Various sources point to **cross-border shopping** of chocolate and confectionery. The overall difference in food prices between Denmark and Germany needs to be taken into account, the sugar tax being just one component of it. The cross-border trade of chocolate and confectionery has however been affected by the changes in excise rates.

France

The French SSB tax entered into force in January 2012 as part of the Social Security Finance Bill and was redesigned in 2018 to encourage companies to reduce the sugar content of their products. The tax **revenue** collected increased from 0.017% of GDP in 2017 to 0.019% of GDP in 2021 (or EUR 454 million). In absolute terms, these revenues collected are the highest of any EU Member State.

The French SSB scheme appears to have increased its effectiveness and performance over the years when it comes to triggering behavioural changes, particularly after the 2018 revision, when a sliding scale based on sugar content was introduced. The **cost pass through** estimates vary considerably depending on the source of data. Bearing this, **the price elasticity of regular soft drinks is estimated as close to -1 in France**.

Overall, the **consumption of reduced-sugar soft drinks started to increase from 2019** by 20 (Kantar) to 25 (Euromonitor International) million litres per year, while the **decrease in consumption of regular soft drinks continued at a similar rate per year** (-45 million litres per year in 2014-2018 and -38 million litres per year in 2019-2021). It is important to point out that such reductions cannot be attributed to the SSB tax alone, as there has been (since 2015 at least) a more autonomous trend toward reduced sugar-based soda consumption.

The SSB tax has been undergoing evaluation since its 2018 modification. Previous studies provided mixed results regarding health effects, with **limited impact on children's consumption and body mass index (BMI)**. The cumulative health impact remains uncertain, influenced by various factors, both direct and indirect, on consumer demand and supply.

Lower-income households spend about EUR 14 per year more on soft drinks in absolute terms than households in the second income quintile, due also to higher consumption levels of soft drinks in this income group – particularly so in households with children.

Poland

The Polish SSB tax is a recent (2021) initiative that appears overall to be amongst the more **effective and efficient** schemes of its kind. Though **revenue generation** was not a main driver, the Polish SSB tax has nevertheless generated in 2021 EUR 322.7 million (0.056% of GDP) for the state income, making up 1% of total government health expenditure in 2021. In absolute terms, these revenues are among the highest within the EU.

When it comes to triggering behavioural change, the Polish SSB tax appears to be overall effective in its design. First the tax appears to have been **passed on to consumers at a rate of 107%** - though varying strongly between the products concerned. **The price elasticity of soft drinks is estimated at -1.35** based on HBS 2015 data. The volumes of regular soft drinks and nectars dropped sharply in the year of the SSB tax introduction in 2021, though one needs to take the effects of the COVID-19 pandemic into account as well.

With regard to **product reformulation**, various sources point towards a significant drop in the proportion of beverages that contained >5 g of sugars/100 ml following the introduction of the tax, which led to a clear reduction in sugar content. Overall the implied reduction of **daily sugar intake** dropped by 1.4 grams per day, with the note that health authorities expect a reduction in particular of excessive sugar intake.

Concerning **affordability**, despite SSB consumption levels of lower income categories being relatively low (EUR 28 per capita compared to EUR 47 for highest income spending levels), the share of income used for buying soft drinks by them was higher (2.5%) than for highest income groups (0.7%). Expenditures on soft drinks (per equivalent size) have gone up for all income groups from 2010-2015.

4

Promoting prosperity in times of uncertainty: The contribution of tax systems to a competitive EU economy

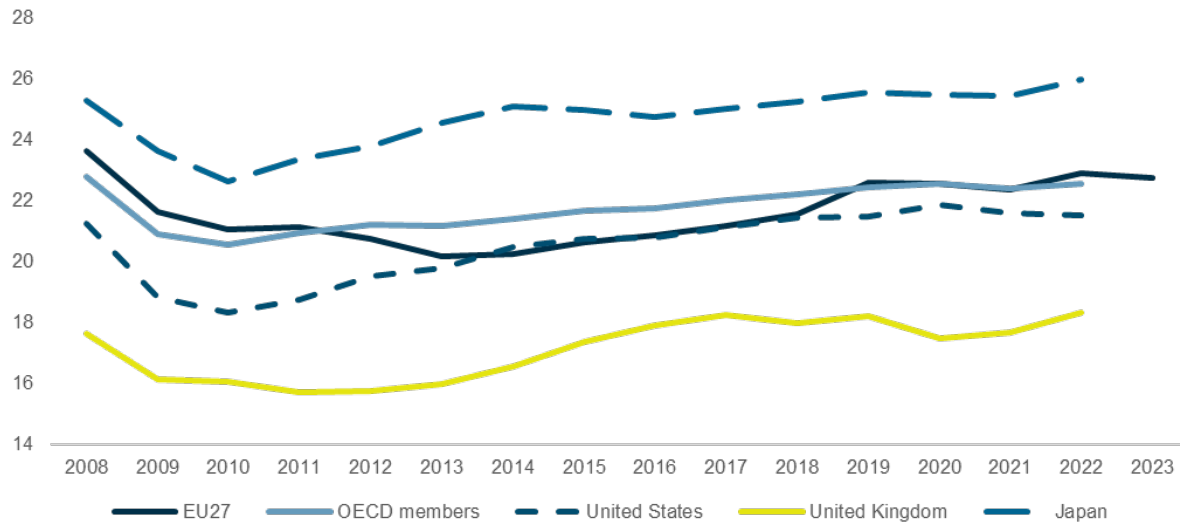
Tax systems in the EU are designed to underpin the principles of fairness, efficiency, simplicity and stability. The primary function of taxation is to collect revenue to fund societally shared services, that maximise citizens' wellbeing. Progressive taxation and redistribution, through social transfers and the provision of public goods, is a central policy approach to ensure fairer societies. The EU also promotes an inclusive and resilient economy by actively fighting against aggressive tax planning, tax evasion, and tax avoidance. In addition, tax policy can be part of the toolbox for increasing prosperity by fostering a thriving economic environment, thus helping to increase income and wealth that can be shared and distributed within the economy. This chapter specifically focuses on the contribution of tax systems to a competitive EU economy, as a way to create fair opportunities and raise living standards for all Europeans.

Tax policy and tax systems are essential components for achieving a competitive and dynamic European economy. However, the direct and indirect links between taxation and competitiveness are many and complex. While taxation ensures government revenue to finance essential infrastructure and public services, well-designed tax policies also help to incentivise investment and human capital accumulation, fostering economic growth and protecting the EU's competitive edge. In addition, a stable, predictable and simple tax system is critical for fostering innovation. Section 4.1 will look at the concept of competitiveness, and how it relates to increasing living standards and wellbeing. Section 4.2 will specifically focus on the relation between taxation and competitiveness, also looking at how corporate taxation and labour taxation can affect specific determinants of economic growth such as investment and labour-market outcomes. Section 4.3 will cover selected tax-policy tools and specific tax measures, that help to ensure the EU economy remains competitive amidst long-term structural challenges.

As a series of severe crises hit the EU in recent years, its competitive strength has been put under pressure. The COVID-19 pandemic dragged down GDP, and just as the recovery had set in, the EU was faced with a severe energy crisis which led to inflation levels that had not been seen in decades. High energy prices in turn had a strong cost impact on many businesses, and in particular for the more energy-intensive ones.

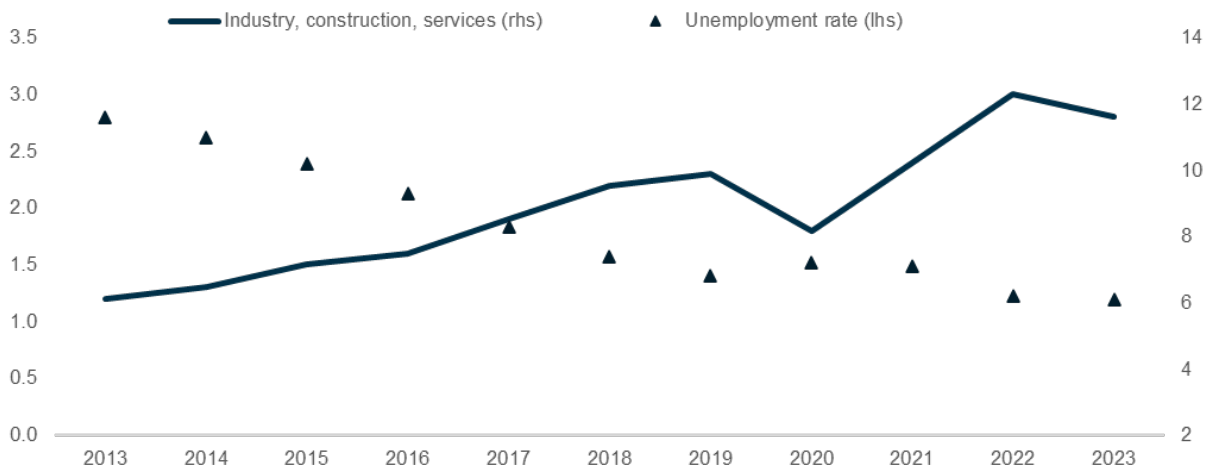
The macroeconomic situation shows a mixed picture. In the EU, real GDP grew by 3.4% in 2022 but it slowed down to 0.5% in 2023, in parallel with a decline in labour productivity (both per person and per hour worked). The level of investment in the EU stood at 22.7% of GDP in 2023, a very slight decline from 22.9% of GDP in 2022 (see Figure 57). Despite this slowdown in economic growth, the EU labour market remained resilient and continued to perform strongly in the first half of 2023, with particularly sustained employment growth in the construction sector and in IT-related services. In the second quarter of 2023, the unemployment rate reached a new record low of 6% of the active population. However, labour-market tightness persists with firms experiencing labour shortages at historically high levels (see Figure 58).

Figure 57: Gross fixed capital formation as a % of GDP, 2008-2023



Source: Eurostat ([sdg_08_11](#)) and World Bank database

Figure 58: Vacancy rate and unemployment rate (%), EU-27, 2013-2023



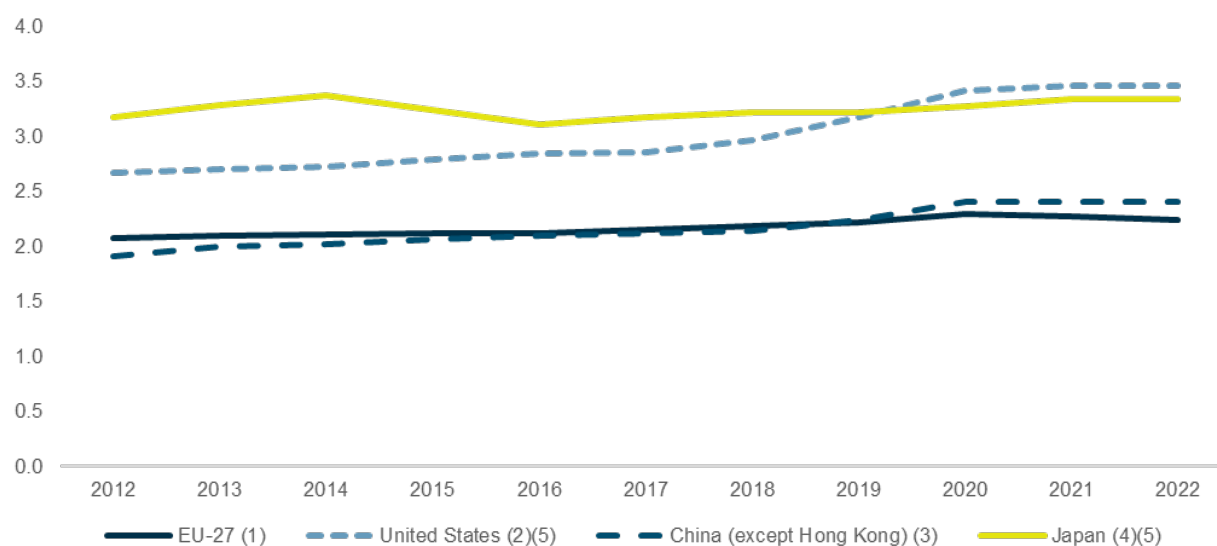
Source: Eurostat ([jvs_a_rate_r2](#) and [tipsun20](#))

Note: The vacancy rate is calculated as follows: number of job vacancies / (number of occupied posts + number of job vacancies) * 100. NACE 2 activities, B-S (Industry, construction, and services (except activities of households as employers and extra-territorial organisations and bodies)).

Productivity growth in the EU has been lagging. Since the mid-1990s, average productivity growth in the EU has been weaker than in other major economies (European Commission, 2023g), and new challenges for European competitiveness have emerged e.g. in the context of the twin (green and digital) transitions and the current geopolitical tensions. European firms are facing persistent cost disadvantages, aggravated by the energy crisis and the shortening of global value chains. The EU is also vulnerable to supply-chain disruptions, in particular for products for which the EU has a dependency, such as raw materials, batteries and semi-conductors, to quote just a few. In addition, The EU has also been suffering a long-standing gap in total factor productivity (TFP) growth and its innovation performance compared with the US, while new actors such as China have been catching up rapidly in sectors that are key for future productivity growth and innovation. Part of the TFP growth

gap between the EU and the US is due to a lower weight in the EU economy of sectors where TFP growth is particularly strong, notably ICT industries and digital services. In parallel, an innovation gap is becoming visible not only in terms of innovation performance and global presence in key industries, but also in terms of the availability of skills and human capital. The EU also remains well behind the US and Japan in R&D spending as % of GDP (see Figure 59), and has been recently overtaken by China in this area. This is to a large extent due to a significantly lower spending on R&D in Europe’s business sector, with remarkable differences across individual EU Member States (see also Section 4.3).

Figure 59: Gross domestic expenditure on R&D (% of GDP), 2012-2022

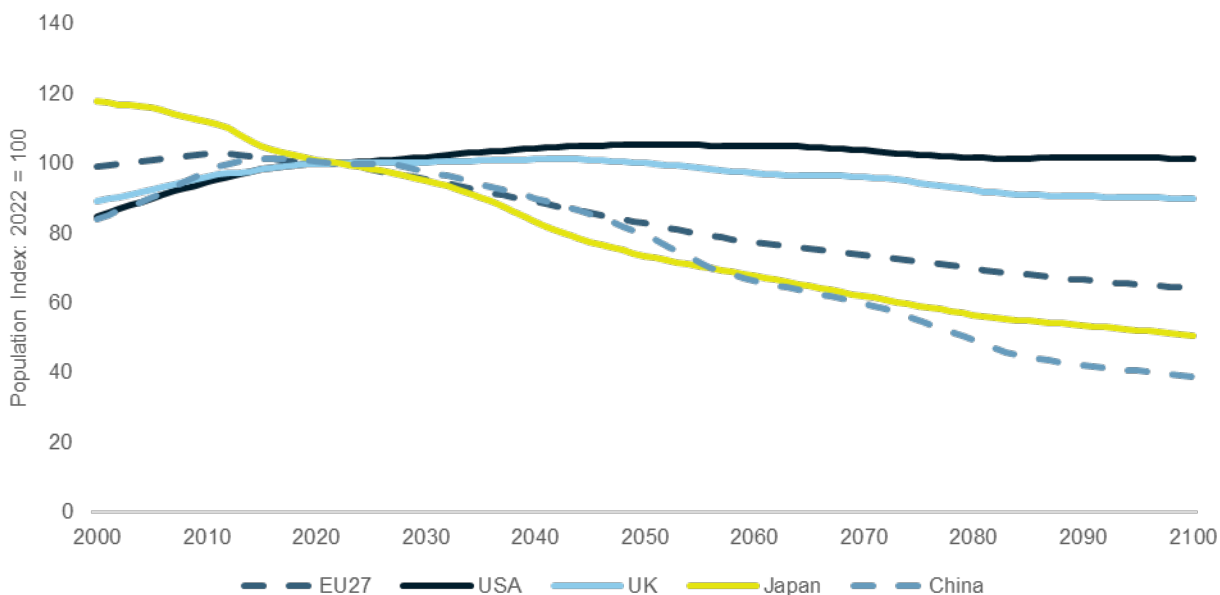


Source: Eurostat ([rd_e_gerdtot](#)) and OECD database

Notes: (1) 2012 and 2022: estimates; (2) Excludes most or all capital expenditure, definition differs: 2012-2021; (3) 2020 instead of 2021 and 2022; (4) 2013 and 2018: break in series; (5) 2021 instead of 2022.

The future performance of the EU economy is challenged by megatrends such as ageing, digitalisation, climate change and geopolitical shifts. The EU’s population is ageing, due to longer life expectancies and lower fertility rates. According to current projections, the EU’s population will start declining by 2030, even taking into account migration trends. Demographic ageing is set to bring about an imminent and significant change in terms of human capital. On 1 January 2023, the median age of the EU’s population reached 44.5 years and is projected to reach 48.2 years in 2050. This phenomenon also affects other global competitors, like China and Japan, but not the US (see Figure 60). Moreover, technological advancement and digitalisation are reshaping labour markets, enabling new ways of work to be created but requiring specific digital skills. The problems of climate change and environmental degradation are now more pressing than ever. Climate change will bring more frequent and more severe extreme weather events. This will impact all economies, disrupting production (especially in agriculture) and supply chains, increasing the cost of infrastructure and insurance. The green transition is costly, as convergence towards net-zero emissions and the need for adaptation measures require new skills. Moreover, a shift in investment patterns will increasingly lead to stranded assets (i.e. investments in carbon-intensive assets, such as those for fossil fuel extraction, will lose their value) in the coming decades.

Figure 60: Projected evolution in working age population (20-64), EU and selected competitors, 2000-2100 (2022=100)



Source: UN database

In this context, preserving European competitiveness and prosperity is a top priority on the EU policy agenda. The 2023 State of the Union address by President von der Leyen identified three major economic challenges for EU industry in the year ahead: labour and skills shortages; inflation; and making it easier for EU companies. The European Council conclusions of 17-18 April ⁽¹⁰⁸⁾ and the Council Conclusions of 24 May ⁽¹⁰⁹⁾, together with the report of Enrico Letta on the future of the Single Market ⁽¹¹⁰⁾, have brought strong momentum to further boost the Single Market. The report highlights that, despite recent progress, tax fragmentation remains an important barrier for EU businesses and SMEs, in particular. Tax policy has an important role to play in supporting EU prosperity as taxes can provide incentives to workers, businesses and investors. The twin transitions will require EU Member States to invest (including in research and development) and develop new economic models to remain competitive. Those large investment needs will not be met by the public sector alone, and tax policy can help to incentivise private investment. At the same time, tax revenue supports the financing of high-quality public services (such as education, research, infrastructure and healthcare) that contribute to a well-functioning and thriving economy. An efficient and predictable taxation system, delivering stable revenues in a fair manner, is one of many important elements needed to ensure a competitive social market economy in the EU.

4.1 What is meant by ‘competitiveness’ and how do we measure it?

There is no single definition of competitiveness. Competitiveness is a complex and multifaceted concept, encompassing various dimensions that collectively determine the ability of a country, a region or firms to succeed in a market which may be local, regional or global. Although the notion of competitiveness is widely referred to in

108 European Council conclusions, 17 and 18 April 2024, available at <https://www.consilium.europa.eu/en/press/press-releases/2024/04/18/european-council-conclusions-17-and-18-april-2024/>

109 Council conclusions, 24 May 2024, available at <https://www.consilium.europa.eu/en/press/press-releases/2024/05/24/council-adopts-conclusions-on-the-future-of-the-single-market/>

110 *Much more than a market – Speed, Security, Solidarity*, April 2024 (Letta, E., 2024).

the economic debate, there is no consensus among managers, policy makers and academics about how to define and measure it. Competitiveness can have different meanings depending on whether one refers to individual firms, to groups of firms, to economic sectors, to all economic activities within a region, to an entire national economy, or to a group of economies encompassing several countries. Although the competitiveness of an individual firm is usually related to its ability to enter and remain profitable in markets (at least in the medium term), the competitiveness of a country refers instead to its competitive strengths and weaknesses in the international market or in comparison with other countries, as a result of the set of institutions, policies and factors that determine its level of productivity (World Economic Forum, 2019).

Achieving a ‘competitive’ economy is not an end in itself, but an enabling condition to ensure sustainable growth and shared prosperity. In a much-discussed article, Paul Krugman stated that “*competitiveness is a meaningless word when applied to national economies*” (Krugman, 1994), as countries do not compete with each other the way corporations do. His argument was that long-term growth comes from raising productivity, which benefits everyone, rather than through trying to improve each relative position against others. More recently, competitiveness has been associated with the attributes and qualities of an economy that allow for a more efficient use of factors of production (World Economic Forum, 2019). A narrow focus on economic growth without an equal focus on making growth inclusive and environmentally sustainable has often resulted in negative societal outcomes (e.g., accelerating climate change and deepening inequality) rather than contributing to the overarching goal of improving living standards. The 2019 edition of the Global Competitiveness Report emphasises that strengthening competitiveness must be compatible with shared prosperity, greater equality and environmental sustainability.

Cost competitiveness is receiving renewed attention amid the recent high rates of inflation. Inflation differentials can give rise to competitiveness concerns, especially in a common currency area such as the eurozone, where depreciation of the nominal exchange rate is not an option. If increases in aggregate wages fully or partially compensate for the loss in purchasing power of workers, these wage increases will be reflected in higher unit labour costs unless they are offset by productivity increases. The EU has been marked by significant cost and price pressures over the past two years, with strong and divergent dynamics. Unit labour costs have been rising markedly across the EU amid high inflation and tight labour markets ⁽¹¹¹⁾. However, in a floating exchange rate regime as is faced by the EU vis-à-vis its trading partners, such concerns are less pronounced. Hence, although cost competitiveness is critical for companies and industries, it cannot be thought about in exactly the same way at the level of countries. When looking at EU competitiveness it is therefore important to move towards broader concepts which look at productivity, sustainability, and the single market, as Mario Draghi highlighted in a recent speech ⁽¹¹²⁾.

The EU follows a broader approach to competitiveness. Economic competitiveness has long been one of the key political priorities of the EU ⁽¹¹³⁾. The European Commission communication “*Long-term competitiveness of the EU: looking beyond 2030*” ⁽¹¹⁴⁾ considers that sustainable competitiveness is built on productivity growth, environmental sustainability, macroeconomic stability and fairness (European Commission, 2023g). The communication identifies nine competitiveness drivers: (i) the functioning of the single market; (ii) access to private capital; (iii) public investment and infrastructure; (iv) research and innovation; (v) energy; (vi) circularity; (vii) digitalisation; (viii) education and skills; and (ix) trade and open strategic autonomy. The Annual Single Market and Competitiveness Report tracks yearly developments according to the nine competitiveness drivers and details the competitive strengths and challenges of the Single Market. Since 2010 the EU has also produced its own competitiveness ranking, which assesses competitiveness at regional level. The Regional Competitiveness Index

111 Alert Mechanism Report 2024 (European Commission, 2023n).

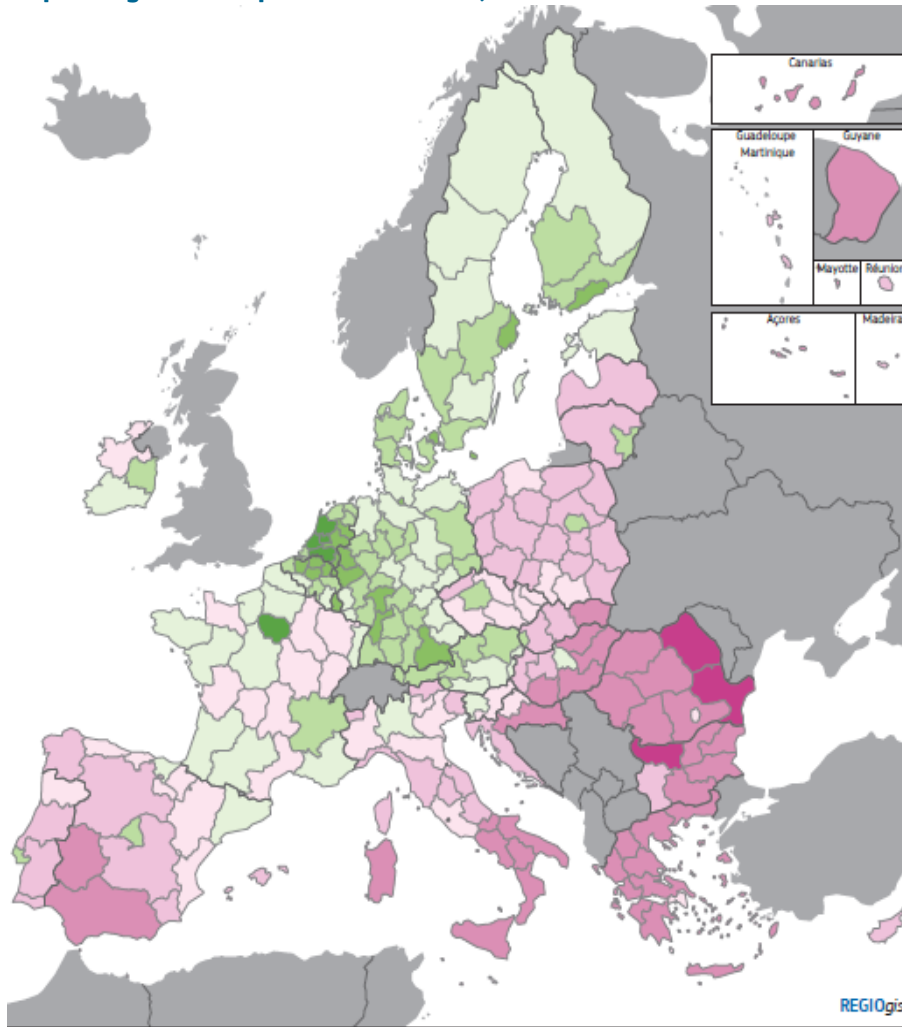
112 M. Draghi: Speech at the High-Level Conference on the European Pillar of Social Rights, Brussels, 16 April 2024. <https://belgian-presidency.consilium.europa.eu/media/v1mhgwtw/20240416-draghi-speech-la-hulpe-16-april-as-delivered-clean.pdf>

113 The EU’s Lisbon Strategy (2000) set the ambition for the EU “to become the most competitive and dynamic knowledge-based economy in the world” by 2010.

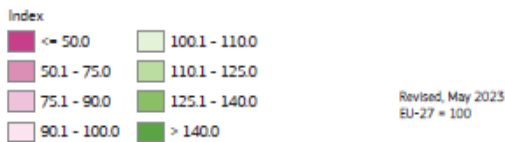
114 COM(2023) 168 final

covers the NUTS-2 level regions across the EU, and uses three sub-indices – ‘Basic’, ‘Efficiency’ and ‘Innovation’ (115). The 2022 edition of the EU Regional Competitiveness Index 2.0 (European Commission, 2023m) defines regional competitiveness as ‘the ability of a region to offer an attractive and sustainable environment for firms and residents to live and work’. According to the index, Member States with the highest regional competitiveness are the Netherlands, Belgium, Luxembourg, Denmark and Sweden (see Map 2), while capital regions perform above average in most Member States.

Map 2: Regional competitiveness index, 2022



Regional Competitiveness Index 2.0, 2022 edition



Source: [EU Regional Competitiveness Index 2.0 - 2022 edition](#)

115 The ‘Basic’ sub-index refers to the key basic drivers of all types of economies. It identifies the main issues that are necessary to develop regional competitiveness and includes five pillars: (1) ‘Institutions’, (2) ‘Macroeconomic stability’, (3) ‘Infrastructures’, (4) ‘Health’ and (5) ‘Basic education’. The ‘Efficiency’ sub-index includes three pillars: (6) ‘Higher education, training and lifelong learning’, (7) ‘Labour market efficiency’ and (8) ‘Market size’. The ‘Innovation’ sub-index includes the three pillars that are the drivers of improvement at the most advanced stage of economic development: (9) ‘Technological readiness’, (10) ‘Business sophistication’ and (11) ‘Innovation’.

Ultimately, a competitive economy is an economy that is able to improve living standards for its people. The approach to competitiveness that will be used in the remainder of this chapter is based on the assumption that a boost in EU competitiveness enables the European economy as a whole to create employment, innovation and prosperity. The tax system plays a pivotal role in this respect, through its essential revenue-generation function. Tax policy also influences short- and long-term competitiveness drivers such as investment decisions, labour market outcomes, research and innovation incentives, price signals, business environment and overall economic performance. Simple, clear, predictable and transparent tax rules, as well as an effective tax design, are important elements/ingredients to unlock the competitiveness potential of the EU. Zooming in on selected tax measures can illustrate how taxation affects EU competitiveness in practice. Those aspects will be covered in Section 4.2 and 4.3. Taxation is one of several other elements that can affect competitiveness in this broader sense.

4.2 The complex relation between taxation and competitiveness

4.2.1 General aspects, synergies and trade-offs

The role of taxation for competitiveness is multifaceted and needs to be viewed in a broader context.

As outlined above, competitiveness and growth are closely related. The impact of taxation on growth has been studied extensively. The tax system, especially in modern and intertwined economies, is not neutral. Taxes change relative prices, which in turn alter the behaviour of economic actors' behaviour, be they producers, investors or consumers. An OECD study (Myles, 2009) looked at the economic modelling of growth and the theoretical evidence for the link between taxation and growth. In particular, the study highlighted: (i) the impact of corporate taxation on the return to innovation and on R&D spending; and (ii) the impact of personal income taxation on the accumulation of human capital. At the same time, the way taxes are designed is as important or can even be more important than the level of taxation for economic activity and growth. Therefore, a closer look at how tax design can be used to drive productivity-enhancing investments and innovation can further inform policy choices. However, tax choices also imply trade-offs with fairness and sustainability considerations. It is therefore of paramount importance to carefully consider such implications when designing tax systems.

Traditional economic theory stipulates that, to maximise social welfare, taxes should minimise distortions to the decision-making of economic agents. While social welfare corresponds to the sum of individuals' utility, it is difficult to measure, and is sometimes approximated by GDP or related measures. Taxes influence behaviour and therefore choices about production and consumption. For example, choices can be made between: (1) different goods, (2) doing something (e.g. consuming) today or doing it tomorrow (an 'intertemporal' choice), and (3) working more or less, (i.e. choosing between income and leisure). Any tax reduces disposable income, but taxes can distort and weigh differently on these choices and hence on economic activity and growth, and lead to the so-called deadweight loss (Musgrave, 1989; Auerbach and Hines, 2002). From an efficiency perspective, taxes should minimise allocative distortions between goods to maximise welfare. However, fairness considerations also need to be taken into account.

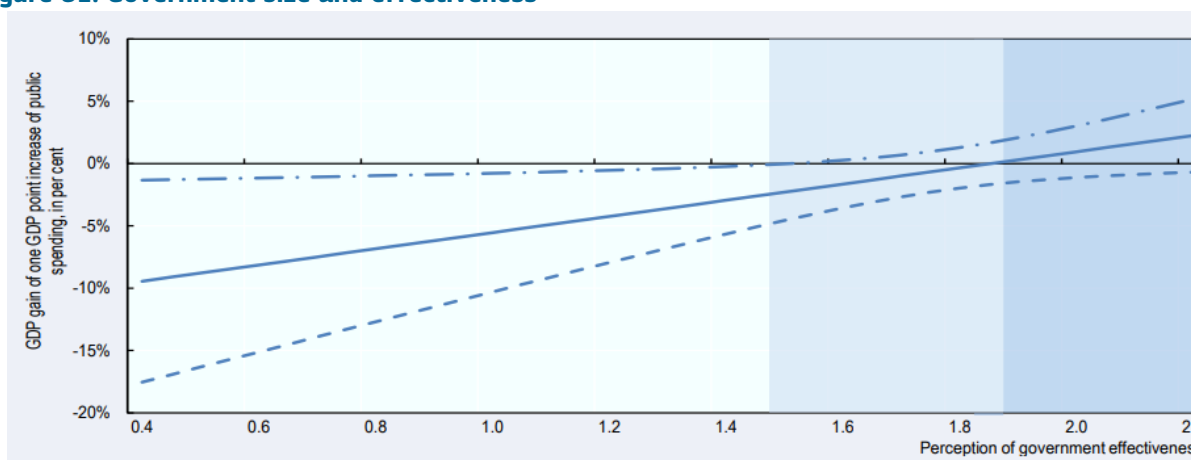
There is an extensive debate on how the tax mix (i.e., the distribution of overall tax revenue across different tax sources) and tax design affect the economic performance of a country. Theory and empirical evidence provide insights into an optimal tax mix and tax level. Tax policies are usually considered to be growth-friendly if they rely on taxes that are less distortive of economic activity and are supportive of employment and investment (Kiss et al., 2024). However, the existing literature shows that the empirical evidence on the relationship between revenue-neutral tax shifting and growth varies significantly and can be somewhat contradictory (¹¹⁶). According to some authors (Johansson et al., 2008); (Arnold, 2008); (Arnold et al., 2011) and

¹¹⁶ Tax revenues are determined by the tax rate and tax base. For lack of better data it is generally tax revenues which are used to analyse the relation between taxes and growth. Potential different rate and base effects are often confounded which may explain why the academic literature on this topic presents contradicting results.

more recently Şen and Kaya (2023) a shift from direct to indirect taxation is associated with higher long-run economic growth. Xing (2012) suggested that shifting tax revenues to property taxes might be associated with higher GDP per capita in the long term. In turn, Di Sanzo et al. (2017) and Baiardi et al. (2019) challenge the view that a shift from direct to indirect taxation is associated with higher long-run economic growth. A study by Arachi et al. (2015) finds that tax structure by tax type and GDP per capita does not have a robust long-run relationship, but that short-run effects are observed with revenue-neutral tax shifts. A recent econometric analysis (Piroli and Peschner, 2023) supports the idea that a reduction of the share of labour taxes in total tax revenue (under the condition of revenue neutrality) is positively associated with higher output growth in the long term. Any tax shift should consider the potential impact on the progressivity of the system and be designed in a way that mitigates possible negative impacts on the more vulnerable.

A high level of overall taxation is not always found to hamper economic growth if it is coupled with an efficient use of revenues. Research suggests that there can be trade-offs between equity and efficiency, but that any negative effects of a higher tax burden on growth can be – and increasingly are – offset by a higher quality of government (OECD, 2018). Figure 61 shows the respective regression results. Specifically, it shows the percentage GDP gain associated with a 1 pp increase in public spending, depending on perceived government effectiveness (with the dashed lines indicating the 95% confidence interval) (Fournier and Johansson, 2016). Trust in government nurtures tax compliance, and is an important condition required for the successful execution of the social contract on which taxation and solidarity are founded. An OECD study (OECD, 2019) finds that countries with high ratios of tax to GDP ratios have higher tax morale. This may be indicative of a virtuous circle between effective government performance, higher tax morale and voluntary tax compliance; or evidence of a willingness to pay tax by citizens in return for effective public services. This is exemplified by the Nordic countries, where an elevated level of taxation goes hand in hand with high level of competitiveness. Denmark and Sweden (with a tax-to-GDP ratio in 2021 of respectively 48.8% and 43.5%) ranked first and fourth, in the 2022 World Competitiveness Ranking⁽¹¹⁷⁾. Generally, a large share of public investment in total government spending is associated with higher growth. Of course, the precise nature of public investment also matters. It also matters whether public investment delivers benefits to the economy that are greater than the economic activity permitted by the absence of the respective taxes.

Figure 61: Government size and effectiveness



Source: (OECD, 2018).

Tax competition can exacerbate the impact of globalisation on inequality. Looking at the impact of higher trade and factor mobility on relative tax burdens in OECD countries, a study from Egger, et al. (2019)

117 IMD World Competitiveness Ranking 2022, available at: <https://www.imd.org/centers/wcc/world-competitiveness-center/rankings/world-competitiveness-ranking/>

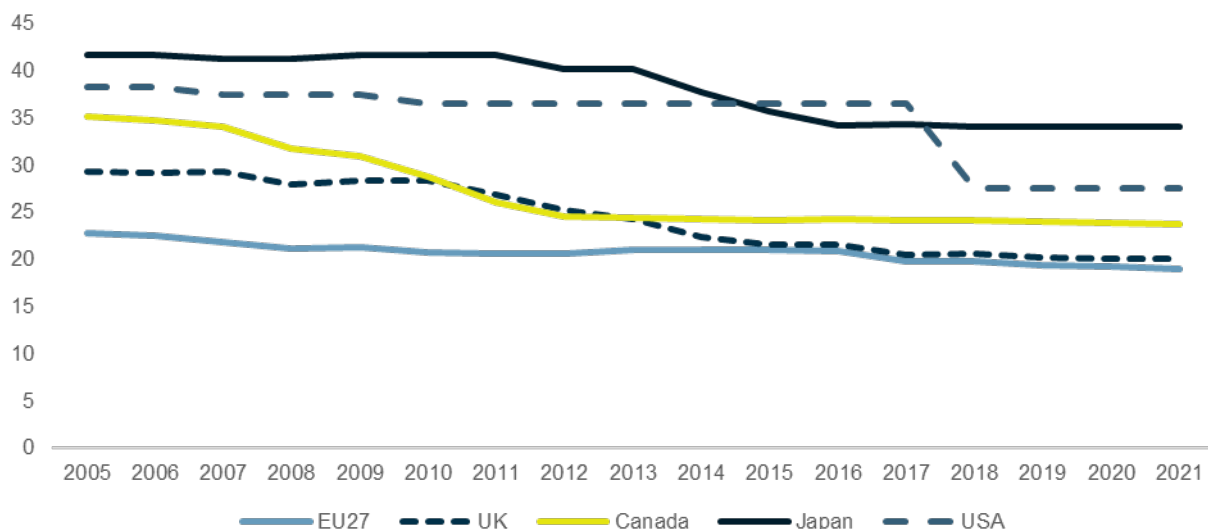
shows a globalisation-induced rise in the labour-income-tax burden of the middle class after 1994, while the top 1% of workers and employees faced a reduction in their tax burden of 0.59–1.45 percentage points. Recent research on the welfare effects of tax competition also goes in that direction, suggesting that individuals in the bottom 50% of the income distribution may experience a welfare loss ranging on average from -10% to -20%, depending on the redistributive tastes of the government and the strength of mobility responses to taxation. By contrast, higher income earners would typically benefit from tax competition (Muñoz, 2023).

4.2.2 The role of capital and corporate taxation

High corporate tax rates have historically been identified as harmful. Large parts of the literature on how capital taxation affects growth originate from Judd (1985) and Chamley (1986), who use standard neoclassical growth models to claim that the taxation of capital has substantial negative effects on the accumulation of capital, which is needed for investment and for driving technological change, and ultimately on output. Taking a different view, some scholars have argued that capital taxes, on the other hand, may reduce the under-accumulation of human capital compared to physical capital, and help address capital and insurance market failures (Bastani and Waldenström, 2020). Johansson et al. (2008) concluded that corporate taxes are the most harmful for growth, followed by personal income taxes, and then consumption taxes. In particular, Johansson et al. (2008) find that lowering corporate taxes may raise total factor productivity (TFP) growth, especially for the most dynamic and innovative firms. They warn, however, that lowering the corporate tax rate substantially below the top personal income tax rate can jeopardise the integrity of the tax system as high-income individuals will attempt to shelter their savings within corporations.

Corporate tax rates have substantially decreased in recent decades. Over the last 30 years and encouraged by the argument that taxing capital harms growth (combined with the argument that capital is highly mobile), top statutory CIT rates have significantly declined, falling by as much as 30 pps in the period 1995–2022 (for a detailed country-level analysis, see Chapter 3), not just in the EU but also in other advanced economies (see Figure 62). Recently, Bachas et al. (2022) also showed that globalisation has led to lower effective capital tax rates in developed countries.

Figure 62: Effective average tax rate (EATR), selected economies, 2005–2021



Source: European Commission, DG Taxation and Customs Union, based on ZEW data

Recent research suggests a weak empirical connection between corporate tax rates and economic growth. A meta-analysis (Gechert and Heimberger, 2022) suggests that there is a publication bias in favour of reporting statistically significant growth-enhancing effects of corporate tax cuts and that, correcting for this bias,

the hypothesis of a zero effect of corporate taxes on growth cannot be rejected. According to a recent econometric analysis (Piroli and Peschner, 2023), an increase in the share of corporate taxes in the total tax mix under the condition of revenue neutrality does not appear to have a negative effect on long-term growth. This conclusion may also be related to the fact that corporate tax rates have fallen considerably in recent years, weakening their influence on growth determinants.

Nevertheless, corporate tax policy has often been used to influence business investment and attract inward investment. Economic literature has often argued in the past that lower effective taxation reduces investment costs, and that this in turn increases investment. If a country's domestic tax burden is high relative to other countries, it is often assumed that the tax base may shift to countries with lower taxes, implying outward flows of foreign direct investment (FDI), while controlling for other country characteristics that may impact investment decisions (e.g. institutional capacity and the rule of law). FDI encompasses real capital allocation and includes financial flows like mergers and acquisitions. A meta-study by Feld and Heckemeyer (2011) estimated the median tax semi-elasticity of FDI (the reaction of FDI to a 1 pp change in the tax burden) at 2.5 pps in absolute terms.

Economists' assessment of the relationship between corporate taxation and investment is evolving, with recent evidence showing a more nuanced impact of corporate tax on investment. In the last couple of decades, the cost of capital has been significantly and steadily decreasing, reflecting a historical fall in both interest rates and corporate tax rates. However, productivity growth during this time has remained subdued (see Section 4.1). This raises the question of whether business investment still responds to the cost of capital and to what extent corporate tax policy can support investment. A recent OECD study (Hanappi et al., 2023) found that there is significant heterogeneity in firms' investment responses to corporate taxation. In particular, the authors argue that after the global financial crisis, large firms, firms that are part of multinational groups, firms that have a large proportion of intangibles in their total fixed assets, and firms that are highly profitable have become less sensitive to taxation compared with other firms. The study also finds that the tax sensitivity of old firms decreases over time compared with young firms. The findings of this OECD study also suggest that changes in corporate taxation that result in higher effective tax rates (ETRs) reduce investment less now than before the global financial crisis.

More research is needed on the impact and possible unintended consequences of tax incentives on investment decisions. There is a considerable literature on the effect of tax incentives in stimulating investment⁽¹¹⁸⁾, for example. It is well established that tax incentives can increase investment in R&D (see Section 4.3.2). However, the use of tax incentives increases the complexity of the tax code and can tilt the level playing field among companies, in addition to the budgetary implications caused by revenue losses. In the context of the Single Market, the uncoordinated use of tax incentives can lead to harmful tax competition if not accompanied by effective anti-fragmentation tools. Also, if the corporate tax system does not ensure a level playing field between foreign multinational companies and domestic firms, there is a risk of increasing industry concentration and declining competition within the Single Market, with a negative impact on employment and prices. The implementation of the Pillar Two Directive⁽¹¹⁹⁾, which ensures a minimum effective tax rate for the global activities of large multinational groups, is expected to help tackle this risk. As with all policies, it is important that tax incentives are well designed and regularly monitored to ensure they are effective (they do what they were set out to do and target the right beneficiaries) and cost-effective (i.e. are they the most efficient way to achieve the objectives) in view of their fiscal impact and that they are consistent with existing policy goals

118 For example, Brown, E. C. (1962). Tax incentives for investment. *The American Economic Review*, 52(2), 335-345; Dinkelacker, E. W. (1964). Alternative Tax Incentives for Investment. *Journal of Political Economy*, 72(2), 184-188; Hall, R. E., and Jorgenson, D. W. (1967). Tax policy and investment behaviour. *The American Economic Review*, 57(3), 391-414; Boadway, R. (1978). Investment incentives, corporate taxation, and efficiency in the allocation of capital. *The Economic Journal*, 88(351), 470-481 and many others since.

119 Council Directive (EU) 2022/2523 of 14 December 2022 on ensuring a global minimum level of taxation for multinational enterprise groups and large-scale domestic groups in the Union.

(¹²⁰). Such regular assessment could improve the quality of tax support policies that aim at increasing competitiveness, growth, and prosperity. This is without prejudice to the State aid rules.

Accelerated depreciation is a type of tax support is used to help incentivise investment, including through the faster uptake of technology to support the green transition. Accelerated depreciation policies decrease the cost of new investments by allowing firms to deduct the new investments from their taxable income more quickly (see also Section 4.3). Research suggests that accelerated depreciation rules have large and significant effects on productive investment (Ohrn, 2019). In addition, such policies are being used to support the green transition (see chapter 2). The high-level report on the future of the Single Market highlights that targeted measures to support investment can also help to reduce fragmentation and contribute to a level playing field (Letta, E., 2024). Obviously, support to investment would likely need to be considered together with its fiscal impact and the available fiscal space.

In summary, corporate taxation can be a tool to support competitiveness. Recent literature suggests that the role of corporate tax rates in shaping the competitiveness of an economy has weakened in recent years. Even high rates of statutory corporate tax may not significantly weigh on growth if they are combined with measures that affect the tax base such as more generous capital allowances (e.g. via accelerated depreciation or immediate expensing). In any case, the impact of corporate taxation on economic growth is multifaceted and can vary depending on several factors such as the overall tax structure and tax level, as well as government efficiency and government-spending priorities. Striking a balance between generating revenue to support public investment and fostering a conducive environment for businesses to thrive is crucial in maximising the positive impact of corporate taxation on economic growth.

4.2.3 The role of labour taxation

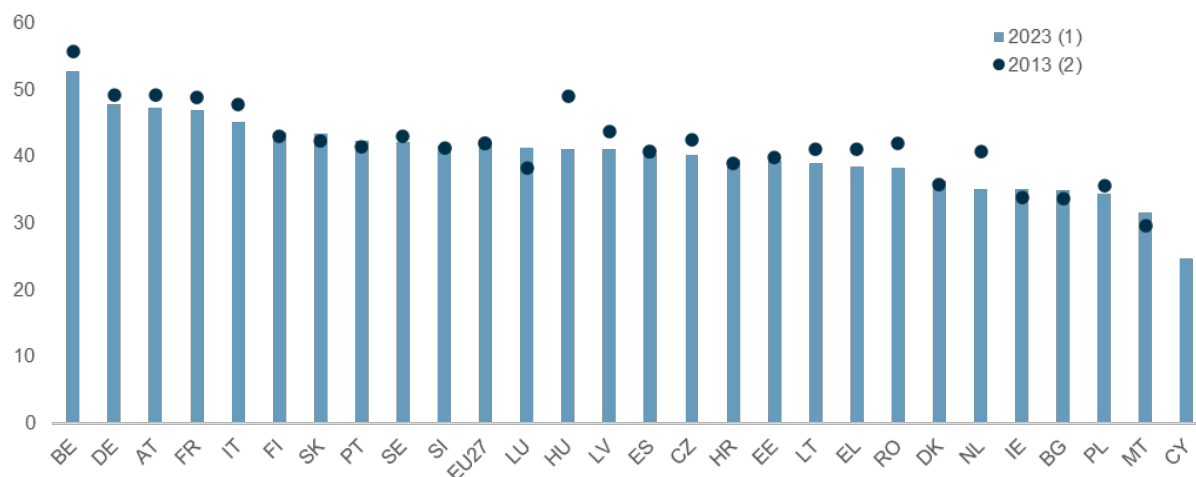
Labour taxation shapes labour market performance, which is a key determinant of competitiveness. Labour taxation is an important determinant of labour market performance, and it is therefore important to ensure that labour taxation does not unduly discourage labour supply. In particular, the labour tax wedge influences both labour supply and labour demand (see also Chapter 3). Individuals' decisions may be affected by the marginal taxation of labour regarding either the choice to enter the labour market (i.e., the extensive margin of labour supply) or the number of hours they decide to work (i.e., the intensive margin of labour supply) (¹²¹). From the employers' perspective, a higher tax wedge reduces hiring incentives as it increases labour costs. In this context, labour tax reforms can effectively strengthen work and hiring incentives, particularly for population groups that are still under-represented in the labour market. Raising labour market participation could contribute to reducing labour and skill shortages and counterbalance the effects of demographic change, in turn supporting competitiveness and promoting smart growth.

Labour taxes are relatively high across the EU. The size of the tax wedge varies significantly across Member States (see Figure 63). Despite recent declines in the past 10 years (on average of about 1.1 pps since 2013), the tax wedge (calculated for single persons at the average wage) remains high in the EU (an average of 41.6% in 2023 compared with 34.6% on average among OECD members in 2022, with the US, UK and Japan standing respectively at 30.5%, 31.5% and 32.5% in 2022). Since 2013, 16 EU Member States have recorded declines in the labour tax wedge, notably Hungary, the Netherlands and Romania. Conversely, in the same period, the tax wedge increased by more than 1 pp in Portugal, Ireland, Malta, and Bulgaria. In some countries, a high tax wedge for second earners is the result of family-based rather than individual-based taxation.

120 This in part stems from discussions held with Member States on tax expenditures in the context of the Expert group on Structures of Taxation Systems

121 See for example De Poli et al. (2023)

Figure 63: Tax wedge for a single person on average wage, 2023 and 2013



Source: European Commission, DG Taxation and Customs Union, based on DG Economic and Financial Affairs, Tax and Benefits database, and OECD tax/benefit model (updated April 2023).

Notes: (1) 2022 figure for SI, HR, BG, MT and CY. (2) 2013 data missing for Cyprus.

Changes in labour taxation can help to increase female labour supply. Partly as a result of the gender pay gap, women are more likely to be second earners in families. It has been estimated that the elasticity of women’s labour supply with respect to wages is high in absolute terms and tends to be higher for married women than for married men, although the elasticity has declined in recent years (Keane, 2022); (CPB, 2015) . These findings hold at both the extensive margin (the decision to take up employment) and the intensive margin (the decision about how many hours to work) but have been found to be higher at the extensive margin. A consequence of the high elasticity of female labour supply is that tax and transfer policies may particularly affect women’s employment and contribute to the gaps in labour supply between men and women (see also Chapter 3). An OECD analysis (OECD, 2024) has found that the average tax wedge for second earners was higher than for single workers in a majority of OECD countries and on average across the OECD in 2023. The differences were mainly due to joint taxation or the presence of tax reliefs (either allowances or credits) that were only available to one spouse or depended on joint earnings. Changes in tax design could therefore be a tool to promote greater gender equality while helping reduce labour shortages (Annual Report on Taxation 2023).

The importance of labour taxation can be seen in the increasing number of special taxation schemes.

Recent research suggests that certain segments of the labour market, especially high-income workers and people working in jobs that do not need to be location-specific, may be quite responsive to taxes in their decisions over where to live and work (Kleven et al., 2020). Across the single market, a growing number of Member States have introduced preferential tax regimes over the last 15 years to attract high-income or high-wealth individuals (Flamant et al, 2021) (see also Chapter 3). While some Member States may benefit from introducing these preferential regimes, they may result in a cost elsewhere. If such uncoordinated developments turn into harmful tax competition, they may considerably erode the tax base – and tax revenue – in other Member States. Beyond the revenue risks, preferential regimes could also undermine the progressivity of tax systems and violate the horizontal equity principle of taxation, i.e. that taxpayers with equal incomes face equal tax burdens.

The trend towards remote working could make the taxation of employees more complex, particularly in the EU.

The pandemic resulted in increased teleworking and technological developments are likely to further expand the use of remote working. In the EU, cross-border workers teleworking for part of their total working time may find their employment income taxable in both their Member State of employment and their Member State of residence. In addition, in certain circumstances, teleworking may lead to the company itself being taxable in the residence state of the cross-border worker, if the activity is judged to create a permanent establishment. At present, such situations are governed by bilateral tax treaties between individual Member States. In the short-

term, these developments may push Member States to look for more common rules that could be easily applied by remote workers and employers.

The absence of coordination for labour-taxation issues can create frictions. The tax systems of EU Member States are not designed by default to cope well with workers that work and reside in different countries. In addition, the wide differences between EU Member States in terms of the level of the tax wedge, its progressivity, and the split of social contributions between employers and employees present challenges in this regard (see Chapter 3). The levying of income tax and social contributions in cross-border situations adds further complexity and can lead to significant inconsistencies. The Commission services and the Member States are in technical discussions to better understand the issues and identify possible solutions.

4.2.4 Tax revenues supporting growth-enhancing public spending and investment

Effective collection of tax revenues is crucial to secure public financing capacity. Looking beyond the EU, a recent IMF paper (Benitez et al., 2023) focused on low-income countries shows that tax capacity — the policy, institutional, and technical capabilities to collect tax revenue — is essential for achieving progress towards the sustainable development goals, addressing climate change, and ensuring debt sustainability. Gaspar et al. (2016) have estimated that once a country reaches a tax revenue level of 12.9% of GDP (excluding social contributions), its real GDP per capita increases sharply and in a sustained manner over several years. Their interpretation is that revenue collection enables the State to fund public spending and improve the quality of market-supporting institutions. In this sense, tax capacity is a cornerstone of state capacity, which is shaped by the interaction between tax capacity, legal capacity, and public administration capacity. There are also indirect means through which tax capacity helps to strengthen state capacity. For example, a simple and fair tax system can support improvements in public-finance management and help build credibility among taxpayers that taxation is necessary to fund reasonably efficient and transparent programmes that private markets, left to their own devices, could not deliver.

Assessing the effects of tax increases on an economy requires a far-reaching approach. Some studies argue that moderate tax increases, particularly on high-income individuals and corporations, can fund essential public services and infrastructure projects, thereby fostering a supportive environment for long-term economic growth. For example, Aghion et al. (2016) suggested that the overall effects of taxation on growth depend on how the taxation affects the provision of public goods (public infrastructure, education and schools, legal system, etc). A study by Diamond and Saez (2011) builds on the concept of optimal taxation and makes the case for tax increases on high-income individuals and for significant taxation of personal capital income.

Reducing tax uncertainty is conducive to a more growth-friendly environment. Tax uncertainty can arise from several sources, generally linked to weaknesses in the institutional framework of tax policy, at domestic and international level. At the domestic level, typical sources of uncertainty are the lack of precision in the tax code and frequent tax changes. At the international level, the existence of different tax systems unavoidably generates uncertainty for cross-border investments. Zangari et al. (2017) reviewed the empirical literature on the effects of tax uncertainty and find a sizeable negative relationship between tax uncertainty and economic outcomes, although still limited due to the complexity of measuring tax uncertainty. Some studies (e.g. (Taylor and Richardson, 2014)) also suggest a positive association between uncertainty in firms' tax bills and corporate tax avoidance. According to Zangari et al. (2017), tax certainty can be improved through policy initiatives at both the domestic and international level. Their research highlights that at the domestic level, the key aspects to consider when seeking to increase tax certainty are the simplification of the tax system and the features of the process used to create tax law. At international level, they suggest that the best policy solution for increasing tax certainty is to increase cooperation on tax matters.

The tax system helps to enable investment in human capital and skills. Raising education outcomes and skills levels is crucial for ensuring sustainable economic growth rates and building economies that can provide employment and prosperity. Creating incentives to invest in skills across society is a key component in lifting

competitiveness by expanding productivity levels across the economy (European Commission, 2020)⁽¹²²⁾. Investment in education may also generate positive cross-country spillovers if, by expanding the world technological frontier, it allows other countries to reach a higher productivity level (Woessmann, 2016). The tax system impacts the ability of individuals to develop skills in a variety of ways. The revenues that taxes raise can be used to finance direct investments in education and skills. The tax code can treat labour income and capital income differently, and this can create incentives to invest in physical instead of human capital. Equally, the tax system can impact the financial incentives of individuals to develop, activate and use their skills efficiently in the labour market. An OECD study (OECD, 2017) finds that governments recover the costs of their investment in tertiary education on average through higher tax revenues on higher wages from more highly skilled workers, as the extra income taxes paid over the lifetime of an average student more than cover government costs of educating that student. The tax system can also reduce the costs of skills investments through tax expenditures which provide targeted tax relief to students, often based on income levels and education costs.

4.3 Tax policy tools: practical examples

For the EU to retain its competitiveness, action is needed from both the public and the private sectors. As pointed out in the Commission Communication on ‘An Action Plan for Fair and Simple Taxation Supporting the Recovery Strategy’⁽¹²³⁾, growth-friendly tax systems can support private investment and improve the business environment, encourage employment, reduce inequalities and contribute to an environmentally resilient economy. Moreover, simplifying the tax system can help limit economic distortions and reduce the administrative burden for companies.

4.3.1 Enabling a growth-friendly tax shift

Long-term structural challenges will impact the tax mix. There is broad consensus on the need to shift the tax burden away from labour, especially as the impact of megatrends threaten to challenge the revenue-generation capacity of labour taxation (see also Chapter 1). In addition, adequate revenues help to face the increase in public spending needed to manage an ageing population and support the twin digital and green transitions. In recent years, the idea of shifting the tax burden away from labour towards other tax bases has been widely debated by researchers and policymakers. Recent EU country-specific recommendations have advocated a greater use of recurrent taxes on immovable property and a shift in some of the tax burden away from labour income, including a reduction in the labour tax burden of low-income taxpayers (Kiss et al., 2024). Recurrent immovable property taxes are considered one of the most economically efficient forms of taxation, given that the tax base is highly immobile, which limits the scope for behavioural responses to the tax (OECD, 2022). By reducing taxes on labour, including social contributions, the cost of hiring is lowered for employers, potentially leading to increased employment opportunities and reduced labour market rigidities (see for example Torres (2022)). When shifting away from labour taxation, it is essential to ensure that social security systems remain adequately funded to support the welfare of the public. To that end, tax incentives for social economy organisations can in some cases be justified and beneficial, as outlined in the *Council Recommendation on developing social economy framework conditions*⁽¹²⁴⁾.

A shift in the composition of tax bases could encourage long-term economic growth. Shifting taxation from labour to consumption could help to address the dual challenges raised by labour shortages and the need to ensure sustainable public finances. Personal capital income taxation may also contribute to the tax shift, for example through a shift towards more stringent capital gains taxation, inheritance taxation or wealth taxation.

122 See also *Investing in Human Capital – Assessing the efficiency of public spending in education*. Technical note prepared by European Commission staff for the Eurogroup of 6 November 2017, available at: https://www.consilium.europa.eu/media/31409/investment-in-human-capital_eurogroup_31102017_ares.pdf

123 COM(2020) 312 final

124 Council Recommendation of 27 November 2023 on developing social economy framework conditions (C/2023/1344), available at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023H01344>

Guvenen et al. (2023) find that wealth taxation can be a more desirable alternative to capital income taxation, as it has the potential to improve aggregate productivity, generate redistributive gains, and improve welfare. Some research suggests that shifting the tax burden from labour towards wealth or net wealth could also support inclusive growth and equality of opportunity, while compensating for the reduction in labour tax revenues⁽¹²⁵⁾. Taxes that relate to externalities or the scarcity of resources, such as environmental taxes or so-called health taxes, could also play a more important role in the tax mix of the future. Environmental taxes set price signals that correct market failures and can play a role in delivering the European green transition. Such taxes currently only provide a moderate share of tax revenues and there is still untapped potential to increase their role in the tax mix, also in light of the variety of environmental taxes at national level. However, it is crucial to pay attention to the possible distributional impacts of consumption taxes and either design them to minimise their impact on lower income groups or ensure compensatory measures. In addition, shifting the tax burden from labour to pollution and resource use could support inclusive and green growth.

Box 7: Improving the business environment and labour market participation: de-taxing labour

Two types of simulation exercise are carried out with the European Commission's labour market model (LMM) for the EU as a whole. Higher revenue from increases in VAT rates would be used to (1) incentivise the take-up of employment and (2) improve employability through investment in human capital.

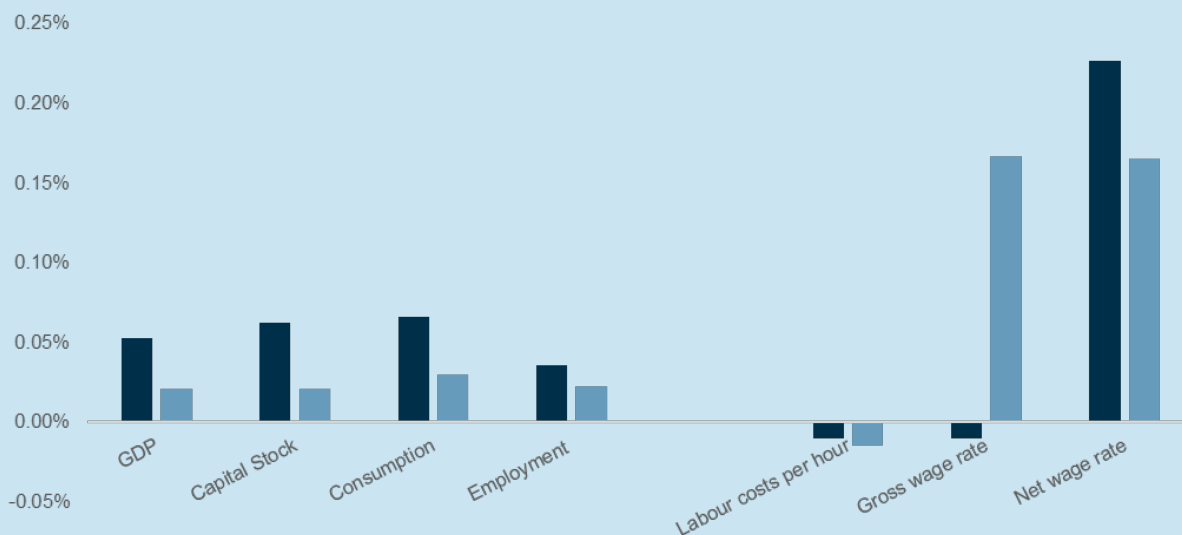
Lowering direct labour taxes through increases in VAT (volume: 0.1% of GDP, corresponding to around EUR 16 billion per year). In this scenario, average VAT rates would increase by 0.6%. Lower labour taxes would allow for net wages to increase by 0.23%. As net wages increase, more workers might feel incentivised to join the labour market. Higher labour supply would push up employment. New workers would become equipped with new capital, triggering investment. With employment and capital increasing, GDP would get a 0.05% boost, relative to the no-policy change scenario. A number of forces impact on the wage level (measured as labour costs per hour). Higher GDP and investment would boost labour demand and thus wages. On the other hand, the additional labour supply would also weigh on the level of gross wages. Lastly, rising take-home pay (net wages) would ease workers' pressure to bargain hard on higher wages, which tends to lower wages. As a result, the gross wage rate would slightly decline. The impact on GDP and employment, while positive, would be moderated to some extent through higher VAT which deflates workers' incomes.

Reducing labour costs through increases in VAT (volume: 0.1% of GDP, corresponding to around EUR 16 billion per year). In this scenario, governments could also target labour costs, aiming to reduce employers' social contributions for their workers. Firms would then be incentivised to hire more workers and keep their already employed staff for longer. The decline in labour costs would thus be policy-induced (while in the scenario of labour tax reductions it was due to the endogenous reduction in gross wages). In this scenario, the additional demand for workers would push up their wage level, so that gross wages increase strongly, pulling up net wages significantly, albeit not to the extent seen above in the case of a wage tax reduction. Labour supply would therefore increase to a lesser extent. As a result, employment, investment and GDP increase significantly, yet by less than was the case for a wage tax reduction. As positive macroeconomic effects are somewhat less pronounced in this second scenario, so would be the effect on governments' tax revenues. To pay for the measure, VAT rates would therefore have to be increased by almost 0.7%, i.e., a larger increase than in the case of a wage tax reduction.

125 See for example (Thiemann et al., 2021).

Box 7 (continued)

Figure 64: Macroeconomic impact of lowering wage taxes (dark bars) and labour costs (bright bars), funded over higher VAT. Volume: 0.1% of GDP, EU-27



Source: European Commission, based on the labour market model. See also (Piroli and Peschner, 2023), Chapter 4.

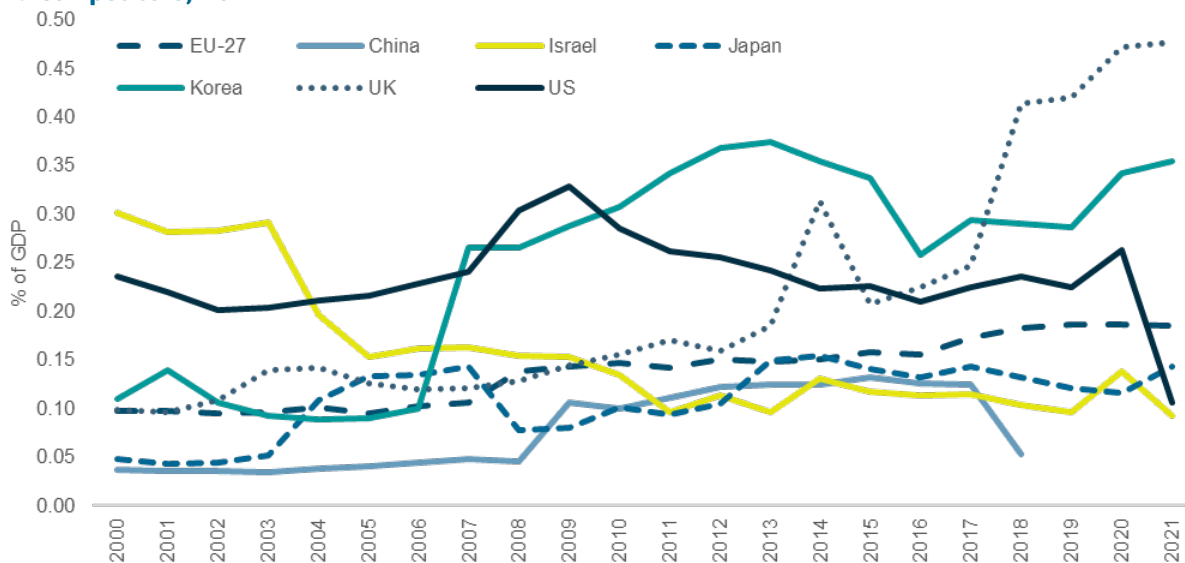
4.3.2 Enhancing investment in research and innovation

Research, development and innovation are key drivers of productivity and long-term economic progress. Research and development (R&D) activities lead to improvements in products, services and processes, turning societal challenges into innovation opportunities and fostering economic growth. R&D investment can both boost total productivity and innovation within a Member State (direct impact) or increase a country's ability to absorb worldwide available technology (indirect impact). Although EU Member States invest significant funds, R&D expenditure is relatively low compared to the other global competitors, notably in terms of private component ⁽¹²⁶⁾. Figure 65 shows that public support to business R&D through tax incentives in the EU-27 has been quite stable over time, reaching 0.18% of GDP in 2021, which is just below the OECD average (0.21%) and US (0.23%) ⁽¹²⁷⁾, but much less than in the UK (0.48%) and South Korea (0.35%).

126 In 2021, EU R&D investment intensity was 2.3% of GDP, which is quite below the US (3.5%), Japan (3.37%), and South Korea (4.8%) (European Commission, 2023g).

127 Indirect government support through R&D tax incentives (GTARD) data for 2021 is missing, so it has been replaced by 2020.

Figure 65: R&D direct public support and indirect government support through tax incentives, EU-27 and competitors, 2021



Source: European Commission, DG Taxation and Customs Union, based on [OECD Data Explorer](#)

Tax incentives play a key role in the mix of policies supporting R&D. Special tax treatment has been used to reduce costs and uncertainty associated with R&D activities, which tend to be riskier than many other production activities ⁽¹²⁸⁾. Jurisdictions offer support to private R&D directly through grants and/or indirectly via tax incentives on both income and expenditure. Grants can be directed to projects with high social returns, but at the same time involving higher administration costs (e.g., selection of projects by public offices and civil servants). In the case of tax incentives, on the contrary, the choice of the R&D programme is left in the hands of the companies. R&D tax incentives can be provided in the form of an allowance, an exemption, a tax deduction or a tax credit. Tax allowances, exemptions and deductions are subtracted from the tax base before the company's tax liability is computed, reducing the taxable amount before assessing the tax. Relief in the form of a tax credit reduces directly the tax due after the gross tax liability has been computed. In the last 15 years the proportion of tax relief in total government support for R&D has almost doubled in OECD countries with an even stronger pattern in the EU, where it has increased from 20% in 2005 to 56% in 2021, reaching 60% in 2018 and 2019 ⁽¹²⁹⁾.

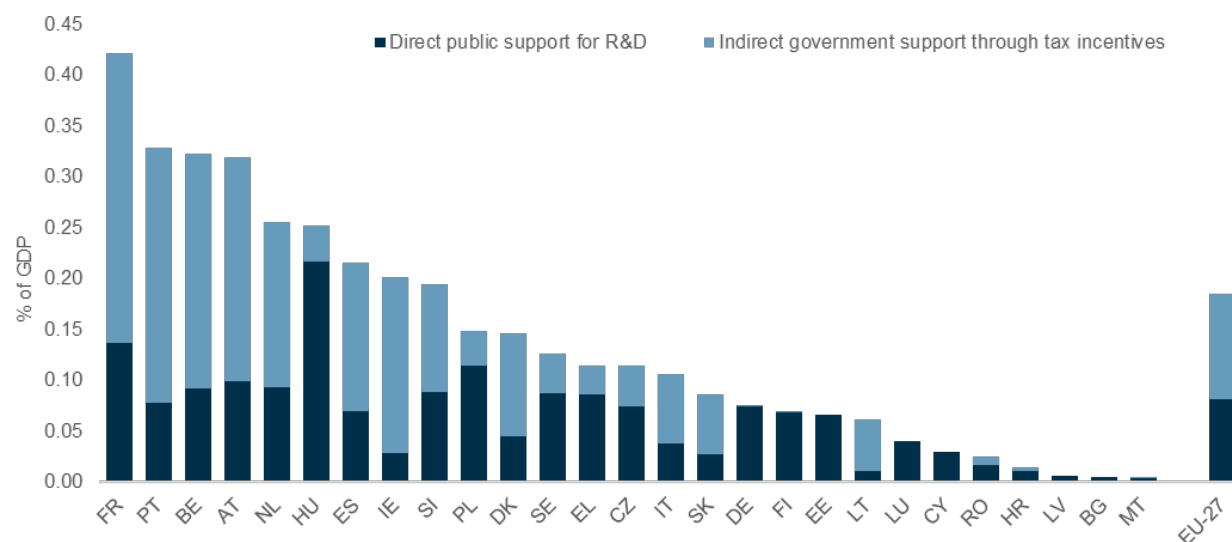
The EU average support to business R&D stands at 0.1% and 0.08% of GDP for tax incentives and direct funding respectively. As shown in Figure 66, the combined support to business R&D (direct and indirect) is relatively high in France, Portugal, Belgium, Austria, the Netherlands and Hungary, ranging between roughly 0.25% and 0.42% of GDP. On the other hand, Malta, Bulgaria, Latvia, and Croatia offer less support to business R&D (around 0.01% of GDP or less). While these low levels logically reflect the very low volumes of business R&D investment in these countries, it is important to note that in several Member States with very high business R&D investment (such as Germany, Finland, Denmark and Sweden), the amount of public support to business R&D is nevertheless also low. This reflects major differences in the research and innovation strategy and policy mix of those Member States, with an especially dedicated policy focus on building a strong public science base (through universities and research institutes), which is in turn able to provide businesses with the highly skilled workers and opportunities for cooperation they need. For instance, a comparison of the evolution of the research

128 For a detailed analysis on the impact on taxation on R&D, see Annual Report on Taxation 2023, Section 3.2.

129 <https://stip.oecd.org/innotax/>

and innovation policies of Germany and France (European Commission, 2019c) highlights that, in the last decade, public support for R&D in Germany has been focused on strengthening the public science base, while France has developed more strongly its fiscal support for business R&D.

Figure 66: R&D direct public support and indirect government support through tax incentives, 2021



Source: European Commission, DG Taxation and Customs Union, based on [OECD Data Explorer](#)

Notes: (1) For direct public support, 2020 figure is used for Denmark. For tax incentives, 2020 figure is used for Romania. (2) Estimated direct public support for R&D includes direct government funding, funding by higher education and public sector funding from abroad.

An important question therefore is how effective tax policy-based support for R&D and the resulting research output is. The effectiveness of R&D tax incentive schemes exhibits substantial heterogeneity. Literature shows that, on average, R&D tax incentives stimulate the level of R&D expenditure. Nevertheless, the underlying features of tax incentive schemes are very important in determining effectiveness (Blandinières and Steinbrenner, 2021). For instance, schemes targeting SMEs are, on average, shown to be particularly effective. Moreover, caps on incentives or pre-approval processes for such incentives have not negatively impacted the effectiveness of various R&D tax incentive policies. Importantly, clear and stable tax incentive frameworks reduce uncertainty and thus also increase the resulting effectiveness of the schemes. According to some authors (Evans and Joseph, 2022), there are as many options as there are considerations and best practice depends on each country's policy needs and stage of development. The effectiveness of R&D tax incentives has been investigated by a Commission study (European Commission, 2014) identifying a number of good practices in terms of scope, targeting and organisational practice of the tax instrument. For example, some best practice principles suggest that tax incentives should seek to favour strong knowledge spillovers and contribute to the world-wide stock of knowledge, rather than support activities limited to progress in the firm's own expertise. Moreover, the study remarks that volume-based R&D tax credits perform better than incremental tax credits⁽¹³⁰⁾. In conclusion, the overall policy architecture plays a key role in its success and effectiveness⁽¹³¹⁾.

Research suggests that targeted tax tools to boost innovation can increase the impact of these tax tools on economic growth. Recent OECD analyses (OECD, 2023) show a gross incrementality ratio of around

130 Incremental schemes are tax incentives that only apply to increments in a firm's R&D expenditure, while volume-based schemes apply to total R&D expenditure.

131 For example, IMF Fiscal Monitor 2016 remarks i) the use of refundable (particularly for start-ups) or redeemable financing against payroll taxes; ii) targeting incremental R&D expenditures above a baseline amount, which is gradually expanded over a longer term; iii) targeting young companies may be particularly conducive to increasing innovation.

1.4⁽¹³²⁾ for both direct funding and tax support, while the effect of tax incentives on experimental development is found to be more than three times as large as the effect of tax incentives on basic and applied research. The IMF Fiscal Monitor 2024 argues that advanced economies should choose a policy mix that supports innovation more broadly, especially because fundamental research with wide applications is usually underfunded. According to IMF estimates, increasing fiscal support for R&D by 0.5 percentage points of GDP through a combination of public research funding, grants to firms, and tax credits could raise GDP by up to 2%. To maximise results, different types of tools need to be designed to target different needs. For example, grants are more useful at earlier stages of the innovation lifecycle, while tax incentives must be easily accessible so as not to discourage SMEs. However, tax incentives for innovation may become less effective in the future because of the implementation of the global minimum tax if the effective tax rate would be pushed below 15% by the tax relief⁽¹³³⁾. In general, more research is needed to investigate the relationship between tax incentives and R&D investment and their effectiveness in producing the desired outcomes. The 2023 Annual Taxation Report (Annual Report on Taxation 2023) focused on the link between taxation and inputs in R&D activities (R&D expenditure) without finding any robust correlations, while this year the analysis looks at patenting as output of research activity.

Contrary to expectations, a simple correlation analysis shows that higher levels of effective marginal taxation are associated with higher levels of patent applications. Figure 67 reports, at country level for 2022 and 2021⁽¹³⁴⁾, a positive correlation between the number of European Patent Office (EPO) applications⁽¹³⁵⁾ and effective marginal tax rate (EMTR)⁽¹³⁶⁾. However, the correlation does not appear to be linear and could yield misleading conclusions. Of course, this is just a simple correlation, and it does not account for the many important factors other than taxation that determine the location and magnitude of R&D and its outputs. Generally, when looking at R&D activities, although tax subsidies can play a role, a more holistic assessment is needed as there are other things that incentivise investments in R&D. These other things include: (i) the availability of skilled workers; (ii) access to relevant opportunities for cooperation with the public science base; (iii) institutional capacity; (iv) trust in institutions; (v) access to direct public support (grants schemes); (vi) access to credit; and (vii) access to venture capital, amongst other, can play an important role in investment decisions for R&D.

132 One extra unit of R&D tax support translates into 1.4 extra units of R&D.

133 International Monetary Fund, April 2024 Fiscal Monitor, Chapter 2, available at <https://www.imf.org/-/media/Files/Publications/fiscal-monitor/2024/April/English/ch2.ashx>.

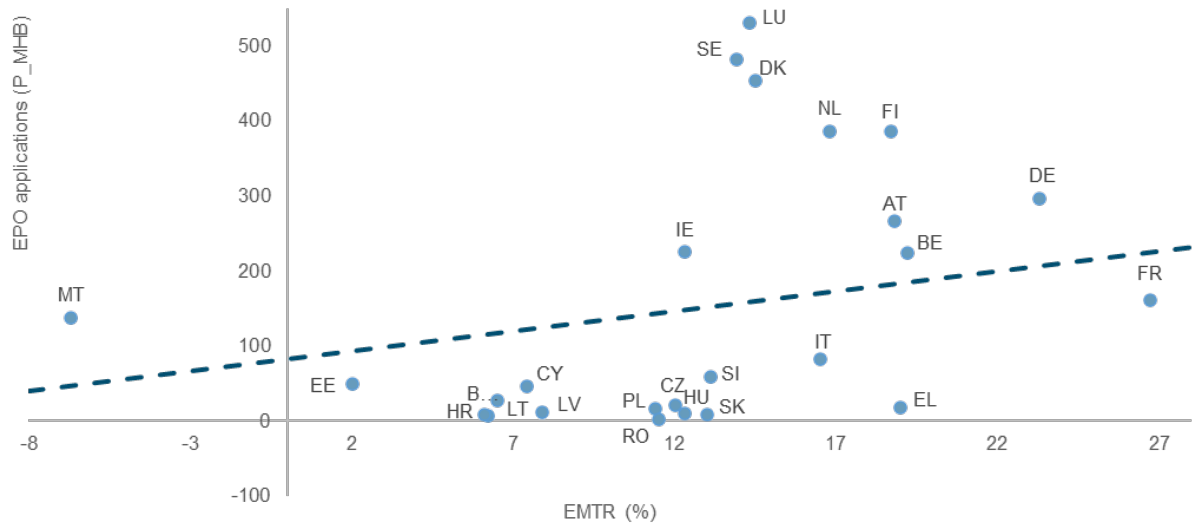
134 One year lag is chosen to account for a minimum lag between the investment and its output (patent).

135 European patent applications are per million of inhabitants and include direct European applications and international (PCT) applications that entered the European phase during the reporting period. Data is provided by European Patent Office (EPO).

136 EMTR and EATR are calculated by ZEW:

https://taxation-customs.ec.europa.eu/system/files/2022-03/final_report_2021_effective_tax_levels_revised_en.pdf

Figure 67: EPO applications (2022) and effective marginal tax rate (2021)



Source: European Commission, DG Taxation and Customs Union, based on ZEW and EPO data.
 Note: EPO applications per million of inhabitants.

On R&D output, human capital and the quality of institutions seem to play a much more significant role than taxation. A regression over 6 years for EU Member States allows to assess the impact of the EMTR⁽¹³⁷⁾ on the number of patent applications filed at the EPO controlling for the availability of human capital⁽¹³⁸⁾, the quality of government (QoG)⁽¹³⁹⁾ and the level of intellectual property protection (IPP)⁽¹⁴⁰⁾. The results (Figure 68) show that the coefficient of EMTR is not significantly different from zero (light blue), suggesting that the taxation level does not have any relevant impact on the production of patents. On the contrary, the other variables clearly affect the patent capacity of the country and, breaking down QoG into its components, it appears that a low level of corruption and a high level of regulatory quality are the crucial factors for patenting⁽¹⁴¹⁾. The limited impact of the taxation system on R&D output is also confirmed by OECD analyses and suggests some useful insights into the policies needed to foster innovation (OECD, 2023c).

137 Similar results are found using EATR instead of EMTR.

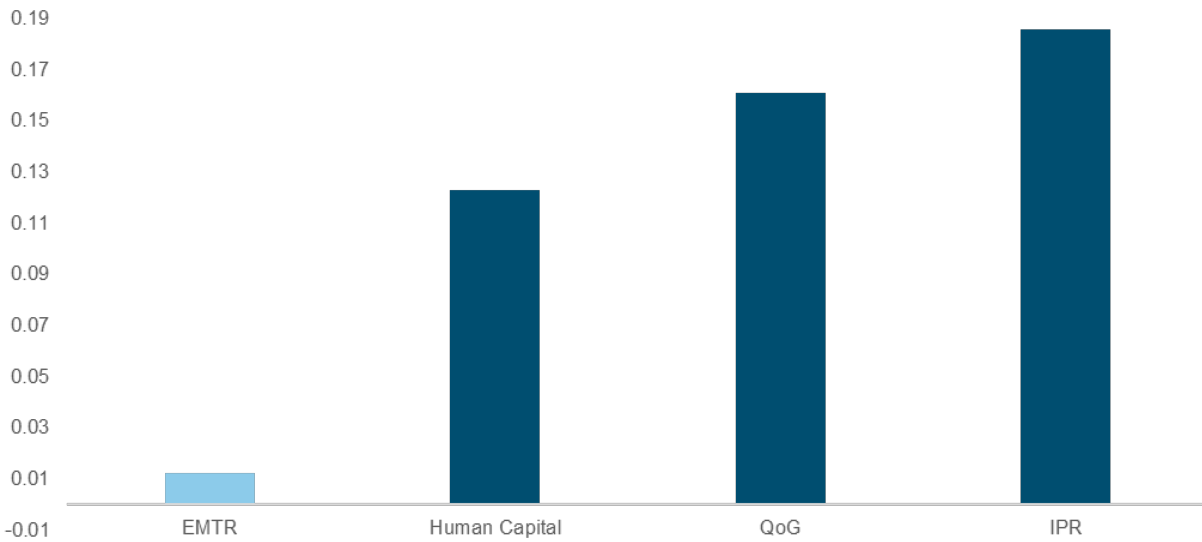
138 Human capital index based on the average years of schooling from Barro and Lee (Barro and Lee, 2013) and an assumed rate of return to education, based on Mincer equation estimates around the world (Psacharopoulos, 1994) provided by THE QOG STANDARD DATASET 2024 (University of Gothenburg).

139 The mean value of the variables 'Corruption', 'Law and Order' and 'Bureaucracy Quality' from the International Country Risk Guide (ICRG) dataset, scaled from 0 to 1. Higher values indicate higher quality of government (QOG STANDARD DATASET 2024, University of Gothenburg). See: Dahlberg, Stefan, Aksel Sundström, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon, Cem Mert Dallı, Rafael Lopez Valverde & Paula Nilsson. 2024. The [Quality of Government Basic Dataset](https://www.gu.se/en/quality-government), version Jan24. University of Gothenburg: The Quality of Government Institute, <https://www.gu.se/en/quality-government> doi:10.18157/qogbasjan24.

140 Intellectual property protection (scale 1 to 7, while 7 is best). In your country, to what extent is intellectual property protected? [1 = not at all; 7 = to a great extent]. Original sources: World Economic Forum, Executive Opinion Survey and provided by THE QOG STANDARD DATASET 2024 (University of Gothenburg). However, there is some positive correlation between QoG and IPP (0.74).

141 The estimated model is a pooled regression. Adding GDP per capita as control variable, the impact of QOR is attenuated and, breaking down its components, it appears that low corruption is the crucial factor for patenting.

Figure 68: Factors affecting EPO applications (standardised regression coefficients)



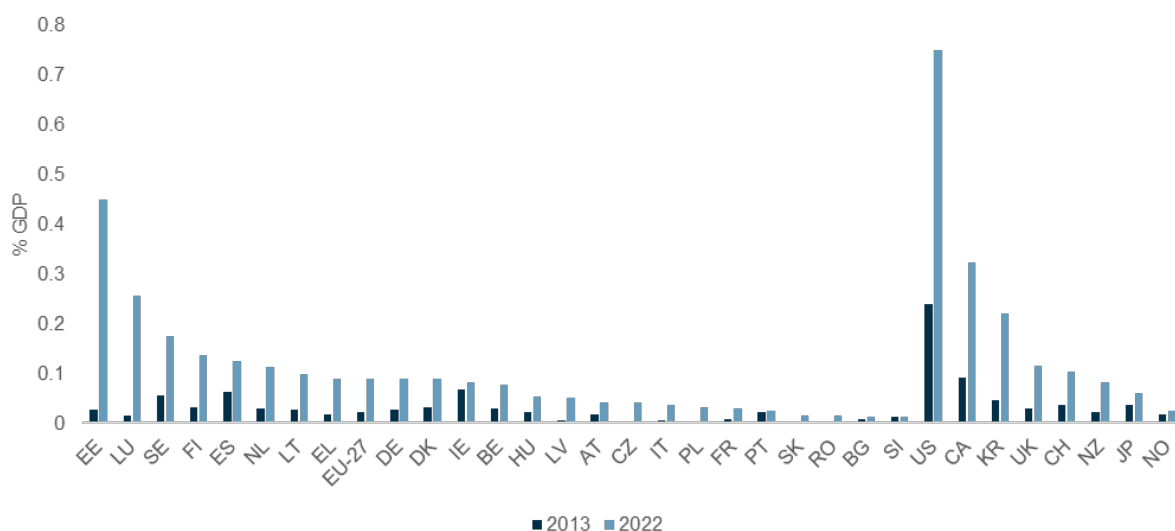
Source: European Commission, DG Taxation and Customs Union, based on ZEW, EPO and QoG database.

Note: (1) beta coefficients of pooled regression for EU-27 Member States (2015-2019); EMTR statistically non-significant (light blue); dark blue coefficients are significant. (2) explicative variables lagged (1 year) and GDP per capita included as control.

4.3.3 Tax policies and capital access for young and innovative companies

Venture capital investments have s grown rapidly in the EU over the past 10 years. Venture capital (VC) is a form of equity financing particularly relevant for young and innovative companies with growth potential but untested business models and no track record. It replaces or complements traditional bank finance. The development of the venture capital industry is considered an important framework condition to stimulate innovative entrepreneurship. The EU venture capital industry is 5% the size of that of the US and most venture capital investments are concentrated in only a few EU Member States (European Commission, 2023g) and very specific locations. However, it is noteworthy that growth rates in venture capital investment in many EU Member States by far outperform those of the US, especially since initial levels have been very low (see Figure 69). In the EU, venture capital investment has increased from 0.02% in 2013 to 0.09% of GDP in 2022. In the US venture capital investment has increased from 0.24% to 0.84% of GDP over the same time span.

Figure 69: Venture capital financing as share of GDP, 2013 and 2022 (¹⁴²)

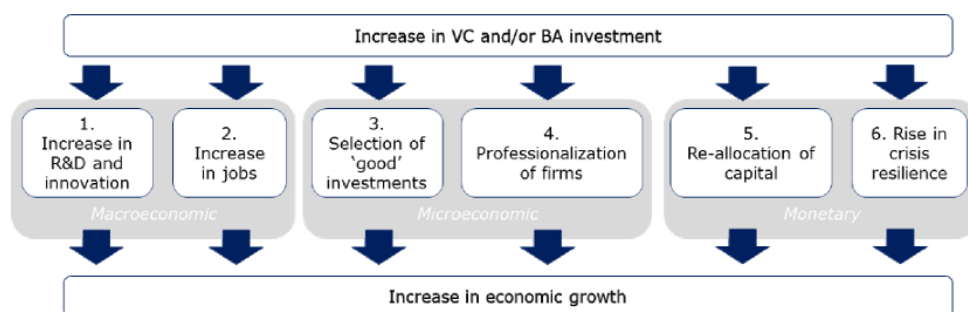


Source: OECD, [Venture capital investments \(market statistics\)](#)

Notes: In Israel venture capital investments were greater than 1.7% of GDP in 2021, dwarfing rates in all other countries. To make the figure more readable, Israel is not presented. Data for Japan is from 2021. No data available for Croatia, Cyprus and Malta. EU-27 value is the simple average of available national shares.

Research shows that venture capital investments increase the growth and survival probability of recipient companies. There is some indication that start-ups funded by venture capital grow faster and have a higher chance of survival than companies financed through other forms of investment. This advantage is driven by a selection effect, and access to the specialised expertise of the investor and its network. As indicated in Figure 70, venture capital is both a micro- and macroeconomically significant development factor for an economy, and is associated with greater innovation, greater productivity, and further positive outcomes (Köppl et al, 2021).

Figure 70: Channels through which VC and Business Angel financing increase economic growth



Source: European Commission (2017)

There is some evidence that targeted tax policy can support the development of venture capital investments. By offering incentives such as reduced capital gains taxes or upfront investment relief, these policies lower the financial risk and increase the potential returns for investors (¹⁴³). While there is evidence that capital gains taxation negatively impacts the supply of venture capital (¹⁴⁴), there is only limited empirical

¹⁴² Venture capital investments as a share of GDP is one of the three financial market indicators of the [Single Market Scoreboard](#).

¹⁴³ The detailed effect of these taxes might interact with and depend on other tax provisions, such as loss-carry over provisions.

¹⁴⁴ Several studies confirm the negative impact of capital gains taxation on venture capital investments. For example, (Keuschnigg and Nielsen, 2004); (Dimitrova and Eswar, 2023). (Bock and Watzinger, 2019) find the same negative effect on VC supply. In addition, they

evidence on the impact of tax incentives for venture capital and business angels (BA) investment. A 2017 study on the effectiveness of tax incentives for venture capital (European Commission, 2017b) analysed such tax benefits and identified a number of best practices for designing tax incentives.

The effectiveness of tax incentives depends on their design. Tax relief needs to be targeted. According to the aforementioned study (European Commission, 2017b), only new investments should be eligible, a minimum holding period can be required and an upper limit for investment size can be imposed. Cross-border investors should be allowed⁽¹⁴⁵⁾. To assure administrative efficiency, tax reliefs for venture capital and business angels should be administered on a non-discretionary basis. Related fiscal costs should be transparently measured on an annual basis. In addition, regular and transparent evaluation and impact monitoring is paramount.

Tax benefits tend to increase the complexity of the tax code and need to consider potential regressive distributional effects. Any potential benefits of an incentive scheme must be weighed against an increase in tax complexity, tax-compliance costs and the costs of tax administration. Investment incentives that reduce the tax burden on capital, tend to be regressive. Such incentives primarily benefit higher-income individuals and institutions that have the means to provide venture capital and sufficiently diversify their portfolio. As a result, these policies may have the potential to exacerbate income inequality⁽¹⁴⁶⁾. On the other hand, the added value of these policies may materialise in the long-term, through the fostering of innovation, economic and job growth once the investments have matured. This then benefits a wider group of individuals, primarily the employees of those investment targets (where the companies are successful), who have possibilities to reap significant monetary rewards and use that capital to make their own investments.

Alleviating the tax associated burden in cross-border investment is paramount. The difference between tax systems across the Single Market poses a hurdle for cross border investments arising from compliance costs and tax uncertainty. Consequently, Action 10 of the 2020 Capital markets union action plan calls for an alleviation of the tax associated burden in cross-border investment⁽¹⁴⁷⁾. The recently agreed FASTER Directive (Council Directive on Faster and Safer Relief of Excess Withholding Taxes) will be a major step into this direction. New fast-track procedures will benefit small and large European and non-EU investors and will encourage investments towards the EU. The Directive is expected to raise GDP by 0.025% in the EU due to second round effects leading to increasing investment towards Member States and, therefore, having a major positive impact on the Capital Market Union (see in detail above, section 2.2.2).

Employee stock options have been identified as an important tool that help young and innovative companies to attract and retain talent⁽¹⁴⁸⁾. Start-ups often lack the cash flow to offer sufficiently high wages to attract and retain talented employees. Employee stock options (ESO) represent an important alternative incentive for people to choose to work for start-ups. Moreover, some Member States have outdated rules and regulations that limit the uptake of ESOs and there is a wide variation in these rules across Europe. Such complexity can reduce the attractiveness of remuneration schemes that could otherwise motivate and retain employees via ESO and there is a risk that Europe's top talent will relocate to London or the US, or simply stick to lower-risk corporate jobs.

Taxation can be an enabling factor when rolling out employee stock options. There is wide variation in the tax treatment of ESOs across Europe, giving rise to a fragmented landscape. In Belgium, for example, ESOs

show that there is a disciplining effect of taxes. The probability of eventual start-up success increases with the tax burden on capital gains tax.

145 (Poterba, 1989) also shows the negative effect of capital gains taxation on venture capital investment. However, a general reduction of capital gains taxes are considered a blunt and ineffective approach).

146 For example, (Slemrod and Chen, 2023) show the importance of capital gains taxation to properly tax the highest incomes. Reduced rates for venture capital seem to undermine such an approach.

147 European Commission (2020e), for details see https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/capital-markets-union/capital-markets-union-2020-action-plan_en

148 The positive effects of ESOs have been analysed for example by Aldatmaz et al. (2018), Kruse et al. (2008) and others.

are taxed at the moment they are granted, which means that when the value of a company's shares is still low taxation is not an issue, but it becomes more important as the company grows and the value of its shares increases. In Spain, ESOs are instead taxed at the moment of sale, with a threshold below which employees are exempted from paying the tax. In the US there is more uniformity and clarity over how ESOs are taxed. Several design features are being discussed for ESOs, such as basing them on accepted fair market value practices (thus removing tax uncertainty), taxing ESOs at a flat rate (to avoid taxes increasing with the value of a company's shares) and deferring taxation to the point of sale of shares (when employees receive an actual cash benefit) (Letta, E., 2024).

4.3.4 Promoting simplification and reducing single market barriers

Research underlines that simple, stable, and predictable tax rules also help foster a competitive economy. Simple and efficient tax collection can ensure good tax compliance. Cutting red tape and reducing the administrative burden for companies can allow for increased investment in productive activities. This, in turn, helps level the playing field for all taxpayers and, to the extent that complex tax systems create opportunities for avoidance or evasion, may reduce the need to raise tax rates. Box 4.2 presents evidence that simplified tax rules increase firms' productivity and foster economic growth. The recent high-level report on the future of the single market (Letta, E., 2024) highlights that better alignment of EU tax systems through a harmonised EU tax framework is key to facilitating the free movement of workers, goods and services and in supporting growth and private investment.

Box 8: The potential macroeconomic impact of removing barriers to the single market

Cortax is a multi-country general equilibrium model run by the European Commission's Joint Research Centre, covering households, firms and governments. It includes all Member States, plus the United Kingdom, Japan, the United States and low-tax jurisdictions. Cortax models the tax base explicitly, taking account of tax depreciation, the deductibility or non-deductibility of interest, and the presence of an allowance for corporate equity. It also embeds the feature of loss carry-forward and distinguishes between domestic and multinational firms. For the latter, it allows for cross-border aggregation. Cortax explicitly takes account of compliance costs, i.e., workers in firms absorbed by compliance activities.

It is important to understand that the simplification of international tax law is not only a matter of costs incurring to a cross-border operating firm as it has to comply with a complex international network of rules. It is also a matter of confidence in doing cross-border business in the first place as rules become more transparent and accountable. With simplifications in place, firms can better plan what the crossing of borders means for them: in what countries (and to what extent) they are present for taxation purposes; what efforts they would have to make in order to comply with EU-wide tax rules; and ultimately what effective tax rate they would have to factor in for future investment. Many firms, especially SMEs, are thus more likely to expand their business to other Member States if there is more tax certainty.

As they become exposed to international competition, firms become more efficient in production, so that total factor productivity increases. The existing evidence suggests that firms exposed to international competition are more productive than purely domestic firms. Most relevant in the context of SME simplification, Mikić et al. (2016) find that internationalisation has a positive impact on the business performance of SMEs. Bellak (2004) finds that performance gaps arise in such fields as productivity, technology, profitability, wages, skills and growth and that the multinational aspect of the company, more than the nationality of the firm, seems to explain these gaps. Helpman et al. (2001) see productivity differentials between international and domestic firms as a result of choice: low-productivity firms may not even try to engage on foreign markets at all, while the most productive firms engage not only by exporting but also through FDI. Markusen and Trofimenko (2009) find that FDI, through foreign experts working in a country, is a channel of knowledge transfer and push productivity. Indeed, the positive impact of internationalisation on a firm's performance

Box 8 (continued)

seems to increase with the extent of a firm's FDI activity (Lu and Beamish, 2001). (CompNet, 2020) estimates that exporters' labour- productivity premium over non-exporters could amount to 15%.

It is impossible to estimate precisely the number of SMEs which decide to expand their business cross-border, following major tax simplifications. Tentatively assuming that 10% of so-far domestic firms did so after introducing these simplifications, the shock introduced into the Cortax model could thus be a 15% productivity shift, applied to 10% of so-far domestic firms in the EU. The exogenous productivity shift implies that firms would be able to produce more with a given factor (labour and capital) input. Under the 10% take-up assumption, the long-term effect on GDP (+0.7% in the long run) and on tax revenue (+1.0%) would be significant ⁽¹⁾.

(1) Results have been first presented in the Commission's Impact Assessment for a Council Directive establishing a Head Office Tax system for micro, small and medium sized enterprises (SWD)2023) 302 final, Chapter 6.

The International Tax Competitiveness Index compiled by the Tax Foundation ranks OECD countries by scoring various features of their tax systems. Generally speaking, lower tax rates and lower tax complexity improve a country's score on this index. The main categories used to compile the index are corporate income taxes, individual taxes, consumption taxes, property taxes, and cross-border tax rules. Each of these categories is weighted equally and therefore no preference is given to certain types of taxes over others. On tax complexity, the index considers, for example, the presence of patent boxes and R&D tax incentives, both of which reduce the neutrality of the tax system and hence worsen a country's score in the corporate income tax category. On tax rates, lower rates are ranked more highly. On cross-border rules, the focus on competitiveness implies that fewer rules, for example the absence of withholding taxes (which reduce aggressive tax planning risks) or of anti-tax avoidance rules, also improve a country's score. Among EU countries, the ranking is led by Estonia, Latvia, Czechia, Luxembourg, and Lithuania ⁽¹⁴⁹⁾.

In the EU, each Member State has a national corporate tax system. There is currently a limited common EU framework for direct taxation, and corporate income tax systems only operate at national level. National rates at the moment range between 9% and 35% and each Member State has its own deductions and credits. However, following the implementation of the Pillar Two Directive, companies within its scope will be subject to higher taxation in countries where the effective tax rate is currently below 15% (see Chapter 3). EU companies can only consolidate their tax base nationally. This means that losses can generally only be offset against local profits and that tax incentives, such as tax credits, can only be used in the same Member State. There are nearly no common EU rules to determine the different national tax bases. A limited common EU framework applies in specific areas only. For example, the Parent-Subsidiary Directive, Merger Directive, and Interest and Royalty Directive lay down common taxation rules for cross-border mergers, payment streams between parent companies and subsidiaries, and for interest and royalty payments to remove cross-border tax obstacles in the single market, while the Anti-Tax Avoidance Directive establishes certain common rules to tackle tax avoidance.

Specific policy proposals to increase EU convergence in the area of direct taxation have been recently presented. On VAT, the EU system is based on the EU VAT Directive, which forms the harmonised legislative framework to which national VAT legislation throughout the EU must conform. Over time, the EU system of VAT registration has continued to be simplified, to facilitate trade within the EU. In turn, the complexity associated with direct taxation still presents barriers to the single market for intra-EU business. In addition, it has been estimated that compliance with tax obligations costs SMEs 2.5% of their turnover, while for MNEs this is estimated at 0.7% (European Commission, 2022d). For this reason, in September 2023 the Commission

149 International Tax Competitiveness Index of the Tax Foundation, available at <https://taxfoundation.org/research/all/global/2023-international-tax-competitiveness-index/>

presented three proposals (on the Head Office Tax (HOT) system, on the 'Business in Europe: Framework for Income Taxation' (BEFIT) framework and on a directive on transfer pricing) to bring simplification (see Chapter 2). Also, the Commission in September 2023 adopted a proposal for a directive that aims to facilitate cross-border activities of non-profit associations in the EU (¹⁵⁰).

4.3.5 Driving the green transition: The case of energy

Energy prices and taxation

Analysing the link between taxation, energy prices and their possible impact on EU competitiveness requires a critical look at relevant fiscal measures. Soaring energy prices resulting in part from the Russian war of aggression against Ukraine threatened to derail the post-pandemic recovery, particularly in Europe. Against this background, many EU Member States used taxation and other instruments to mitigate the impact of the price increases, primarily targeting households by reducing VAT rates and excise duties applicable to energy consumption. These were often flanked by non-tax support measures to industry (Sgaravatti et al, 2021). Now that wholesale energy prices have decreased to levels closer to pre-pandemic ones, many of these temporary measures are being phased out, partly due to revenue considerations, and partly linked to broader environmental objectives. Despite this, concerns remain over the level of energy prices and their impact on the competitiveness of the EU compared with other countries, notably the US which benefits from substantially lower energy prices (¹⁵¹). It is thus opportune to look at the extent to which fiscal measures, including consumption taxes, parafiscal levies (e.g. network charges), and tax expenditures (including various forms of tax incentives) of any sort influence energy consumption costs, in particular those of industry and how this affects productivity. Such an analysis needs to look at short-term and long-term competitiveness and evidently be embedded in the broader policy context, notably the energy transition, the policy framework, and the provision of fiscal support. It also needs to take into account differences between primary energy carriers, final energy uses, and the availability of alternatives. A Commission study estimated that the planned support for climate objectives provided through EU funding facilities under the long-term budget and the NextGenerationEU programme, would lead to sizeable increases of the green sector in the EU (+12.0%), both in terms of capital stock and production levels, as well as to substantial increases in wages and employment in these activities, with positive net impacts also for the EU economy as a whole as regards capital stock, GDP and tax revenues (Barrios et al, 2023).

Energy tax policies can affect EU competitiveness in different ways over different timescales. A tax-induced increase in production costs via increased energy costs in the EU may constitute a short-term competitive disadvantage compared with non-EU countries. The OECD estimates that a 5% increase in energy prices reduces productivity by approximately 0.4% one year later (André et al., 2023). At the same time, sending an appropriate price signal to further policy objectives such as the green transition may help change consumption patterns and frontload necessary private investment, thereby safeguarding long-term competitiveness. The OECD estimates that a 10% increase in energy prices is associated with an increase in productivity growth of around 0.9 pps 4 years after this increase, suggesting productivity gains in the medium term. Moreover, different levels of effective taxation of the same activity across EU Member States may cause inefficiencies and distortions in the single market, thereby hampering long-term economic potential and competitiveness (¹⁵²).

Despite an increasing 'green' component in fiscal measures in the EU in recent decades, the energy intensive industry is only burdened by these measures to a limited extent. A large share of the burden of energy taxes falls on final consumers, notably via the taxation of motor fuels. Current tax (and carbon pricing) measures envisage special treatment for energy-intensive industry, among others, for competitiveness reasons.

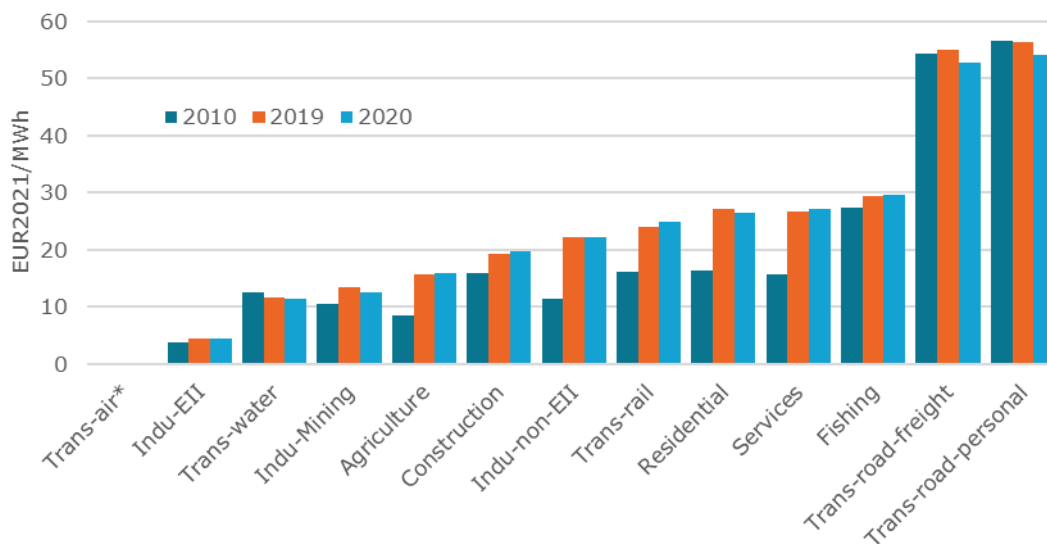
150 Proposal for a Directive of the European Parliament and of the Council on European cross-border associations, COM/2023/516 final, available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52023PC0516>

151 International Energy Agency, Electricity 2024

152 See also: Proposal for a Council Directive restructuring the Union framework for the taxation of energy products and electricity (recast). COM/2021/563 final. Available at: <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021PC0563>

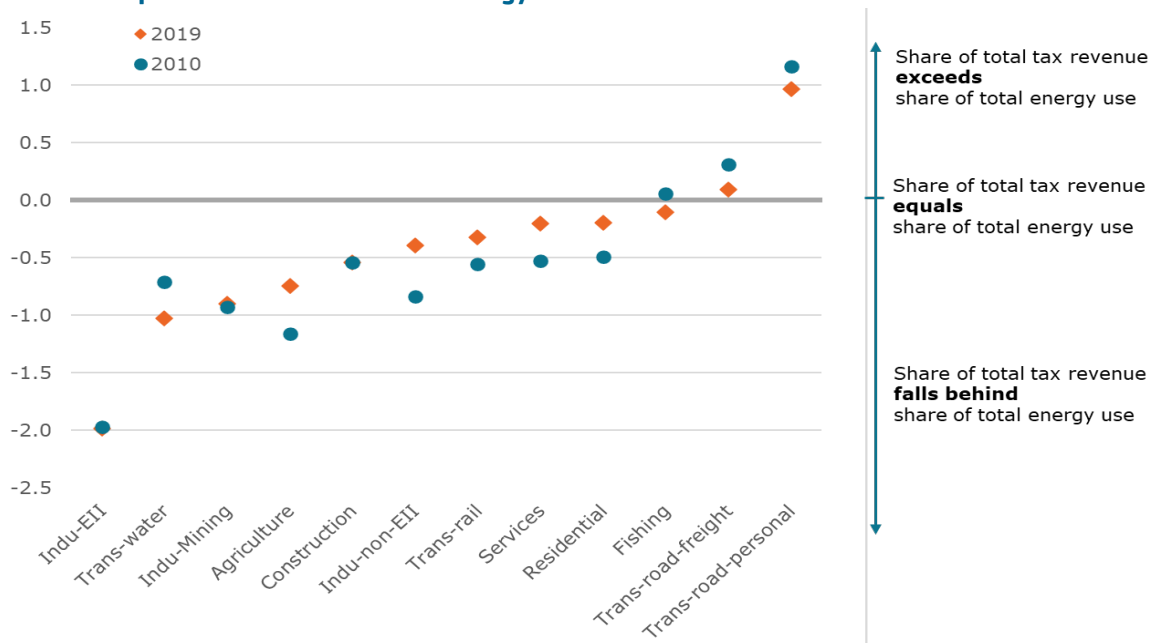
In 2020, energy-intensive industries (EIIs) paid the lowest per unit tax rates, accounting for 14% of energy consumption in the EU and 2% of tax revenue (excluding the EU ETS) (European Commission, 2024e). Further lowering the tax burden would put further pressure on budgets and reduce incentives for the green transition. Moreover, it is important to consider possible adverse social and distributional impacts, especially if the tax burden is shifted elsewhere.

Figure 71: Tax rates by sector in the EU-27, 2010, 2019 and 2020 (EUR₂₀₂₁/MWh)



Source: (European Commission 2024e), based on Eurostat, Odyssee, DG TAXUD and national sources data

Figure 72: Comparison of tax burden vs energy use



Source: (European Commission 2024e), based on Eurostat, Odyssee, DG TAXUD and national sources data.

Energy taxation can be used more efficiently to support the energy transition, for example by putting in place a clearer price signal to encourage the use of energy-efficient energy products. This is a core component of the pending Commission proposal for a revision of the Energy Taxation Directive. This revision, once enacted, will also help to reduce distortions in the single market, by helping to ensure coherence with other

EU climate and energy policies by providing incentives to save energy and use fewer polluting fuels. Additionally, it will contribute to a more level playing field across Member States by harmonising tax rules to a certain extent, increasing minimum tax rates and removing many fiscal subsidies for energy products (by expanding the taxable base and reducing the opportunities for exemptions and rates below the minima).

Corporate tax incentives supporting the green transition

Fiscal incentives – including direct subsidies, tax credits or deductions – can facilitate investment in the greening of industrial production and thereby help accelerate the green transition, underpinning Europe’s long-term competitiveness. The Commission’s Communication “Securing our future: Europe’s 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society” ⁽¹⁵³⁾ of 6 February 2024 notes that an additional 1.5% of GDP compared with the 2011-2020 decade should be invested annually in the transition, and that the private sector will have to be mobilised to make this possible. This ‘requires a comprehensive reflection on all elements: from taxation to access to finance, from skills to regulatory burdens, and from a deepening of the single market to energy costs’.

Many Member States leverage features of the corporate income tax system and beyond to provide fiscal incentives. For example, to support the green transformation in the mobility sector, many EU MS have introduced tax incentives for electric vehicles, recharging points and other low-emission modes of transportation, including increased allowances and more favourable depreciation. The REPowerEU Communication of 18 May 2022 encouraged Member States to consider additional tax measures such as inter alia reductions and exemptions from vehicle taxation for both the purchase and use of electric and hydrogen vehicles, and tax deductions linked to energy savings. Common forms of tax incentives granted include accelerated depreciation or immediate expensing, and tax credits. Highly accelerated depreciation or even immediate expensing (full depreciation) are granted either broadly or more targeted towards investment costs (and R&D activities) related to the acquisition of net zero technologies. This implies an expense deduction for acquisition costs of new fixed tangible assets that is granted faster or in full in the tax year when the expense or cost is incurred. The reduction of companies’ taxable base leads to a lower tax liability, freeing up funds for possible investments (cash-flow advantage). Tax credits allow eligible taxpayers to reduce the amount of the total (corporate) tax they owe to the Member State in proportion to that taxpayer’s investment, often designed with a carry-forward (e.g. for 4 years) to allow taxpayers with an initial insufficient tax liability to keep the unused part of the tax credit for future tax payment. In general, it is important to understand the impact of such measures in terms of effectiveness, cost-effectiveness, and cost to public budgets. With the Temporary Crisis and Transition Framework (TCTF) allowing a greater possibility to support the competitiveness of EU industries, Member States that enjoy a greater fiscal space may be able to support their companies more than others.

4.3.6 Reinforcing tax compliance and strengthening the level playing field

Greater compliance of all taxpayers - corporate and individuals - can improve the functioning of the economy. By assuring simple tax rules and optimising tax collection, authorities can harness the full revenue potential of current tax bases and rates (European Commission, 2020d). This implies fewer gaps in the system and helps ensure that every taxpayer pays their fair share. When tax collection is streamlined and effective, it reduces the need for frequent policy changes, providing stability to the economic environment and allowing individuals and businesses to plan and operate with greater certainty. Complex tax rules may result in aggressive tax planning, which harms competitiveness by depriving governments from needed revenues and diverts resources away from productive activities to tax speculation and tax control activities. On the corporate side, improving compliance ensures that companies cannot use aggressive tax planning techniques to game the system and gain a competitive advantage against other competitors. On the individual side, strengthened compliance relies on ensuring that each taxpayer pays what is legally due and does not hide part of their income

153 COM(2024) 63 final

or wealth (e.g., abroad). Individual tax evasion reduces the revenue generation and redistribution ability of the tax system, potentially increasing the tax burden where tax collection is easier. Significant improvements have already been achieved through the OECD and through the EU's Directives on Administrative Cooperation by improving coordination and exchange of information between countries (see also Section 2.4).

Digitalisation and artificial intelligence (AI) can help tax administrations to increase tax compliance.

Improving tax collection is pivotal for bolstering tax revenues (see Section 2.3). The integration of new technologies into tax administration systems offers a potentially transformative approach to counteract tax avoidance, evasion, and fraud. AI, advanced data analytics, and blockchain technology can provide real-time information, streamline tax processes, and ensure transparency. This could make it increasingly challenging for individuals and corporations to exploit loopholes and thus help tax administrations to detect and close those loopholes. These technological advances can both ensure a fairer distribution of the tax burden and instill greater public confidence in the tax system, promoting compliance and ultimately driving a substantial increase in revenue collection.

Digitalisation – and digital reporting in particular – are good practices that increase compliance and reduce the VAT compliance gap.

For this reason, the VAT in the Digital Age (ViDA)⁽¹⁵⁴⁾ initiative has the potential to further reduce the VAT compliance gap⁽¹⁵⁵⁾. It is estimated that the introduction of an EU standard-based digital reporting⁽¹⁵⁶⁾ increased VAT revenue by 1.9%, based on the C-efficiency (quarterly data) model. Many Member States experienced substantial year-on-year changes and, contrary to expectations regarding the impact of the pandemic, several showcased marked decreases in their compliance gaps (see also Section 2.3).

However, AI also presents tax-related challenges. The growth in the revenues of AI developers and sellers will have economic and tax policy implications that largely mirror and strengthen the trends already seen in the development of the existing digital economy. For this reason, from the perspective of taxing the AI/digital firms themselves, AI-related dynamics only increase the importance of pursuing reforms to ensure the fair and effective taxation of the digital economy, including through the implementation of international agreement on Pillars One and Two. These proposals would redistribute a share of excess profits for very large companies with a new focus on the location of sales (Pillar One), and set a minimum effective tax rate to limit tax avoidance (Pillar Two). As wider AI use is expected to further disrupt traditional ways of work and reinforce the importance of intangible capital, recent analysis has suggested that this will increase the importance of ensuring that all forms of income and profits, including capital income, are taxed effectively (Brollo and Others., 2024).

Multi-national enterprises (MNEs) can use legal loopholes and opportunities in tax systems to gain competitive advantages and reduce competition within the single market.

Globalisation has created increasingly complex multinational companies with interests dispersed across multiple jurisdictions. The digitalisation of the economy is exacerbating this trend⁽¹⁵⁷⁾. As a result, the real economic activity of large multinationals is often disconnected from the place where they register their profits and pay their taxes, creating opportunities for international tax arbitrage and artificial profit shifting that may affect the competitive position of EU Member States, both within the single market and compared with countries outside the EU. In 2019, on average, 37% of multinationals' foreign profits were shifted to what some classify as tax havens (Wier and

154 See Section 2.2.2. on VAT in the Digital Age

155 See Impact Assessment - VAT in the Digital Age, SWD/2022/393 final, Table 10, p. 56. Also note that that, even if nothing is done on an EU level, individual Member States, and especially the ones with high VAT compliance gaps, such as Romania, Italy, Greece and Lithuania, will continue to introduce digital domestic reporting requirements to deal with their VAT compliance gap issue at national level, thus impacting the EU VAT compliance gap figures.

156 The impact of the introduction of e-invoicing digital reporting on VAT revenue was estimated in the ViDA Impact Assessment and has been done by means of an econometric analysis based on panel data. Changes in VAT revenue in specific Member States that introduced digital reporting requirements (DRRs) were used to determine whether and to what extent such DRRs have resulted in increased revenues, and therefore a decrease in VAT non-compliance in the adopting Member States.

157 The tax challenges raised by digitalisation have been analysed, for example, in the context of the inclusive framework on base erosion and profit shifting (BEPS).

Zucman, 2022). In some sectors, such as chemical manufacturing, non-store retailers or computer products, tax avoidance by MNEs could explain up to 30% of increase in industry concentration since 1990, according to a recent study (Martin et al., 2023). Rulings granted by Member States to some MNEs have given a competitive advantage to some firms, such as in the Apple, Fiat or Amazon cases. Since 2017, the automatic exchange of tax rulings between Member States has decreased the use of such agreements for tax advantage purposes. Coordination of tax policies and more transparency help to restore a level playing field for all firms within the Single Market.

Tax planning can be detrimental to competitiveness because it can undermine the budgetary space for supporting investments and distort business decisions. Businesses may decide to invest somewhere based on opportunities to lower their tax burden, rather than based on economic factors (e.g., skills, infrastructure, etc.). Tax policy can support investments, but support should be well-targeted. Aggressive tax planning results in lower taxation that violates the spirit of the law, and even tax planning where companies genuinely relocate to lower their tax burden can lead to inefficiencies. The 2023 Annual Taxation Report provides extensive information on the EU actions to fight aggressive tax planning.

Within the EU, the Code of Conduct helps address harmful tax competition. Direct tax measures are traditionally decided by Member States and the EU *acquis* is still limited in this area. Nevertheless, the *acquis* does introduce some limitations on tax competition to ensure the functioning of the single market. In 1997, Member States agreed on a Code of Conduct on Business Taxation, a legally non-binding instrument, to limit the effects of harmful tax competition and to coordinate the use of tax incentives. Since 1997, the Code of Conduct Group has examined more than 400 tax measures. Over the last 25 years, around 210 of the 400 measures examined by the Code of Conduct Group were assessed not harmful, while 70 measures were not assessed for reasons such as being *de minimis* or out of scope.

4.4 Conclusions

Taxation is key to achieving a competitive economy, that results in sustainable growth and shared prosperity. Protecting the competitiveness of the EU economy, which has recently been put under pressure, has become a key policy priority in the European Commission's agenda. EU tax policy and tax systems are built on the principles of fairness, efficiency, simplicity and stability, but can also play a crucial role in that respect. While traditional economic literature suggests that high corporate tax rates may weigh on economic growth, more recent evidence points out that the impact of corporate taxation on growth is multifaceted and can vary depending on several factors, in particular the design of tax provisions. Labour taxation plays a significant role as it shapes labour market performance, which is a key determinant of competitiveness and sustainable growth. Appropriate design of tax and social benefits (with attention to their distributional impact), can help encourage labour market participation. A balanced and more future-proof tax mix can support the delivery of inclusive and sustainable growth, including by shifting some of the tax burden from labour taxation towards environmental and recurrent immovable property taxation in a fair and efficient manner ⁽¹⁵⁸⁾. Well-justified tax incentives can also support economic activities that advance public goals such as the green transition ⁽¹⁵⁹⁾, provided that they are compatible with the existing fiscal space and that they are accompanied by effective anti-fragmentation tools to protect the integrity of the Single Market.

Well-designed tax systems can effectively support balanced economic growth and a fair society. In recent years, the EU has experienced many crises that had an impact on its economy and taxation systems. For the EU economy to retain its strength, decisive choices need to be made – including for the green and digital

158 2024 European Semester – Spring Package Communication, 19 June 2024 ([European Commission, 2024f](#)).

159 For example, the REPowerEU Communication of 18 May 2022 (COM(2022) 230 final) encouraged Member States to consider additional tax measures such as *inter alia* reductions and exemptions from vehicle taxation for both the purchase and use of electric and hydrogen vehicles, and tax deductions linked to energy savings.

transitions – in both the public and the private sectors. In this complex context, tax policy has a role to play in supporting an inclusive, sustainable and digital-friendly economy. As the main source of government revenue in the EU, taxes support redistribution and provide the resources to finance education, health and public goods which are essential for a fair and inclusive society. Tax rules that are simple, stable and predictable, coupled with the efficient use of revenues in growth-enhancing public spending, are important tools in the policy mix to promote competitiveness, fairness and shared prosperity.

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Glossary

Accelerated depreciation is the depreciation used for accounting or for income tax purposes that enables greater depreciation expenses in the first years of the life of a fixed asset.

Aggressive tax planning consists of taxpayers reducing their tax liability through arrangements that may be legal but are in contradiction with the intent of the law.

Base Erosion and Profit Shifting (BEPS) are tax avoidance strategies that exploit gaps and mismatches in tax rules to artificially shift profits to low or no-tax locations.

Carbon Border Adjustment Mechanism (CBAM) is a climate measure to support climate mitigation by preventing carbon leakage (i.e. industries transferring polluting production to other countries with less stringent climate policies). It equalises the price of carbon between domestic products and imports, for a selected number of products.

Direct taxes are defined as current taxes on income, wealth and capital (including taxes such as inheritance, property or gift taxes). In the subcategory of income taxes, you can further distinguish between personal income tax (PIT), corporate income tax (CIT), and tax on capital gains.

Effective average tax rate (EATR) is calculated based on the nominal tax rate and the definition of the tax base.

Effective marginal tax rate (EMTR) shows what part of a change in earnings is taxed away by the combined operation of taxes, social security contributions (SSCs), and any withdrawal of earnings-related social transfers.

Environmental taxes include taxes on energy, transport, pollution and resources (excluding VAT, which is levied on all products). **Energy taxes** include taxes on energy products and electricity used for transport (e.g. petrol and diesel) and stationary purposes (e.g. fuel oils, natural gas, coal and electricity). **Transport taxes** include taxes on the ownership and use of motor vehicles, and taxes on other transport equipment such as planes and on related transport services, e.g. duties on charter or scheduled flights. **Pollution taxes** include taxes on measured or estimated emissions to air (except taxes on CO₂ emissions) and water, on the management of solid waste and on noise. **Resource taxes** include any tax linked to the extraction or use of a natural resource (e.g. taxes on licence fees paid for hunting and fishing rights) ⁽¹⁶⁰⁾.

European Semester is the European Union's framework for the coordination and surveillance of EU Member States' economic and social policies. As part of the process, the European Commission proposes every year country-specific recommendations (CSRs) that aim to address the key challenges in EU Member States. The CSRs are then endorsed by the European Council and adopted by the Economic and Financial Affairs Council (ECOFIN). Member States should incorporate this policy guidance into their annual budgets, national legislation and policy plans.

Excise duties are indirect taxes on the sale or use of specific products, such as alcohol, tobacco and energy.

Forward-looking effective tax rates (ETRs) are synthetic tax policy indicators measuring the tax burden of a prospective, hypothetical investment project.

Gini coefficient (also known as the Gini index) measures the inequality among values of frequency distribution, such as levels of income. A Gini coefficient of 1 reflects maximal inequality while 0 reflects perfect equality.

¹⁶⁰ This definition is based on (European Commission, 2013).

Health taxes are levied on products that have a negative public health impact, for example tobacco, alcohol and sugar-sweetened beverages. These taxes are meant to save lives and prevent disease, while in parallel advancing health equity and mobilising revenue for the general budget ⁽¹⁶¹⁾.

Indirect taxes are taxes levied on a material or legal event of an accidental or temporary nature and on a (legal or natural) person that can often be an intermediate and not the person responsible for the event (hence the indirect character of the tax), e.g. VAT, import levies, excise duties, other taxes on production.

Offshore, in the context of tax havens and financial centres, typically refers to a jurisdiction or location that is outside the country of residence or domicile of the individuals or entities that utilize its financial services. These offshore jurisdictions are often associated with lower tax rates, financial privacy, and favourable legal and regulatory environments that typically allow for activities with the purpose of establishing financial entities such as trusts, corporations, or bank accounts to minimize tax liabilities, protect assets, or conduct business operations.

Patent box is a term used to describe tax regimes that allow for lower tax rate on profits made from intellectual property assets. This is often used as an incentive for companies' research and development activities.

Pigouvian tax is a tax named after the British economist Arthur Pigou, that is intended to correct negative market externalities (i.e. indirect costs from consumption, production, and investment decisions that affect third parties not directly involved). Negative externalities can for example be related to the environmental consequences of production and consumption.

Recovery and Resilience Facility (RRF) is a temporary instrument that enables the European Commission to raise funds by borrowing on the capital markets (issuing bonds on behalf of the EU) and make them available to its Member States. Member States use the funds provided by the RRF to implement reforms and investment to make their economies and societies more sustainable, resilient and prepared for the green and digital transitions.

Second earner defines a person living in a household where the spouse/partner's earnings represent the household's main income. If the second earner is working, it is assumed to earn less than the primary earner.

Social contributions are compulsory payments made by employers and employees into social insurance schemes that cover pensions, healthcare as well as other welfare provisions.

Subsidies are financial assistance provided by the government to organisations or companies as part of an incentive to further economic and social policy.

Tax allowance is the amount of money that can be deducted from taxpayer's income or a company's profit before tax owned is calculated.

Tax avoidance is the arrangement of a taxpayer's affairs in a way that is intended to reduce his/her tax liability and that (although the arrangement may be strictly legal) is usually in contradiction with the intent of the law.

Tax credit is a sum of money that taxpayers can deduct from the taxes they owe.

Tax evasion generally involves illegal arrangements whereby liability to tax is hidden or ignored, i.e. the taxpayer pays less tax than they are legally obliged to pay by hiding income or information from the tax authorities.

Tax fragmentation refers to a situation where a tax system is divided into multiple, possibly conflicting, components or levels. This can occur when different jurisdictions (such as states or municipalities) have their own tax laws, leading to inconsistencies and complexities in the overall tax system. Tax fragmentation can result in

161 This definition is based on: https://www.who.int/health-topics/health-taxes#tab=tab_1

challenges for businesses and individuals who operate across different jurisdictions, as they may need to navigate and comply with varying tax regulations, rates, and requirements. **Tax fraud** is a form of deliberate evasion of tax that is generally punishable under criminal law. It includes situations in which deliberately false statements are submitted or fake documents are produced.

Tax incentives are measures employed by the government to encourage activities in certain domains of the economy, by offering deductions, exclusions or exemptions from tax liability. Tax incentives are selective in nature in the sense that they give preferential treatment to economic activities which are in line with the objectives of the government.

Tax relief refers to any program or policy designed by the government to help individuals and businesses lower their tax burdens or settle their tax-related debt.

Tax wedge on labour is the difference between wage costs to the employer of a worker and the amount of net income that the worker receives, expressed as a proportion of the overall wage costs. The difference arises as a result of taxes, including PIT and compulsory SSC.

Transfer pricing concerns the prices charged between associated enterprises established in different countries for their inter-company transactions, i.e. transfer of goods and services. Since the prices are set by non-independent associates within a multi-national enterprise, it may be that the prices do not reflect an independent market price.

VAT gap is the difference between VAT revenue actually collected by the tax administration and the theoretical net VAT liability for the economy as a whole, under the country's current VAT system. The theoretical VAT liability is estimated by identifying the expenditure categories that give rise to irrecoverable VAT and then applying the appropriate VAT rate to these to estimate the expenditure in each category.

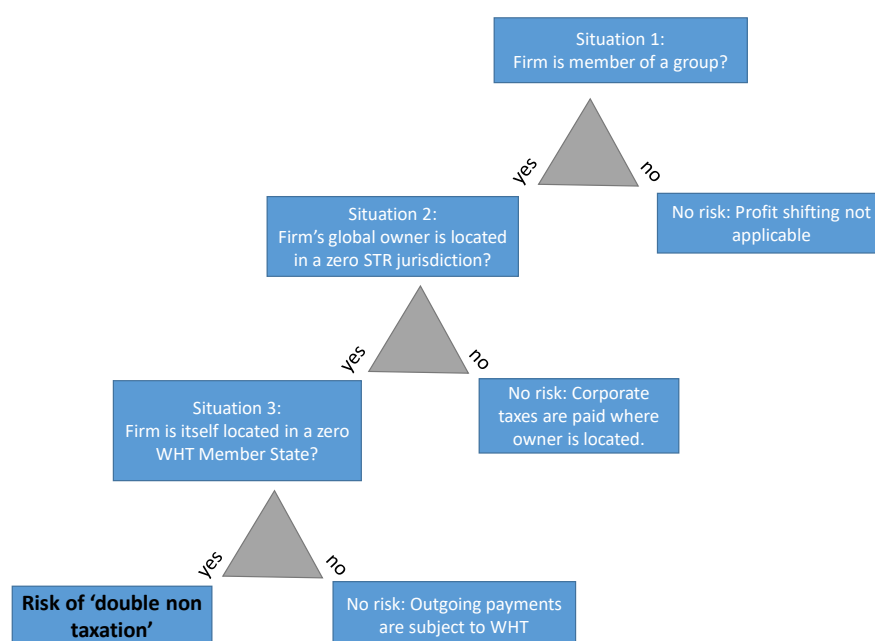
Venture capital is a subset of private equity taking the form of investment in unquoted companies by firms who, acting as principals, manage individual, institutional or in-house money. In the EU, the main financing stages are early-stage (covering seed and start-up financing) and expansion.

Withholding tax is a tax on income imposed at source. A third party is charged with deducting the tax from certain kinds of payment and remitting that amount to the tax administration. Withholding taxes are widely used for dividends, interest, royalties and similar tax payments.

Annex 1 – Analysis of Aggressive Tax Planning

We analyse Bureau van Dijk's global firm-level *Orbis* dataset which combines information about a groups' ownership structure with detailed financial information about each of group members. *Orbis* is an extensive database containing information about up to 400 million enterprises around the globe. Though data provided about firms is usually everything but complete, it gives detailed information about core financial indicators and ownership structure at firm level. In the case of a subsidiary of an MNE, this means that for many firms it is known in which country the global ultimate owner (GUO) ⁽¹⁶²⁾ is based. In other words, for a given subsidiary found in the *Orbis* database, one could make the link to its owner. Owners may be based in the EU or in a third country. It may be based in a jurisdiction with very low or even non-existing corporate taxes. It is therefore possible for firms in the dataset to distinguish the following situations related to a firm's location/ownership constellation:

Figure A-1: Decision tree: Firm characteristics of interest for the Orbis-based analysis



We focus on advantages MNE may have due to *double non taxation*: That is, we look at firms (1) located in an EU country where no withholding tax (WHT) on outbound interest and royalty payments was levied. (2) The firms' global owner is located in a tax haven where corporate taxes imposed on profits are zero. Do subsidiaries in that particular situation have a competitive advantage over other firms? We analyse the unconsolidated accounts of every single firm in the dataset (i.e., not the consolidated group accounts). We pool *Orbis* financial and ownership data of four years: 2016 to 2019 which are not influenced by subsequent global shocks (Corona, political tensions).

The model

From the ownership-file, the following characteristics of each EU-located firm in the dataset is important, as depicted above in Figure A.1:

Situation 1: The firm is member of a group.

¹⁶² We chose the Orbis definition of a GUO which is based on majority ownership: To identify a firm's GUO, Orbis follows two alternative ownership links with the owner's share in the firm in question being higher than 25% and 50%, respectively. We work with the latter ownership definition.

Situation 2: Situation 1 plus: the group's global ultimate owner is located in a tax haven (zero STR jurisdiction) outside the EU.

Situation 3: Situation 2 plus: the firm itself is located in one of the six zero WHT Member States. This situation was referred to above as "double non-taxation".

Firms fulfilling *situation 3* would be able to shift part of their tax base to their GUO into that zero STR jurisdiction via outbound royalty and interest payments. In extreme cases, these amounts would go untaxed altogether: no WHT would be applied in the EU, nor corporate taxes paid outside the EU. We therefore hypothesize that this cost advantage will procure **higher productivity** and **lower taxes paid**, while **reported profits** on the accounts of the respective firm **are not necessarily higher** than is the case with comparable firms who would not have this ownership constellation because outbound payments would reduce the firm's tax base.

To measure productivity, taxes paid, and profits, the following variables are calculated based from *Orbis* financial data:

- **Total factor productivity (TFP):** We measure the TFP at the individual subsidiary level using the residual of value added based on the Cobb-Douglas production function with two factors: labour and capital ⁽¹⁶³⁾. The core idea here is that the MNEs with presence in the zero WHT and zero corporate STR environments can reduce their costs via double non-taxation, which inflates their total factor productivity.
- **(Corporate) taxes paid:** Looking at the association of the group presence in zero WHT and zero STR with the level of corporate tax paid identifies an important channel of the increase of the TFP and thereby the channel behind the influence on the distortions of conditions of competition.
- **Profit/turnover ratio (mark-up = EBITDA/turnover):** We measure what Sorbe and Johansson (2017) refer to as the level of mark-up, using the ratio of EBITDA (earnings before interest, taxes, and amortisation) and turnover. Whereas Sorbe and Johansson (2017) measure the mark-ups at the consolidated group level, we measure them at the level of each individual subsidiary.

We run a regression with the (logarithm of) TFP, taxes paid, and mark-up as dependent variables. The set of explanatory variables include, most importantly, a set of dummy variables which describe the three situations the firm can be in, as outlined above:

1. Part of a group (1 if yes, or 0 if not)... ?
2. ... if yes: the group's global owner located in a zero STR jurisdiction (1 or 0) ?
3. ... if yes, located in a zero WHT EU Member State? (1 or 0)?

We have thus a cascading system of three dummy variables describing four possible situations. We regress the (log) of Total Factor Productivity, the (log) amount of taxes paid by the firm and the (log) mark-up as profit/turnover ratio on this set of dummy variables. We control for the firm size (number of employed) and include sector, country and time fixed effects to account for structural and institutional differences across industries and countries, as well as cyclical variation.

163 Whenever missing, we impute value-added using the sum of EBITDA and wage costs. Whenever missing, wage costs are imputed using the number of employees and the average wage in a given industry. The parameters used for the Cobb Douglas function are 1/3 on capital (measured by total fixed assets) and 2/3 on labor (measured by total wage costs). TFP is assumed to be 0 whenever the residual of value added, once accounting for the capital and labor contributions, is negative.

Table A1: Regression: explaining TFP, corporate taxes and mark-ups – double non-taxation from the perspective of an MNE subsidiary potentially shifting profits to the group’s Global Ultimate Owner

	Independent variable:	Dependent variable					
		TFP (log)		Taxes paid (log)		Mark-up (log)	
		coeff	sign	coeff	sign	coeff	sign
'Sit. 3'	'Double non taxation'	1.83	0.04	-2.22	0.00	0.04	0.90
'Sit. 2'	Global owner located in zero STR jurisdiction	-0.53	0.00	1.65	0.00	0.06	0.05
'Sit. 1'	Firm is part of a group	0.23	0.00	0.88	0.00	0.01	0.00
	Number of employed (log)	-10.64	0.00	0.58	0.00	-0.23	0.00
	Mark-up as Profit/turnover ratio (log)	0.01	0.00	0.46	0.00		
	TFP (log)					0.00	0.00

Source: Commission services, based on BvD Orbis data (2016-2019). Note: Controlled for sector, time and country fixed effects; N=2.060.056 (1.856.092 in the case of taxes paid)

The link between double non-taxation and TFP

See first column of Table A1 which shows a set of selected specifications. We include the mark-up (profitability) as additional control variable and find that higher profitability correlates with higher TFP. The impact of firm size (number of employed) tends to be negative: *All else equal* (given profitability), a higher number of workers increases the coordination effort a firm has to make to achieve a given degree of efficiency.

Results are:

- Situation 1: Being part of a group has a positive and significant impact on productivity as groups have more options to allocate productive resources optimally across branches and to better diffuse innovative knowledge.
- Situation 2: Once the firm is part of a group, having the GUO located in a tax haven (a zero STR jurisdiction outside the EU) has a significantly negative impact on TFP. The reasons for this finding can be manifold and are probably related to specificities of the extra-EU jurisdiction hosting the GUO. The institutional setup in this country may or may not promote innovation and the diffusion of technologies from a group’s headquarters to its subsidiaries.
- Situation 3 – double non-taxation: What is more important: **the firm’s GUO being located in a zero STR jurisdiction becomes a boost for productivity only if the firm itself is located in zero WHT EU-country**. Only this very constellation allows the firm to shift profits, via royalty or interest payments, to its mother, free of withholding tax ⁽¹⁶⁴⁾. Only then would there be a boost on productivity as the entire group would save cost (taxes), thus having higher means for investment in higher efficiency at its disposal. The coefficient is positive and highly significant.

The link between double non-taxation and corporate taxes paid

The second column in Table A1 shows the results of a regression in which firm-level corporate taxes are the dependent variable. That is, the analysis tries to explain to what extent double non-taxation may impact the taxes paid. Again, we control for a set of relevant variables, which include the firms’ mark-up as one must take into account that, *cet. Par.*, more profitable firms pay more taxes.

- Situation 1: After controlling for profitability,
- If part of a group, enterprises tend to pay more taxes than other firms.
- Situation 2: This holds true – even to a much larger extent – for those firms which are part of a group whose GUO is located in a jurisdiction where there is zero statutory corporate taxation.

¹⁶⁴ It is also possible for MNEs to shift profits from a subsidiary located in a high-tax jurisdiction to another subsidiary located in a zero-STR jurisdiction in order to avoid taxes. However, the focus of this analysis is on profit shifted to the ultimate parent company.

- Situation 3 – double non taxation: similarly to what was found said in the context of TFP above: **the firm's owner located in a zero STR jurisdiction reduces the firm's tax bill only if the firm itself is located in a zero WHT Member State**. Only then can outbound payments shift part of the firm's profits overseas, free of tax.

The link between double non-taxation and profitability

The third column in Table A1 regresses the profitability at firm level, measured as the ratio of profits and turnover. Apart from fixed effects explained earlier, we control for TFP, taking into account that more productive firms will also be more profitable, all else being equal. Thus, the respective coefficient is positive and significant.

The dummy for situation 3 (double non-taxation) is insignificant (even negative). As outlined in the non-technical part above, this finding is in line with the assumption that profits are being shifted overseas to the group's GUO via outbound royalty and interest payments. Profitability of MNEs may be high in general, yet profits reported in the EU-based subsidiaries' balance sheets are not necessarily higher.

Summary

Cross-country differences in the level of WHT on outbound royalty and interest payments are likely having a significant impact on a firm's competitive position. Foreign-owned firms in countries where WHT are low tend to generate higher overall mark-up, higher productivity, more market power on product and factor markets, and they operate on more concentrated (less competitive) markets, compared with all other firms.

Annex 2 – Statutory tax rates for PIT, CIT, and VAT

Table A2.1: Top statutory personal income tax rates (including surcharges), 2000-2023

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Belgium	60.6	60.1	56.4	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.8	53.8	53.7	53.2	53.1	53.1	53.1	53.1	53.1	53.0	53.0
Bulgaria	40.0	38.0	29.0	29.0	29.0	24.0	24.0	24.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Czechia	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	23.0	23.0	23.0
Denmark	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.1	55.4	55.4	55.4	55.6	55.6	55.8	55.8	55.8	55.9	55.9	55.9	55.9	55.9	55.9
Germany	53.8	51.2	51.2	51.2	47.5	44.3	44.3	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
Estonia	26.0	26.0	26.0	26.0	26.0	24.0	23.0	22.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Ireland	44.0	42.0	42.0	42.0	42.0	42.0	42.0	41.0	41.0	46.0	47.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	40.0	40.0	40.0	40.0
Greece	45.0	42.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	49.0	49.0	49.0	46.0	46.0	48.0	48.0	55.0	55.0	55.0	54.0	54.0	54.0	44.0
Spain	48.0	48.0	48.0	45.0	45.0	45.0	45.0	43.0	43.0	43.0	43.0	45.0	52.0	52.0	52.0	45.0	45.0	43.5	43.5	43.5	43.5	45.5	45.0	45.0
France	59.0	58.3	57.8	54.8	53.4	53.5	45.4	45.4	45.4	45.4	46.6	50.3	50.3	50.3	50.2	50.2	50.2	51.5	51.5	51.5	51.5	51.5	51.5	51.5
Croatia	41.3	41.3	41.3	53.1	53.1	53.1	53.1	53.1	53.1	56.1	50.2	47.2	47.2	47.2	47.2	47.2	47.2	42.5	42.5	42.5	42.5	35.4	35.4	30.0
Italy	45.9	45.9	46.1	46.1	46.1	44.1	44.1	44.9	44.9	44.9	45.2	47.3	47.3	47.3	47.8	48.8	48.8	47.2	47.2	47.2	47.2	47.2	47.1	43.0
Cyprus	40.0	40.0	40.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Latvia	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	26.0	25.0	25.0	24.0	24.0	23.0	23.0	23.0	31.4	31.4	31.4	31.0	31.0	31.0
Lithuania	33.0	33.0	33.0	33.0	33.0	33.0	27.0	27.0	24.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	27.0	32.0	32.0	32.0	32.0
Luxembourg	47.2	43.1	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	42.1	41.3	43.6	43.6	43.6	43.6	45.8	45.8	45.8	45.8	45.8	45.8	45.8
Hungary	44.0	40.0	40.0	40.0	38.0	38.0	36.0	40.0	40.0	40.0	40.6	20.3	20.3	16.0	16.0	16.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Malta	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Netherlands	60.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	51.8	49.5	49.5	49.5	49.5
Austria	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Poland	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
Portugal	40.0	40.0	40.0	40.0	40.0	40.0	42.0	42.0	42.0	42.0	45.9	50.0	49.0	56.5	56.5	56.5	56.5	56.2	53.0	53.0	53.0	53.0	53.0	48.0
Romania	40.0	40.0	40.0	40.0	40.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	10.0	10.0	10.0	10.0	10.0	10.0
Slovenia	50.0	50.0	50.0	50.0	50.0	50.0	50.0	41.0	41.0	41.0	41.0	41.0	41.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	45.0	50.0
Slovakia	42.0	42.0	38.0	38.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Finland	54.0	53.5	52.5	52.2	52.1	51.0	50.9	50.5	50.1	49.1	49.0	49.2	49.0	51.1	51.5	51.6	51.6	51.4	51.1	51.1	51.1	51.1	51.3	51.3
Sweden	51.5	53.1	55.5	54.7	56.5	56.6	56.6	56.6	56.4	56.5	56.6	56.6	56.6	56.7	56.9	57.0	57.1	57.1	57.1	57.2	52.3	52.3	52.2	52.2
Iceland	45.4	45.5	45.8	45.6	43.6	41.7	38.7	35.7	35.7	45.2	46.1	46.2	46.2	46.2	46.2	46.2	46.3	46.3	46.2	46.2	46.2	46.3	46.3	46.3
Norway	47.5	47.5	47.5	47.5	47.5	43.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.0	39.0	38.7	38.5	38.4	38.2	38.2	38.2	39.4	39.5
Simple averages																								
EU-27	44.8	43.9	43.0	42.7	41.8	40.5	39.9	39.7	38.4	37.9	38.1	37.9	38.2	38.9	39.0	38.8	38.7	38.8	38.8	39.2	38.8	38.9	38.7	
EA-19	45.2	44.1	43.3	42.3	41.0	40.6	39.9	39.4	39.1	38.8	39.7	40.6	41.1	42.3	42.3	42.0	42.0	42.3	42.6	43.2	42.9	43.0	42.7	

- Definition:
- The indicator reported in the table is the "top statutory personal income tax rate"
 The "top statutory personal income tax rate" indicator does not differentiate by source of income and therefore as well, surcharges and deduction specific to income source are not taken into account.
 The "top marginal tax rate from employment income", which is sometimes used in other situations, can differ from the "top statutory personal income tax rate" with respect to (1) source of income: any personal income vs. earnings income and
 to (2) statutory vs. marginal tax rate. The marginal tax rate calculation (increase in tax revenue for a unit increase in gross earnings) is only possible for the latter type of indicator. The existence of differences between the two indicators relate directly to the design and complexity of the tax system.
 - General surcharges are included even when not part of PIT or not legally a tax (see country notes below)

3. Local and regional taxes are normally added (see country notes below).

The reader is referred to the "Taxes in Europe Database" for detailed information about the specificities of each country PIT, and in particular for the level of income from which the top statutory income rate applies.

General notes:

1. Figures in italics represent flat-rate tax
2. Numbers are rounded to one decimal

Country notes:

Belgium. Including crisis tax (1993–2002) and (average) local surcharges (Brussels Region rate since 2015). Special social security contributions (capped) are not included.

Bulgaria. The net income of sole proprietors is taxed separately (15 % final flat tax – not included in the table).

Czechia. In addition to the flat tax rate (15 %), in 2013–2020 a solidarity surcharge (7 %) was levied on employment, business and professional income that is above four times the average wage. The two rates apply to different taxable incomes and therefore cannot be added together. As of 2021, the tax rate is 15 % for the part of the taxable income up to 48 times the average wage and 23 % for the part exceeding 48 times the average wage (CZK 1 701 168 represents 48 times the average wage in 2021). For income taxes, average wage means the average wage under the act regulating social security premiums.

Denmark. Including local taxes and labour market contribution (8 % in 2015–2022) but excluding church tax. The top rate is further capped (at 51.7 % in 2013–2014, 51.95 % in 2015–2017, 52.02 % in 2018, 52.05 % in 2019 and 52.06 % in 2020), by a decrease in the state tax if needed. The top rate in the table above includes the labour market contribution; for example for 2019 it is calculated as $8\% + (100\% - 8\%) \times 52.05\% = 55.9\%$.

Germany. In addition, a solidarity surcharge of 5.5 % of the tax liability is applied, subject to an exemption limit.

Ireland. Including the universal social charge of 8 % (for self-employed income in excess of EUR 100 000 it is 11 %).

Greece. Including the solidarity contribution for 2011–2016 (for 2011–2014 the rate ranged from 1 % to 4 %, with the top rate of 4 % applicable to net annual income exceeding EUR 100 000). From 2015 the rates changed, to 6 % for an annual income of EUR 100 000–500 000 and 8 % for income over EUR 500 000. The top-rate calculation for 2015 and 2016 in the table above includes the solidarity contribution for the income band EUR 100 000–500 000 at the rate of 6 %. From May 2016 the top PIT rate was increased to 45 % and the highest solidarity contribution became 10 % for incomes above EUR 200 000. The top-rate calculation for 2017 onwards in the above table includes the 10 % solidarity contribution for the income band EUR 220 000 and above.

Spain. Regional governments can use their own tax schedules. Up to 2016, this is assumed to have been equal to the central government tax schedule. Since 2017, each autonomous community has applied a different scale, of which currently only one matches the central government tax scale. Therefore, the calculation applies that of the Autonomous Community of Madrid, which is considered the most representative tax scale on various grounds. As a result, the top statutory tax rate decreased in 2017, although the PIT Law tax schedule has remained unchanged.

France. Several contributions are added to PIT, but, while PIT applies to individualised global net personal income, the contributions may vary depending on the income source. The value in the table reflects the top statutory rate for earnings. It includes the top PIT rate (45 %), the general social welfare contribution (CSG, applicable rate 9.2 %, of which 6.8 % is deductible) and the welfare debt repayment levy (CRDS, rate 0.5 %). A total of 0.4 % of social contributions is deductible from the basis on which PIT is calculated. The 2018 Budget Act introduced the choice between a flat tax and progressive taxation for taxation on capital income. The flat tax on capital income is 30 %: 12.8 % of income tax and 17.2 % of social contributions (without deductible CSG) on capital income ($9.9\% + 0.5\% + 4.5\% + 0.3\% + 2\%$). If the taxpayer chooses progressive taxation, then, with CSG (applicable rate 9.9 %, of which 6.8 % is deductible), CRDS, and additional social and solidarity levies ($4.5\% + 0.3\%$ and 2%), the top PIT rate becomes $(0.45 \times (1 - 0.068) + 0.099 + 0.005 + 0.045 + 0.003 + 0.02) \times 100 = 59.1\%$. The exceptional contribution for incomes above EUR 250 000 is not shown in the table.

Croatia. Including average crisis tax (2009–2011) and surtax for Zagreb (maximal local surtax rate of 18 %). From 1 January 2017 were introduced only two tax rates 24% and 36% on annual income. From 1 January 2021 these tax rates are reduced to 20% and 30%.

Italy. Including regional and municipal surcharges (values given for Rome) and, from 2011 to 2016, 3 % solidarity contribution (deductible from the tax base). The increases of 0.5 % in 2014 and of 1 % in 2015 correspond to increases in the Lazio regional surcharge.

Cyprus. Not including the (tax-deductible) special contribution on gross wages (2012–2016) of up to 3.5 % (up to 4 % for (semi-)public employees).

Latvia. From January 2018, the previous 23 % flat rate was replaced by three progressive rates: 20 %, 23 % and 31.4 % (the third rate, 31.4 %, is designed as a conditional rate, and it will be calculated only after submission of the annual tax declaration; the PIT part of the solidarity tax is included). From 2021, the third rate is set at 31.0 %.

Luxembourg. Including crisis contribution in 2011 and solidarity surcharge for the unemployment fund (since 2002) of 9 % (for top incomes), but not the *Impôt d'équilibrage budgétaire temporaire* of 0.5 % between 2015 and 2016 (which is added to the social security contributions). Since 1 January 2017, there has been a new rate of 42 % for incomes over EUR 200 000. In 2022, the solidarity surcharge is up to 9 %.

Hungary. Including solidarity tax (2007–2009). In 2010–2012, rates included the effect of a base-increasing component, which was applicable in 2010 and 2011 to total earnings, and in 2012 to the part of monthly earnings above HUF 202 000 (EUR 653), roughly the average wage, leading to a two-rate system: 16 % and 20.3 %. In 2013, the base-increasing component was phased out and the 16 % tax rate applied to all income. From 2016, this was reduced to 15 %.

Austria. A rate of 55 % on taxable income over EUR 1 000 000. This rate is only for 2016–2025.

Portugal. Including a surcharge levied on all aggregated categories of income (3.5 % from 2013 to 2016, 3.21 % in 2017, phased out in 2018), and an additional solidarity surcharge (top rate 5 % since 2013). (The special rate of 60 % applied to **unjustified increases** in personal wealth (above EUR 100 000) is not included.)

Finland. Including general government taxes plus (average of) municipality taxes. Variation to be attributed to variations in average local taxes.

Sweden. Including general government taxes plus (average of) municipality taxes. Variation to be attributed to variations in average local taxes.

Iceland. Including surcharges when appropriate and (average of) municipality taxes. The lump-sum taxes for the elderly fund and radio broadcast services are excluded. Source PWC.

Norway. Including the 12 % surtax up to 2015. In 2016, the surtax was replaced by a bracket tax, the top rate of which in 2019 was 16.2 % for 'person income' (essentially gross labour and pension income) above NOK 964 800.

Table A2.2: Top statutory corporate income tax rates (including surcharges), 2000–2023

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Belgium	40.2	40.2	40.2	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	29.6	29.6	25.0	25.0	25.0	25.0
Bulgaria	32.5	28.0	23.5	23.5	19.5	15.0	15.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Czechia	31.0	31.0	31.0	31.0	28.0	26.0	24.0	24.0	21.0	20.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
Denmark	32.0	30.0	30.0	30.0	30.0	28.0	28.0	25.0	25.0	25.0	25.0	25.0	25.0	24.5	23.5	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Germany	51.6	38.3	38.3	39.6	38.3	38.4	38.4	38.4	29.4	29.4	29.5	29.6	29.6	29.6	29.7	29.8	29.8	29.9	29.9	29.9	29.8	29.8	29.8	29.9
Estonia	26.0	26.0	26.0	26.0	26.0	24.0	23.0	22.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Ireland	24.0	20.0	16.0	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Greece	40.0	37.5	35.0	35.0	35.0	32.0	29.0	25.0	35.0	35.0	24.0	20.0	20.0	26.0	26.0	29.0	29.0	29.0	29.0	28.0	24.0	24.0	22.0	22.0
Spain	35.0	35.0	35.0	35.0	35.0	35.0	35.0	32.5	30.0	30.0	30.0	30.0	30.0	30.0	30.0	28.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
France	37.8	36.4	35.4	35.4	35.4	35.0	34.4	34.4	34.4	34.4	34.4	36.1	36.1	38.0	38.0	38.0	34.4	44.4	34.4	34.4	32.0	28.4	25.8	25.8
Croatia	35.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Italy	41.3	40.3	40.3	38.3	37.3	37.3	37.3	37.3	31.4	31.4	31.4	31.4	31.3	31.3	31.3	31.3	31.3	27.8	27.8	27.8	27.8	27.8	27.8	27.8
Cyprus	29.0	28.0	28.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Latvia	25.0	25.0	22.0	19.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	20.0	20.0	20.0	20.0	20.0	20.0
Lithuania	24.0	24.0	15.0	15.0	15.0	15.0	19.0	18.0	15.0	20.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Luxembourg	37.5	37.5	30.4	30.4	30.4	30.4	29.6	29.6	29.6	28.6	28.6	28.8	28.8	29.2	29.2	29.2	29.2	27.1	26.0	24.9	24.9	24.9	24.9	24.9
Hungary	19.6	19.6	19.6	19.6	17.6	17.5	17.5	21.3	21.3	21.3	20.6	20.6	20.6	20.6	20.6	20.6	20.6	10.8	10.8	10.8	10.8	10.8	10.8	10.8
Malta	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Netherlands	35.0	35.0	34.5	34.5	34.5	31.5	29.6	25.5	25.5	25.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.8
Austria	34.0	34.0	34.0	34.0	34.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0
Poland	30.0	28.0	28.0	27.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
Portugal	35.2	35.2	33.0	33.0	27.5	27.5	26.5	26.5	26.5	29.0	29.0	31.5	31.5	31.5	29.5	29.5	29.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
Romania	25.0	25.0	25.0	25.0	25.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Slovenia	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	22.0	21.0	20.0	20.0	18.0	17.0	17.0	17.0	17.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
Slovakia	29.0	29.0	25.0	25.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	23.0	22.0	22.0	22.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Finland	29.0	29.0	29.0	29.0	29.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	24.5	24.5	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Sweden	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	26.3	26.3	26.3	26.3	22.0	22.0	22.0	22.0	22.0	22.0	21.4	21.4	20.6	20.6	20.6
Iceland	30.0	30.0	18.0	18.0	18.0	18.0	18.0	18.0	15.0	15.0	18.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Norway	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	27.0	27.0	25.0	24.0	23.0	22.0	22.0	22.0	22.0	22.0
Simple averages																								
EU-27	32.1	30.4	29.0	27.8	26.5	25.1	24.9	24.1	23.6	23.6	23.0	22.9	22.9	23.2	23.0	22.9	22.6	22.4	22.0	21.9	21.5	21.4	21.2	21.2
EA-19	33.3	32.1	30.4	28.7	27.8	26.7	26.5	25.7	25.1	25.2	24.5	24.3	24.3	25.0	24.7	24.6	24.3	24.6	24.1	24.0	23.4	23.2	23.0	23.0

Notes: 1. The 'basic' (non-targeted) top rate is presented here; some countries apply small-profits rates or special rates, e.g. in cases where the investment is financed through issuing new equity, or alternative rates for different sectors. Such targeted tax rates can be substantially lower than the effective top rate.

2. Existing surcharges and local taxes are included. When they are targeted at large enterprises or when their level varies, the top rate is used in the table (see country notes below).

Country notes:

Belgium. 3 % surcharge from 1993 to 2017, reduced to 2 % in 2018–2019 and abolished from 2020 onwards. Notional interest deduction (allowance for corporate equity (ACE)) on the stock of equity from 2006 to 2017, reducing the effective tax rate by several percentage points, depending on the difference between the rate of return and the ACE rate. Notional interest deduction restricted to the increase of equity from 2018 onwards.

Cyprus. Public corporate bodies were subject to a higher rate of 25 % (2003–2008). The 5 % surcharge levied in 2003 and 2004 on all companies (including public bodies) with a taxable income exceeding EUR 1.7 million is not included. In 2013, under the macrofinancial adjustment programme and prior to the first disbursement of assistance, the CIT rate was increased to 12.5 % (with effect from 1 January 2013).

France. Including 3.3 % additional social surcharge for large companies; 36.1 % (2011–2012) and 38.0 % (2013–2015) including the temporary surcharge (*contribution exceptionnelle*) for very large companies (turnover of more than EUR 250 million). In 2017, there were two one-off surcharges for very large companies that amounted to 15 % of the CIT owed for companies with a turnover of between EUR 1 billion and EUR 3 billion and 30 % of the CIT owed for companies with a turnover of more than EUR 3 billion. In 2019, the top CIT rate started to decrease from 33.33 % to 31 %, which leads to a combined rate of 32.0 %, including the 3.3 % additional social surcharge for large companies. Since 2014, companies have been able to benefit from a tax credit equal to 6 % of the payroll for (most) employees. The local business tax (*contribution économique territoriale*) is not included (capped at 3 % of added value).

Germany. The rate includes the solidarity surcharge of 5.5 % and the regional trade tax (*Gewerbesteuer*) on weighted average. From 1995 to 2000, the rates for Germany referred only to retained profits. For distributed profits, lower rates applied. Until 2007, the trade tax was an allowable expense for the purpose of calculating the income on which corporation tax is payable.

Estonia. CIT is applied only on distributed profits, not earned profits.

Greece. The rate includes a special contribution introduced in 2009 (2008 income) on companies with a net income of more than EUR 5 million. The contribution is levied at progressive rates, with the marginal rate reaching 10 %. In 2010 (2009 income) the contribution applied to income above EUR 100 000, with the top rate being 10 % (for an income of more than EUR 5 million).

Croatia. From 1 January 2017, the basic tax rate was reduced from 20 % to 18 %, and to 12 % for taxpayers whose annual revenues are below HRK 3 million. . From 1 January 2020, the basic tax rate of 18% applies for taxpayers whose annual revenues are higher HRK 7,5 million and of 12 % for taxpayers whose annual revenues are below HRK 7.5 million. From 1 January 2021, tax rate for taxpayers whose annual revenues are below HRK 7,5 million was reduced from 12 % to 10 %.

Spain. During the whole period of the table, entities involved in the exploration, research, exploitation and underground storage of hydrocarbon deposits have been subject to an increased tax rate, which is 5 pp higher than the standard tax rate. Since 2015, a 30 % nominal tax rate has been applied to financial entities.

Hungary. Including the local business tax of a maximum of 2 % that applies on the adjusted gross operating profit (turnover minus certain costs) and is deductible from the CIT. In the typical case of a local tax of 2 %, the total tax paid is $2 + (9 \times 0.98) = 10.82$ % (for any additional unit of profit, as tax bases for CIT and local tax differ). For energy providers and other utilities, a CIT rate of 16.3% approximately 40 % applies. An innovation tax of 0.3 % is also due on the same tax base as the local business tax, while micro and small enterprises are exempted from paying (not included in the calculation).

Ireland. 25 % for non-trading income, gains and profits from mining petroleum and land-dealing activities. Until 2003, Ireland applied a 10 % CIT rate to qualifying manufacturing and services companies.

Italy. Since 1998, the rates for Italy have included *imposta regionale sulle attività produttive* (IRAP) (rate 3.90 %), a local tax levied on a broader tax base than corporate income. As of 2012, 10 % of IRAP is deductible from the CIT tax base (the figure in the table takes this deduction into account). The IRAP rate may vary by up to 0.92 pp depending on the location. Since 2012, an ACE has been in force, reducing the effective tax rate (see also the note above on Belgium). ACE has been temporarily strengthened in 2021

Latvia. Since 2018, CIT has been applied only on distributed profits, not earned profits.

Lithuania. A social tax (applied as a surcharge) was introduced in 2006 and 2007 (at 4 % and 3 % respectively). Since 2010, companies with up to 10 employees and a taxable income not exceeding LTL 500 000 (approximately EUR 144 810) have benefited from a reduced tax rate of 5 %. In 2012, the threshold was increased to LTL 1 000 000 (about EUR 289 603), and in 2015 to EUR 300 000.

Luxembourg. Basic local tax (municipal business tax) is 3 %, to be multiplied by a municipal factor ranging from 2 to 3.5 in 2021. The rate in the table is for Luxembourg City. In April 2019, after the approval of the budget, CIT was reduced from 18 % to 17 %, retroactive to 1 January, which is reflected in the table above.

Portugal. Since 2007, the rate for Portugal has included the maximum 1.5 % rate of a municipal surcharge. Since 1 January 2014, the state tax has been 3 % on taxable profits between EUR 1.5 million and EUR 7.5 million, 5 % on taxable profits between EUR 7.5 million and EUR 35 million, and 9 % on profits exceeding EUR 35 million.

Slovakia. CIT was reduced to 21 % in 2017, and minimum tax licences were abolished in 2018.

Norway. A corporate tax rate for the financial sector was established at 25 % for 2018, and this level was maintained for 2019 and 2020.

Table A2.3: VAT rates (%) in the Member States, 2000-2023

VAT rate	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Belgium	Standard 21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Bulgaria	Standard 20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Czechia	Standard 22	22	22	22	22	19	19	19	19	19	20	20	20	21	21	21	21	21	21	21	21	21	21	21
Denmark	Standard 25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Germany	Standard 16	16	16	16	16	16	16	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Estonia	Standard 18	18	18	18	18	18	18	18	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Ireland	Standard 5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Greece	Standard 12.5	(4.2)	12.5	(4.3)	12.5	(4.3)	13.5	(4.4)	13.5	(4.8)	13.5	(4.8)	13.5	(4.8)	13.5	(4.8)	13.5	(4.8)	13.5	(4.8)	13.5	(4.8)	13.5	(4.8)
Spain	Standard 16	16	16	16	16	16	16	16	16	16	16	16	18	18	21	21	21	21	21	21	21	21	21	21
France	Standard 20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Croatia	Standard 22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Italy	Standard 10	(4)	10	(4)	10	(4)	10	(4)	10	(4)	10	(4)	10	(4)	10	(4)	10	(4)	10	(4)	10	(4)	10	(4)
Cyprus	Standard 10	10	13	15	15	15	15	15	15	15	15	15	17	18	19	19	19	19	19	19	19	19	19	19
Latvia	Standard 18	18	18	18	18	18	18	18	18	21	21	22	22	21	21	21	21	21	21	21	21	21	21	21
Lithuania	Standard 18	18	18	18	18	18	18	18	18	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Luxembourg	Standard 15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	17	17	17	17	17	17	17	17	17
Hungary	Standard 12	(0)	12	(0)	12	(0)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Malta	Standard 18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Netherlands	Standard 18	19	19	19	19	19	19	19	19	19	19	19	19	19	19	21	21	21	21	21	21	21	21	21
Austria	Standard 10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Poland	Standard 22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Portugal	Standard 17	17	17	19	19	19	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Romania	Standard 19	19	19	19	19	19	19	19	19	19	24	24	24	24	24	24	20	19	19	19	19	19	19	19
Slovenia	Standard 19	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Slovakia	Standard 23	23	23	20	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Finland	Standard 22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Sweden	Standard 25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Simple averages	EU-27	19.4	19.4	19.7	19.7	19.6	19.7	19.5	19.7	19.6	20.0	20.7	20.8	21.2	21.5	21.6	21.7	21.5	21.5	21.5	21.5	21.5	21.5	21.5
EA-19	Standard	18.1	18.1	18.5	18.5	18.6	18.7	18.7	18.8	19.2	19.7	19.9	20.1	20.6	20.7	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8

Notes: Rates given in the table are those applicable (for more than 6 month in the year considered, or) on the 1st July of that year. When change of rates occurred during the year (not on 1st January) the exact date is available in the notes. Super-reduced rates (below 5%) are shown in brackets. 'Parking rates' are not included in this table, as they are 'historic rates' below 15% negotiated by member states, and an exception to the EU directive (only 5 member states retain them). Full information on VAT rates is available at

Bulgaria: Reduced rate increased to 9 % on 1.04.2011

Czechia: Standard rate decreased to 19 % on 1.05.2004

Germany: The standard VAT rate decreased from 19% to 16% from 1 July to 31 December 2020 and the reduced VAT rate from 7% to 5% 1 July to 31 December 2020

Estonia: Standard rate increased to 20 % on 1.07.2009. Reduced rate 5% implemented in August 2022.

Ireland: Ireland: The (super-) reduced rate was 4% on 01.03.1999. It increased to 4.2% on 01.03.2000. The rate further increased to 4.3% on 01.01.2001 and it increased to 4.4% on 01.01.2004. The rate increased to 4.8% on 01.01.2005 and remains at this rate at present.

Standard rate increased to 21 % on 01.03.2002. Standard rate increased further to 21.5 % on 01.12.2008. Standard rate decreased to 21% on 01.01.2010. Standard rate increased to 23% on 01.01.2012 and remains at this rate. An additional reduced rate of 9 % was introduced on 01.07.2011. The standard rate of VAT is temporarily reduced from 23% to 21% from 1 September 2020 to 28 February 2021.

Greece: All rates were increased on 01.04.2005. A further general increase occurred on 15/03/2010 (to 5% or 10 % and 21%, followed the same year by the increase to 5.5% or 11 % and 23 %, which occurred on July 1st. Reduced rate increased to 13% and super reduced rate to 6.5% on 1.1.2011. Super reduced rate is lowered to 6% as of 20.07.2015. Standard VAT rate raised from 23 to 24 percent, effective as of 1.6.2016.

Spain: The 2010 increase (reduced rate to 8% and standard rate to 18%) occurred on 1st July. Both rates were increased further on 01.09.2012 (to 10% and 21%).

France: Before 01.04.2000, standard rate was equal to 20.6 %.

Croatia: Standard rate increased to 23 % on 01.08.2009. A further increase - to 25 % - took place on 01.03.2012. The reduced VAT rate of 0% was introduced from October 1 2022 and applies on the supply and installation of solar panels.

Italy: Standard rate increased to 21 % on 17.09.2011. A further increase - to 22 % - took place on 01.10.2013. From 1.1.2016 introduction of 5% reduced rate for medical, welfare and educational services given by social cooperatives. In 2022, A decrease in VAT rate from 22% to 10% applies for feminine hygiene products.

Cyprus: The reduced rate of 5 % was introduced on 01.07.2000 together with the increase of the standard rate from 8 % to 10 %. Standard rate increased to 13% on 01.07.2002. The second reduced rate of 8% was introduced on 01.08.2005.

Standard rate increased to 17 % on 01.03.2012, and further increased to 18 % on 14.01.2013. On 13.01.2014 the second reduced rate increased to 9 % and the standard rate increased to 19 %.

Latvia: Reduced rate decreased to 5 % on 01.05.2004. Standard rate decreased to 21 % on 01.07.2012.

Lithuania: Reduced rate (5 %) introduced on 01.05.2000. Standard rate increased to 19 % on 01.01.2009 and further increased to 21 % on 01.09.2009.

Hungary: The second reduced rate (15 %) was abolished on 01.09.2006. Reintroduced on 01.07.2009 at 18 % together with the increased of the standard rate to 25 %.

Netherlands: Standard rate increased to 21 % on 1.10.2012

Poland: The (super-)reduced rate of 3 % was introduced on 04.09.2000.

Portugal: Standard rate increased to 19 % on 05.06.2002. Standard rate increased further to 21 % on 01.07.2005 and then decreased to 20 % on 01.07.2008. All rates increased by 1 % on 01/07/2010.

Romania: The second reduced rate (5 %) introduced on 01.12.2008. Standard rate increased to 24 % on 01.07.2010. Standard rate decreased to 20 % on 01.01.2016. Standard rate decreased from 20% to 19% on 01.01.2017.

Slovenia: Reduced rate increased to 9.5 % and the standard rate increased to 22 % on 1.07.2013

Slovakia: The second reduced rate (6 %) introduced on 01.05.2010. Abolished on 01.01.2011 together with the standard rate increase to 20 %.

Finland: Second reduced rate decreased to 12 % on 1.10.2009. Second reduced rate subsequently increased to 13 % on 01.07.2010 together with the increase of the first reduced rate to 9 % and the increase of the standard rate to 23 %.

United Kingdom: Standard rate increased to 20 % on 04.01.2011

