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Tax Policies in the European Union: 2017 Survey

Tax Policies in the European Union

2017 Survey

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Foreword

The EU is making progress towards sustainable recovery with an ambitious agenda for growth, jobs and investment. We are integrating our economies and building a Capital Markets Union for a more stable and competitive future. We are working to strengthen the social dimension of the EU and respond to citizens' concerns over the levels of inequality and lack of social mobility. Taxation policy cannot be left out in the cold in these developments. In fact, it must be at the heart of them. At the same time, revelations about the level of tax abuse have shaken public confidence in the institutions and in the fairness of our tax systems. We need to think in new ways about the challenges we face and how taxation tools can help address them.

Taxation has a central role to play in shaping a fair society and a strong economy. Taxation can help to address inequalities, not only by financing public spending to support social mobility, such as on education, but also by reducing income inequalities. Likewise, tax policy can have a major influence on employment decisions, investment levels and the willingness of entrepreneurs to expand. Europe needs to be innovative and competitive which can be only achieved if our tax rules fit today's realities.

Our work for better taxation cannot be static. Even as we progress with current reforms, new challenges are emerging which will further test the sustainability of our tax systems. Globalisation, as well as demographic and technological developments, are important sources of change, which need to benefit all. Only by working together we can make sure that we deliver on the objectives of fair and efficient taxation.

Faced with challenges, now is the time to act. The Commission has always been an advocate of closer coordination on tax issues, common measures against tax avoidance and greater collective focus on growth-friendly tax policies. It is also because we believe that working together on common challenges allows Member States to be stronger than the sum of their individual parts.

This 2017 edition of the *Tax policies in the European Union Survey* presents an indicator-based analysis of the performance and design of the tax systems in the EU. It enables comparisons based on sound indicators and pertinent criteria. In addition, this year's edition examines and further elaborates on how taxation can support entrepreneurship and harness the collaborative economy as well as foster social mobility and ensure social justice. Ultimately, it puts forward and substantiates the tax policy priorities for the next European Semester cycle.

This report constitutes a reference-point to measure the progress that we will accomplish together to make taxation in Europe fairer and more efficient. I am sure that this report will provide policy makers across Europe with clear insights into challenges that lie ahead and with an excellent evidence base for action.

Stephen Quest

Director-General

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Executive Summary

The Tax Polices in the European Union Survey 2017 presents the state of play of taxation in the Member States. It aims to present in a clear and accessible fashion the most recent reforms and the main indicators used by the Commission to assess Member States' taxation policies in the context of the European Semester, which is the EU's annual cycle of economic policy coordination. This is in line with the Commission's commitment to increasing the transparency and accountability of the European Semester process, as well as the use of benchmarking.

Four priorities for a fair and efficient tax system

The European Union is still confronted with the legacy of the crisis, including high unemployment level in some member states, and with a high level of inequalities. As a result, many citizens throughout the European Union call for greater consideration of social justice. Taxation has a role to play in making our societies fairer, as presented in this Survey. Enhancing fairness goes hand in hand with delivering on economic growth. Both are equally important and their success is mutually dependent.

At the same time, the global economy is rapidly becoming digitalised bringing opportunities and challenges. As traditional business models become increasingly digitalised, the sustainability of the tax base could be jeopardised if the tax rules are not adapted to the new digitalised business models. In September 2017 the European Commission presented a communication that set out the challenges of ensuring the fair and effective taxation of digital economy and outlined possible solutions to be explored. Tax systems need to be future proofed to ensure they collect sufficient revenue and are resilient to prevent abuse. Digitalisation of the economy also brings opportunities for innovation, growth and jobs. But Europe is lagging behind the rest of the world in innovation and the development of new digital technologies. To improve the competitiveness of the EU, we need to create the right framework for new businesses to develop and grow. Tax systems can play a role in this, in particular by removing barriers to the emergence and scaling-up of new businesses,

There are therefore four priorities against which taxation policies are assessed: Facilitating **investment**, boosting **employment**, ensuring **tax compliance** and reducing **inequalities**. There are significant interdependencies in between those priorities. The fight against tax abuse is essential to restore fairness and fair competition. It allows for securing funds for public policies to foster social mobility and reduce inequalities. At the same time, it restores the level-playing field across companies. Similarly, facilitating investment can help boosting employment, which is an important route out of poverty. With that in mind, this report identifies relevant indicators and potential improvements of tax systems, in terms of tax design, implementation and compliance.

Tax reforms can enhance efficiency and help create an environment supportive of risk-taking, investment and innovation. Taxation plays an important role in reducing entrepreneurial risk and costs of carrying out a business, in particular for young, dynamic companies that foster innovation and create jobs. A coherent and coordinated approach to corporate taxation is important to reduce legal uncertainty and competitive distortions faced by companies today. At EU level, action is underway to enhance the fairness and efficiency

of corporate tax systems, through measures such as the re-launch of the Common Consolidated Corporate Tax Base (CCCTB) - a business-friendly system which will deliver the simplicity and certainty needed to encourage cross-border investment.

At national level, Member States can do more to boost investment through tax policy reforms. Designing smarter tax systems that facilitate innovation, entrepreneurship and access to finance and that do not discourage profitable investments would add to developing the right business environment for investment in the EU. This includes: 1) encouraging alternative sources of financing by notably tackling the debt bias – also an objective of the Commission in its CCCTB initiative; 2) designing better fiscal incentives to support entrepreneurial initiative and innovation; 3) cutting compliance costs for entrepreneurs, in particular by increasing efforts to *digitalise* tax administration to facilitate tax compliance and equip the system to new realities, for instance by making tax administration more customer-centric. Harnessing new innovative business models is important to future proof our tax systems. Member States are encouraged to continue simplifying and clarifying the application of tax rules to the collaborative economy and to facilitate and improve tax collection by using the possibilities provided by collaborative platforms, who are encouraged to cooperate with national authorities.

Well-designed tax systems can improve work incentives, help tackle long-term unemployment and ensure better redistribution. While employment levels are increasing, high levels of long-term unemployment and youth unemployment in some Member States remain a legacy of the crisis. The steps taken by some Member States to reduce the tax burden on labour and the focus on low to middle income earners is a positive trend. However, the financing of such tax cuts also needs to be considered, for example by shifting the tax burden to other tax bases where it is relatively low. In that respect, the distributional impact of increasing some types of taxes needs to be duly taken into account, alongside their impact on growth. More than the type of tax, it is the design of a tax measure and the overall tax mix that matters. Further and better designed labour tax reductions could make the difference in helping to restore employment levels in some Member States.

The fight against tax fraud, evasion and avoidance is essential to ensure fair burden-sharing, as well as to secure tax revenues for public investment, education, healthcare or welfare. In the EU alone, tens of billions of euro are still lost each year due to tax fraud, evasion and avoidance. Tackling tax abuse can create the space needed to lower the tax burden on honest taxpayers. Moreover, it can contribute to establishing trust in tax authorities and increase voluntary compliance. The cross-border nature of tax evasion and avoidance and the integration of the Member States' economies call for a coordinated approach, not only through European initiatives but also through the coordination of national policies. It remains important to keep up efforts against those who cheat the system. Member States need to fight tax evasion, tax fraud and tax avoidance using a coordinated approach as national tax policies have spill-over effects on the other Member States. The fight against tax abuse relies not only on enforcement, but also on prevention: (i) by making tax authorities more modern to fight evasion, fraud, and avoidance; (ii) by exploiting better communication and educational measures to promote a culture of transparency and tax compliance. In that light, *digitalisation* provides new and improved means to ensure tax compliance and to facilitate enforcement.

Taxation also plays a role in reducing inequalities and fostering social mobility. Inequalities can be tackled at (i) pre-market, (ii) post-market and also (iii) in-market level: (i) Pre-distributive measures such as the provision of equal access to quality education or

healthcare aim at increasing equality of opportunity. Taxation allows for funding those public expenditures, relying on the right tax mix and actual compliance by all taxpayers. (ii) Tax-and-benefits systems can be powerful instruments to reduce market income inequalities through redistributive measures. (iii) Focused labour tax cuts on groups facing the greatest employment challenges and those most responsive to tax incentives can help to create employment, which is one route out of social exclusion and poverty. Also, entrepreneurship and *collaborative* economy are associated with a form of emancipation or self-development that might translate into social mobility. Taxation of such business sectors need to strike the right balance between encouragement and effective regulation.

Structure of the report

Chapter 1 provides a brief overview of recent taxation trends and a description of what makes a fair and efficient tax system. Recognizing that challenges are country-specific, **Chapter 2** gives an overarching picture of how national taxation systems perform according to key indicators in the areas of investment, employment, tax compliance and inequality. This aims to help Member States to find the best approach to address their own specific challenges and policy response. **Chapter 3** reviews most recent tax reforms in EU countries, ending by drawing some general tax policy options for the EU as a whole.

1

General principles for fair & efficient tax systems

1.1 Context

As identified in the White Paper on the Future of Europe¹, and the subsequent reflection papers on the Social Dimension of Europe² and on Harnessing Globalisation³, we are still confronted with the legacy of the economic crisis, with continued and changing trends in globalisation, and with the increasing phenomenon of digitalisation that will profoundly modify the way we work, produce, and consume. In recent years, the financial and economic crisis led to high unemployment levels, and has put national budgets under pressure (and therefore the financing of public expenditures such as the welfare state, education etc.). At the same time, the younger generations were hit hardest by the crisis, and there is a real risk that, despite their higher levels of education, today's young adults will end up less well-off than their parents.⁴

As a result, many citizens throughout the EU call for greater consideration of social justice in policy making – rooted in perceived and/or actual inequality, lack of social mobility and social exclusion. Both the definition of fairness and the perception of societies' equity and equality rely upon normative judgements. This is particularly challenging for the EU as it is essential to not only reconcile the differences in social preferences within but also between Member States, with the wider objective of convergence.

Tax fraud, evasion and avoidance largely influence the perception and actual fairness of a society. Due to tax abuse, public expenditure may have to be cut or the burden has to be shifted towards compliant taxpayers. This threatens the social contract at large, as honest taxpayers (individuals and companies) might become less inclined to comply with the rules. Furthermore, tax abuse creates unfair competition among companies and a lack of level playing field in the market, both within the EU and at global level. Overall, revelations about tax evasion and tax avoidance by wealthy individuals and by multinationals generate feelings of distrust and discontent.

Taxation has a role to play in ensuring fairness – be it by addressing post-market inequalities through redistribution, by securing funds to address pre-market inequalities (e.g. through access to quality education, healthcare, etc.) and/or by incentivising socially desirable behaviour through in-market measures. Moreover, tax systems should be designed in a way to ensure that companies and individuals pay the right amount of tax when and where they

¹ European Commission, 2017a

² European Commission, 2017b

³ European Commission, 2017c

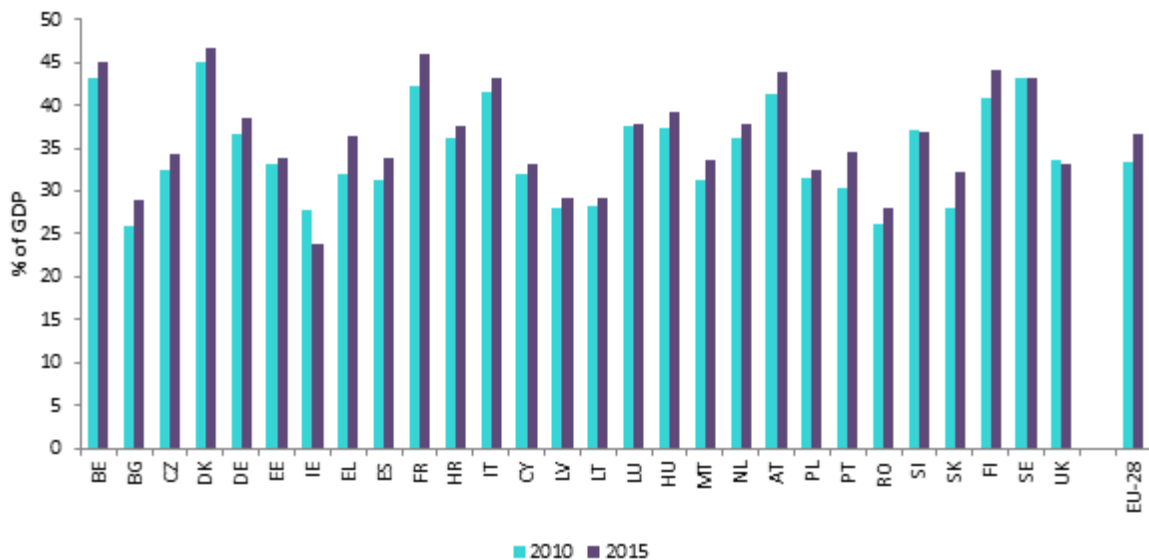
⁴ European Commission, 2017a

ought to. This has to be by no means at the expense of efficiency considerations: A well-designed tax system is both efficient and fair. It is able to raise revenue to finance public expenditure, support growth, competitiveness and job creation, and also allows for socially-desired redistribution. An 'optimal' design involves taking trade-offs into account and necessitates prioritisation of objectives according to specific situations and choices of Member States. To ensure its legitimacy, public buy-in is crucial for tax reforms.

1.1.1 Recent trends in taxation⁵

The level of taxation largely reflects social choices in terms of tax revenues and government expenditure. Strong evidence is lacking on the impact of the overall level of taxation on economic growth.⁶ Since 2010, the total tax revenue as a percentage of GDP has increased in most Member States. However, the level of total taxation differs considerably between Member States. In 2015, the tax-to-GDP ratio varied between 46.6 % in Denmark and 23.9 % in Ireland.

Graph 1.1: Total receipts from taxes and compulsory actual social contributions, 2010-2015



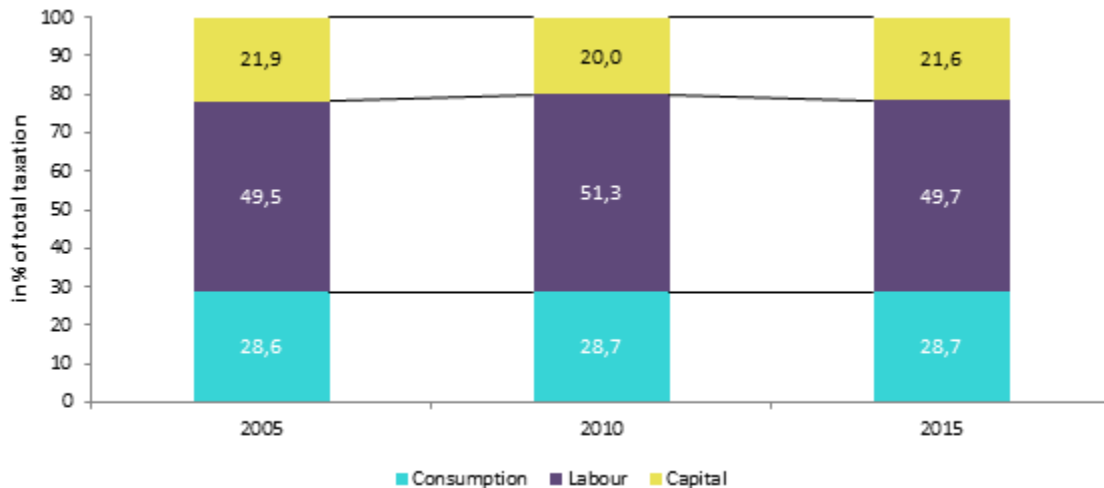
Source: European Commission (2017d) based on Eurostat data

⁵ More information on taxation trends and figures can be found in the [Taxation Trends Report 2017](#) published by DG TAXUD. This report contains a detailed statistical and economic analysis of the tax systems of the 28 Member States of the European Union, plus Iceland and Norway.

⁶ Myles, G., 2009

As depicted in Graph 1.2, the share of consumption tax revenues as part of total tax revenues remained more or less stable in the last decade. The share of labour taxes increased in the period from 2005 to 2010 and decreased again in the following five years, reaching again roughly the same level as in 2005. In contrast, the share of capital taxation decreased from 2005 to 2010 and increased again afterwards.

Graph 1.2: EU-28 tax revenues, 2005, 2010, 2015

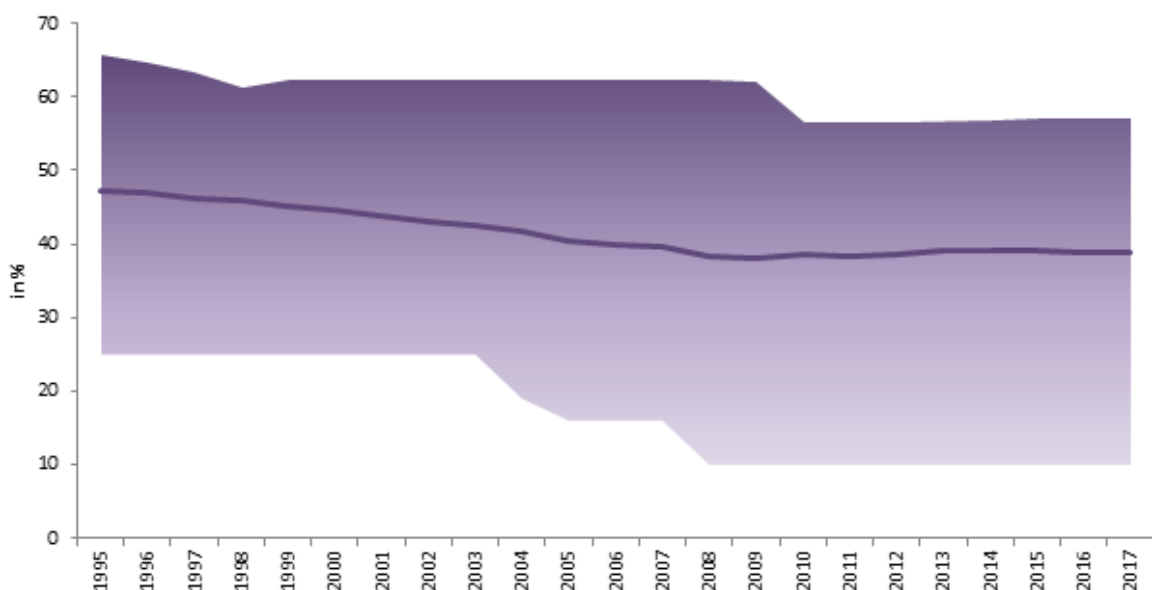


Source: European Commission (2017d) based on Eurostat data

Note: For the purpose of this graph, 'Capital' taxation includes all other categories of taxation that are not classified as labour or consumption (amongst others corporate income taxation).

As illustrated in Graph 1.3, the EU-28 average of the top personal income tax (PIT) rates had been in constant decline until 2009. 2010 was the first year after more than a decade in which more Member States raised the top PIT rates than reduced it. Since then the average is relatively stable.

Graph 1.3: Top PIT rate - EU-28 average and range, 1995-2017

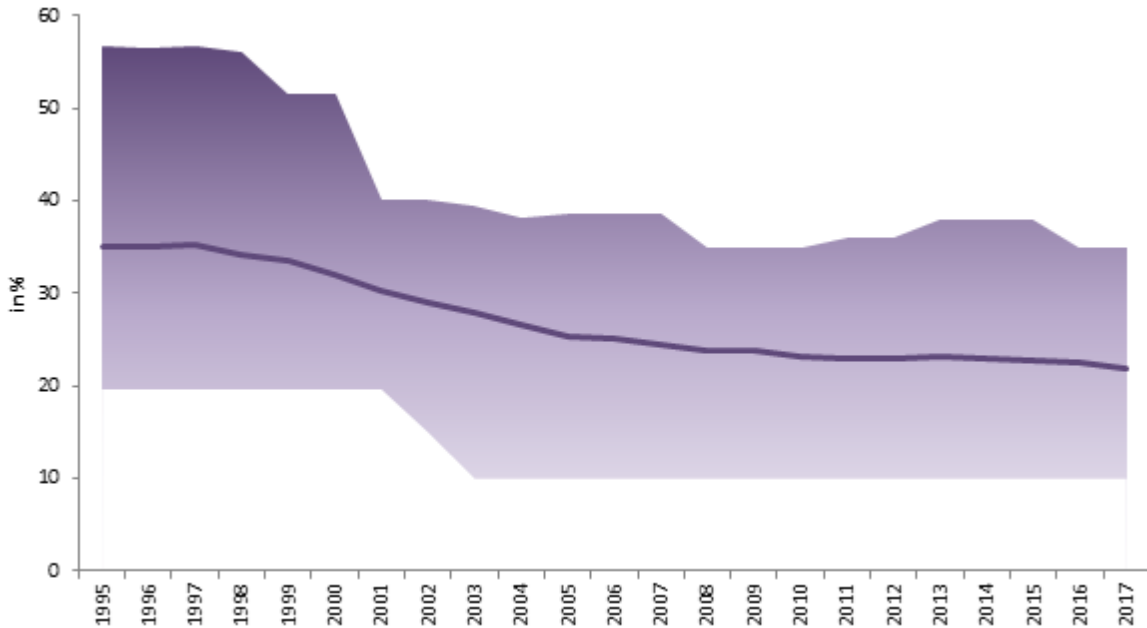


Source: European Commission (2017d)

Note: The average is calculated as the simple average of the 28 national top personal income tax rates

As shown in Graph 1.4 the top corporate income tax (CIT) rates were in constant decline in the European Union in the last two decades. The decline of CIT rates slowed down after the crisis, but the decline appears to accelerate again in recent years.

Graph 1.4: TOP CIT rate – EU-28 average and range, 1995-2017

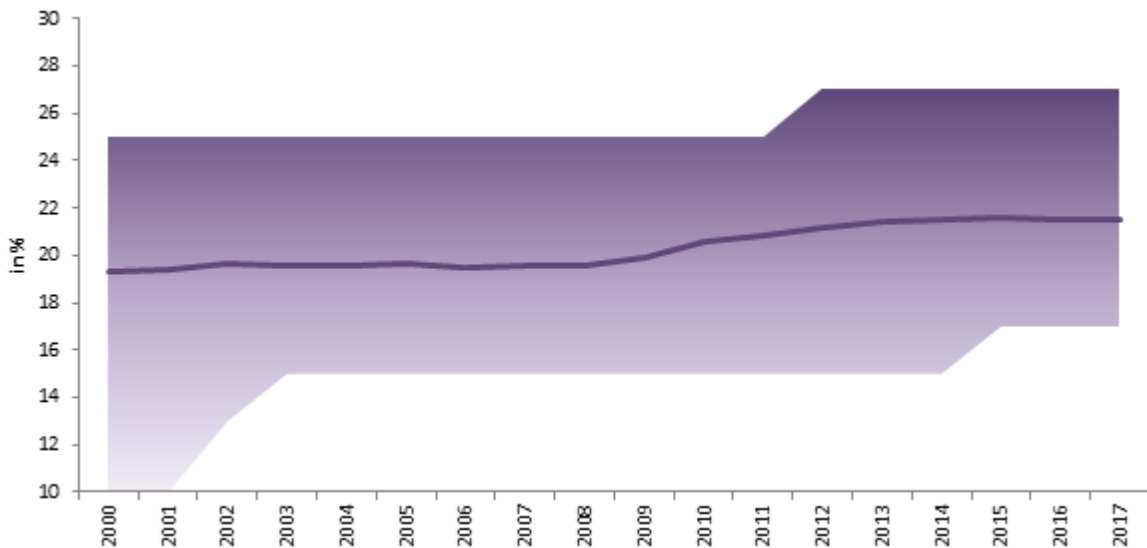


Source: European Commission (2017d)

Note: The average is calculated as the simple average of the 28 national top corporate income tax rates

While one could observe increases of standard value-added tax (VAT) rates in numerous Member States in post-crisis years (2010-2013), the average of the standard VAT rates remains stable since 2013; however, on a higher level than in pre-crisis years.

Graph 1.5: Standard VAT-Rate – EU-28 average and range, 2000-2017



Source: European Commission (2017d)

Note: The average is calculated as the simple average of the 28 national standard value added tax rates

1.2 What makes a fair and efficient tax system?

Key features to look at in assessing the fairness and efficiency of a tax system are the extent to which it encourages investment and job creation, corrects inequalities, supports social mobility and achieves high-levels of compliance. Overall, whilst there are sometimes trade-offs between the goals of efficiency and fairness, the two are by no means in opposition.

1.2.1 Stimulating investment and growth

Despite the continued recovery of the European economy, investment (and wages) still need to grow more strongly to create a sustained upward swing. Investment growth seems to have slightly strengthened at the end of 2016 but is not expected to rise markedly in 2017 and 2018 as uncertainty and deleveraging pressures continue to weigh on investment decisions, despite better financing conditions.⁷ Weak investment means lower growth, but it also depresses productivity growth and entails poor job and growth prospects in the longer term. Boosting investment is thus one of the Commission's top political priorities.

Many factors influence companies' investment decisions. Taxation is one important element of a well-functioning business environment that supports investments. In particular, designing a tax system that does not discourage profitable investments from taking place is important. This can be achieved by keeping the effective marginal tax rate low. This does not necessarily mean that tax rates need to be reduced. Instead, faster depreciation schedules or allowing for the deductibility of equity financing costs brings down effective marginal taxation, even if compensated by an offsetting change in tax rates. Legal certainty, stability, predictability, and simplicity of tax rules matter for business and investors' decisions. Distortions in the tax system could affect access to finance and discourage equity investments.

Taxation is one of the main tools at governments' disposal to empower entrepreneurship and innovation. Tax policies can play a role in reducing entrepreneurial risk and costs of carrying out entrepreneurial activity. Taxation helps correct market failures, for example in under-provision of R&D investment, risk finance and externalities to the environment. A well-designed tax system could thus help improve living standards by providing incentives for smart and green investment.

The efficiency of tax administration influences the level of public trust in the system. Taxpayers tend to have greater trust in organisations that are perceived to be efficient and effective. In addition to the costs of collecting taxes, one should also consider the costs related to paying taxes, which are often referred to as tax compliance costs. Compliance costs can discourage the creation of new businesses, incentivize the underground economy, increase non-compliance and damage businesses' and countries' competitiveness.

1.2.2 Developing a more employment-friendly environment

In recent years unemployment has fallen and is now at its lowest level since 2009. Also, employment rates are rising. However, the economic crisis left a number of Member States with high unemployment levels, exacerbating long-standing challenges with getting more people into work. Long-term unemployment and the situation of harder-hit groups remain challenging, and the joint trends of globalisation and digitalisation will continue to bring about

⁷ European Commission, 2017e

changes in European job markets. Rising income inequality in some Member States is an additional constraint putting pressure on European social models. Targeted labour tax reductions for vulnerable groups can contribute to increasing employment levels, as well as reducing poverty and social exclusion.

Labour tax cuts can be a tool for promoting higher levels of employment, in particular where high labour costs discourage hiring (i.e. labour demand issues) or where incentives to take a job are low when work does not pay (i.e. labour supply issues). Reducing taxes on labour can be balanced by increasing taxes elsewhere. Several economic papers⁸ suggest that corporate and personal income tax have a stronger negative impact on growth than other taxes. Shifting taxation to other tax bases might be worth exploring. The potential room for a tax shift depends on the existing tax structure. High levels of labour taxation together with a relatively low tax burden on consumption taxes, recurrent property taxes, or environmental taxes may indicate room to shift taxes away from labour. The distributional impact of increasing taxation in these areas, however, needs to be duly taken into account.

1.2.3 Fighting against tax fraud evasion and avoidance

Tax fraud, tax evasion, and tax avoidance limit the capacity of Member States to raise revenues and to carry out their economic and social policy. Tax abuse has clear negative spillover effects as profits shifted to or through one Member State mean tax base loss for another Member State. This effect is even larger in the Eurozone. Furthermore, it weighs on tax morale and threatens the social contract. It also distorts the level playing field between companies. While it is difficult to precisely quantify the scale of tax evasion and avoidance, there is a general consensus that it is substantial, with tens of billions of euro lost each year.

Tackling tax evasion and fraud, whilst removing loopholes and mismatches that facilitate aggressive tax planning is essential to secure tax revenues that could be used for public spending (for education, healthcare or welfare) or for lowering the tax burden on honest taxpayers.

The cross-border nature of tax abuse and the integration of the Member States' economies call for a coordinated approach, not only through European initiatives but also through the coordination of national policies. Member States can tackle tax abuse through increased transparency and cross-border cooperation, a more modern and digital tax administration and by facilitating and promoting a culture of compliance, including by enhancing protection of whistleblowers.

1.2.4 Correcting inequalities and promoting social mobility

Europe has among the world's most advanced systems of welfare states. However, there are still some marked inequalities, as in 2016, 23.4 %⁹ of the EU population remains at risk of poverty or social exclusion, with around 1 in 6 at risk of monetary poverty.¹⁰ There are significant differences in both levels and trends between Member States.

Taxation plays a role in shaping a fair society, including by securing the right mix of revenues to finance public expenditure, by mitigating inequalities, or by supporting social mobility and intergenerational fairness. Tax-and-benefits systems can be powerful instruments to combat

⁸ e.g. OECD, 2010

⁹ Eurostat, EU-SILC, ilc_li02

¹⁰ Eurostat, EU-SILC, ilc_peps01

income inequalities. It remains important to consider the social impact of tax systems so as to strike the right balance between efficiency and equity of tax design in line with countries' preferences.

Promoting fairness requires a broad approach: from the provision of public goods and social spending to the way revenues are raised (i.e. the spread of the tax burden across taxpayers). Focusing on taxation, it is first important that everyone pays their fair share. The structure of the system also plays a key role. Beyond income taxation and cash benefits, the overall structure of the tax system (including VAT, property taxes, capital gains tax, inheritance tax, progressivity of personal income tax) can play a role to reduce inequalities and to foster social cohesion. Ensuring a coherent and effective progressivity of the overall tax burden faced by citizens according to their income sources can at best help to correct market income inequalities and at least avoid increasing them. Taxation can also be used to incentivise some behaviour, such as reskilling and upskilling, while correcting others.

Box 1.1: Tax fairness conference

On 28 and 29 June 2017, DG TAXUD hosted a conference on tax fairness, featuring various experts from civil society, businesses, academia, administrations and politics.¹¹ Intense discussions, including active exchange with the audience, took place in eight panels on different sub-topics, aiming at answering five overarching questions:

(i) What are the challenges we face today and how is the concept of "social justice" relevant today?

Europe is facing new challenges of a rapidly changing world. Digitalisation has accelerated the process of globalisation, which led to a feeling of increasing uncertainty and concern about the future. Moreover, unemployment remains high in a number of Member States, following the financial and economic crisis and inequalities are perceived to be (and actually are) growing. Ultimately, citizens perceive a certain degree of powerlessness in light of these challenges, both concerning their individual lives and the global political landscape. Against this background, the concept of "social justice" aims at defining a holistic approach to tackle aforementioned challenges: Social Justice is linked to a notion of equality and the redistribution of resources; but more than that, social justice is about providing real freedom – having power over one's own life – which entails a fair distribution of opportunities.

(ii) How can taxation help address the challenges?

There are three traditional functions of taxation. It is (a) a funding source, (b) a redistributive mechanism, and (c) a measure to induce behavioural changes. Social justice can be enhanced through pre-market, post-market, and in-market measures. But, no matter how a tax system is designed, there cannot be fairness as long as tax fraud, evasion and avoidance are common practice: each member of a society¹² has to pay his/her fair share. But what is more, people must have the feeling that everyone is doing so, as it is key to perceived fairness and voluntary compliance.

Alongside progressive personal income taxation or a revised VAT system, a number of taxes were discussed regarding their suitability to address those challenges. Here are some examples that were debated: Capital income and stock are more unequally distributed and are less related to choices made by the capital owners, than for instance, labour income. Capital/wealth taxation of individuals was generally found to be a relevant means to ensure fairness in opportunities and a more equal distribution of wealth, with efficiency considerations duly taken into account. That said, there is consensus that the taxation of capital held by individuals entails some practical difficulties. In particular, it is mobile and may be difficult to trace in a globalised world. Corporate income taxation is therefore found to be essential in ensuring a contribution of shareholders. However, the current system is outdated and not fit for the 21st century, especially in light of the digitalisation of the economy. The introduction of the Common Consolidated Corporate Tax Base, as proposed by the European Commission, would thus be greatly appreciated. Moreover, environmental taxation could be a way to secure revenues and to support sustainability goals.

¹¹ List of panellists: Ufuk Akcigit, Krister Andersson, Jim Clarken, Peter Egger, Marc Fleurbaey, Judith Freedman, Scott Hodge, Dmitri Jegorov, Katja Lehto-Komulainen, Will Morris, Valère Moutarlier, Richard Murphy, Cora O'Brien, Andreas Peichl, Tove Maria Ryding, Molly Scott Cato, Stephen E. Shay, Stefanie Stantcheva, Paul Tang, Philippe Van Parijs, Alex Voorhoeve, Véronique Willems, Lennart Wittberg.

¹² Including legal persons

(iii) At which level (national and/or EU) should policy levers be activated?

Tax policies have to be appreciated in their global dimension. A coordinated approach to fight tax abuse at EU and international level is indispensable and –contrary to some criticism – actually crucial for *re-establishing (tax) sovereignty*. Tax avoidance and evasion shrink the set of policy options for countries, be it to reduce inequalities or support investment and growth. Fighting tax abuse is very relevant in the area of corporate taxation, but also of capital taxation at large.

Another important consideration is the spillover effects of taxation policies at a global level. National and European policies have an impact on third countries and vice versa. This needs to be duly taken into account – both in terms of encouraging behavioural changes with respect to tax abuse schemes and development priorities of the European Union.

(iv) What is the context for policy makers?

Perception of fairness and social justice are based on normative judgements, which express social preferences. Those differ within and across countries. Similarly, transparency, and trust in authorities and tax administrations (possibly as a result of transparency) vary. Although it is seen as a challenge to reconcile those diverging preferences in EU-wide (or even global) policies, many efforts have been made to embark on common initiatives, notably within the European Union and under the umbrella of the OECD. Nonetheless, it is seen as important to include also non-OECD countries in such exercises to fully appreciate the global dimension of taxation and its spillovers.

(v) What are the future challenges and trends?

Social justice and fairness are expected to remain a key topic for policy makers in general and in taxation in particular. Generally, the challenges that have been emerging in recent years are expected to stay. Particularly, digitalisation is seen as both a challenge and opportunity. While it forces us to rethink the way we design tax systems – for example, it entails the risk of erosion of existing tax base like labour income - it might also provide improved and new means to ensure compliance.

2

NATIO

National tax systems performance

At national level, there is no one-size fits all approach. Each Member State needs to find the best approach to address its country specific situation. The following chapter presents a range of indicators covering aspects of the tax systems of EU Member States in order to help Member States to find the best approach to address their own specific challenges and policy response.

2.1 Encouraging investment

As outlined in section 1.2, taxation is one of the factors influencing companies' investment decisions. This section examines features of Member States' tax systems likely to influence decisions on investment, looking at indicators on effective tax rates, debt-bias in corporate taxation, tax incentives for R&D and Venture Capital & Business Angels, environmental taxation, tax certainty and administrative efficiency.

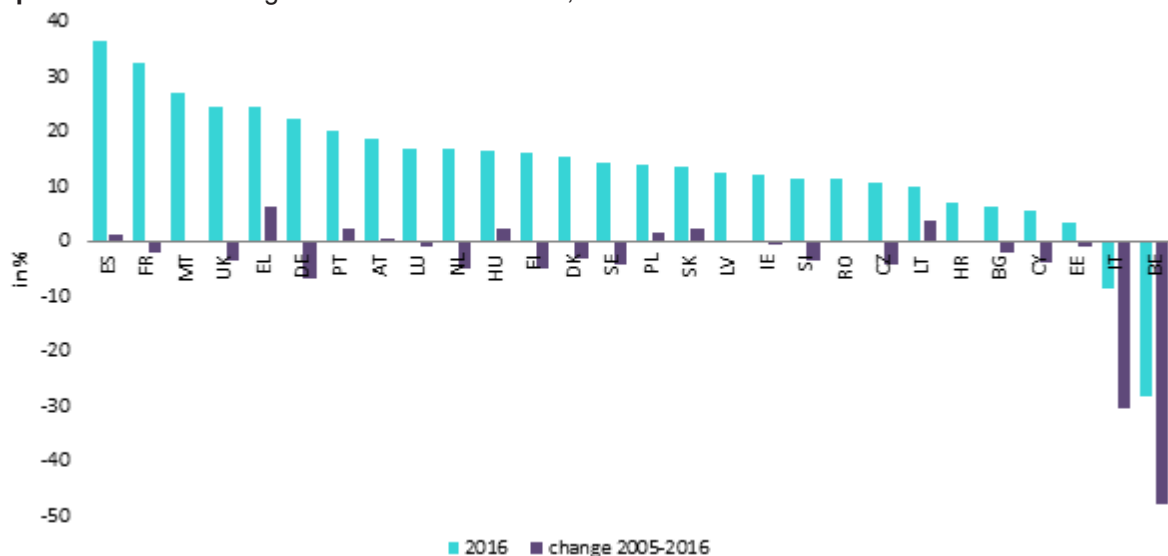
2.1.1 Effective tax rates

Decisions whether to invest less or more, will be influenced by the effective marginal tax rate (EMTR), i.e. the tax burden on the last euro invested in a project that just breaks even (the 'marginal' investment).¹³ The EMTR captures a wide range of factors going beyond the statutory corporate taxes, such as elements of the tax base, the source of financing (debt, retained earnings or new equity), and the asset in which the investment is made (machinery, buildings, intangibles, inventory and financial assets). The smaller the effective marginal tax rate the more conducive to investments the tax system.

There are several ways to decrease the EMTR and design a tax system supportive of investment, for instance by offering faster depreciation schedules, making equity costs deductible, or improving conditions for loss carry forward. Economists have been critical of current systems of corporate income taxation as corporate taxes are distortive and affect not only the level of investment but also, e.g. business location, profit shifting, and the choice of company structure.

Addressing the tax-induced debt bias and R&D tax incentives can lower effective marginal tax rates for equity and R&D investments respectively. For example, the reduction in the EMTR for Belgium, Italy and Cyprus (Graph 2.1) is driven by the introduction of an allowance for corporate equity in these countries.

Graph 2.1: Effective Marginal Tax Rates in the EU, 2005-2016



Source: ZEW (2017).

Notes: (1) The indicator is based on Devereux/Griffith model which allows the consideration of five types of assets and three sources of finance at corporate and shareholder level. This methodology has been applied to calculate the effective tax rates in the EU annually since 1998. Full dataset is available at

http://ec.europa.eu/taxation_customs/common/publications/studies/index_en.htm. (2) To reflect the Allowance for Corporate Equity in Belgium, Italy and Cyprus the assumption is that the rates of these allowances equal the market interest rate in the model. For Cyprus, there remains a small bias since the allowance does not apply to investments in financial assets.

¹³ Whilst the effective marginal tax rate affects the overall level of investment, it is the effective average tax rate (EATR) that influences firms' decisions as to location.

2.1.2 Debt-bias in corporate taxation

Most corporate tax systems give incentives to companies to take on more debt by allowing interest payments to be deducted, but do not grant similar treatment to equity. Because a debt investment enjoys a preferential tax treatment, the minimum pre-tax return required to make the investment worthwhile (the 'cost of capital') will be lower for an investment financed by debt. The size of this debt bias differs across the EU. The debt-bias leads to higher debt levels, which make companies, both non-financial and financial, more fragile and economies more prone to crises.

As a result it contributes to financial stability risks, and it tends to lead to disproportionate levels of bankruptcy.¹⁴ It is particularly problematic for young and innovative companies that often have no access to external funding and are therefore put at a disadvantage, despite their relevance in generating future growth. The debt bias presents therefore an obstacle to the creation of a stronger equity base in European companies and may impede efficient capital market financing which goes against the fundamental goals of the Capital Markets Union. The asymmetric tax treatment of debt and equity is also exploited by some multinationals, in order to strategically organise their debt to reduce their overall tax burden.

Graph 2.2: The debt-equity tax bias in corporate financing in EU Member States, 2010-2016



Source: ZEW (2017).

Notes: (1) The graph shows the debt bias in corporate taxation measured as difference in cost of capital for new equity and debt investment. The cost of capital measures the required minimum pre-tax return of a real investment (the 'marginal investment') to achieve the same after-tax return as a safe investment in the capital market. The standard assumption by the ZEW for the real return on the safe investment is 5 %. (2) To reflect the Allowance for Corporate Equity in Cyprus, Belgium and Italy, the assumption is that the rates of these allowances equal the market interest rate in the model.

The corporate debt bias can be addressed by different reforms such as abolishing the deductibility of interest costs (CBIT reform), or by extending the deductibility to include the return on equity (ACE reform). Such reforms address the debt bias, but the cost of capital is affected differently. The graph below presents how the cost of capital would change following the two potential reforms. The CBIT reforms would increase the overall mean cost of capital for new investment in almost all EU countries, while ACE reforms would reduce it. This is true even if one combines the reforms with budget offsetting changes in the tax rate. The differential impact on the cost of capital is an important difference between the two reforms

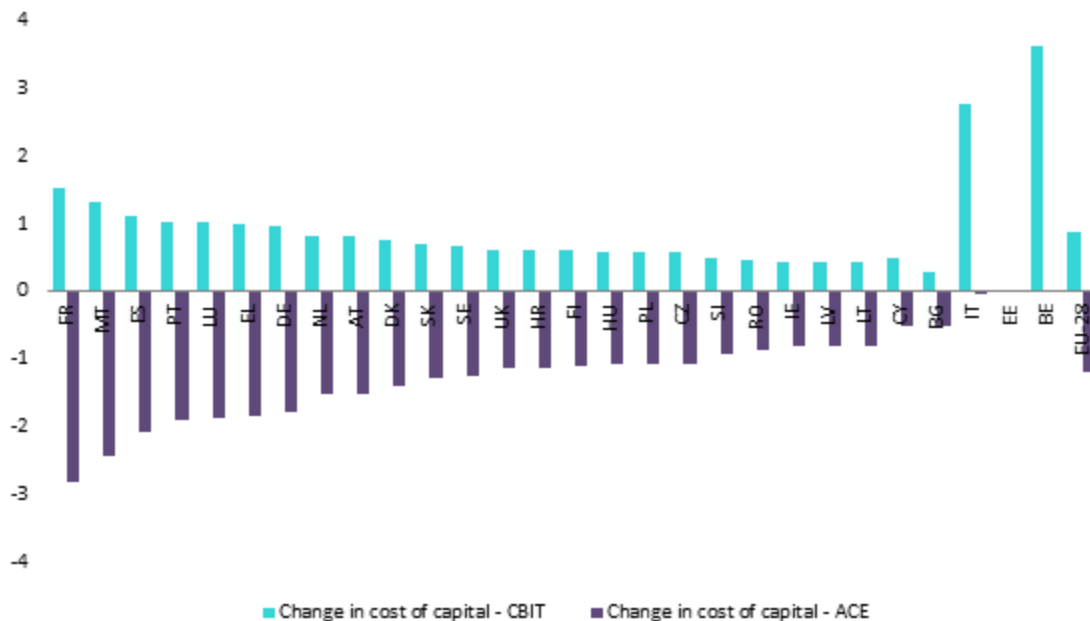
¹⁴ Sutherland and Hoeller, 2012

as the cost of capital is directly linked to the level of the EMTR and the investment-friendliness of the tax system. Moreover, the cost of capital indicates the long term lower price bound and is therefore important for the competitiveness of a country. Belgium, Italy, Cyprus and Portugal already apply an ACE regime.¹⁵

ACE-type reforms shift the tax burden away from the 'normal return' of an investment (roughly, what an alternative safe investment would yield) towards the part of returns exceeding these normal returns. This is efficient from an economic point of view as the level of taxation is not affecting the level of investment. Such a reform has quite fundamental effects. In fact, a corporate tax system with an ACE is similar (and in a clean theoretical case, even equivalent) to an R-base cash-flow tax system.¹⁶ A cash-flow tax has recently been considered in the debate on US corporate tax reform. Indeed, the framework for tax reform¹⁷ released by the US tax administration in September 2017 includes an element of cash-flow taxation, albeit one that would apply only for a limited amount of time.

Any reform needs to be well designed in order not to leave room for tax planning and distortions of competition. The Commission's proposal for a CCCTB removes the debt bias, by offering an Allowance for Growth and Investment (AGI). It will allow a tax deduction for companies that choose to increase equity for financing rather than take on debt. The deduction will be calculated by multiplying the change in equity by a fixed rate, which is composed of a risk-free interest rate and a risk premium. The AGI also has strong anti-avoidance provisions.

Graph 2.3: Change in overall mean cost of capital for ACE and CBIT Reforms, 2015



¹⁵ Malta and Denmark announced to implement an ACE regime, while Belgium announced to reform its ACE regime.

¹⁶ See chapter 17 in 'Tax by Design' by J. Mirrlees, S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles, and J. M. Poterba, Oxford University Press 2011. Under a cash-flow tax system, all investment is immediately expensed instead of depreciated over time. Under an R-base system, only 'real' operations count and financial flows (paid and received) are not part of the tax base.

¹⁷ <https://www.treasury.gov/press-center/press-releases/Documents/Tax-Framework.pdf>

Source: ZEW (2016a).

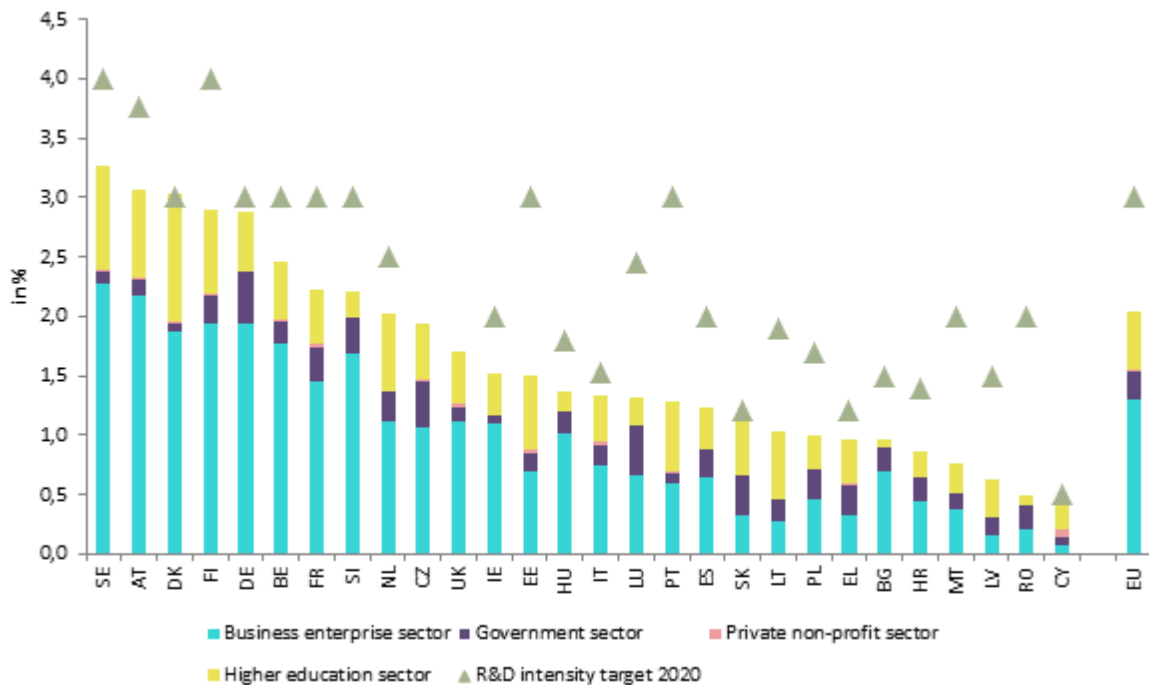
Note: There is no change (zero) for ACE reforms for BE, IT and both reforms for EE.

2.1.3 R&D tax incentives

R&D investment is a key driver of productivity and economic growth. However, private companies do not sufficiently invest in R&D from a welfare perspective. The reason is that companies do not take into account the positive externality from knowledge spillovers which benefit the whole economy. Indeed, the social returns from R&D investment are estimated to be two to three times higher than the private returns of firms.

The underinvestment in business R&D is particularly pronounced in the EU and is one of the reasons behind the widening of the EU's productivity gap compared to the US. To reach the Europe 2020 target of 3 % of GDP devoted to R&D by 2020 large additional R&D investments are needed (see graph). The shortfall mainly reflects a deficit in business R&D expenditure. As taxation is commonly used to support business R&D, it represents an opportunity to both favour investment and direct it toward knowledge-intensive activities.

Graph 2.4: R&D intensities by sector, 2015⁽¹⁾ and R&D intensity targets for 2020

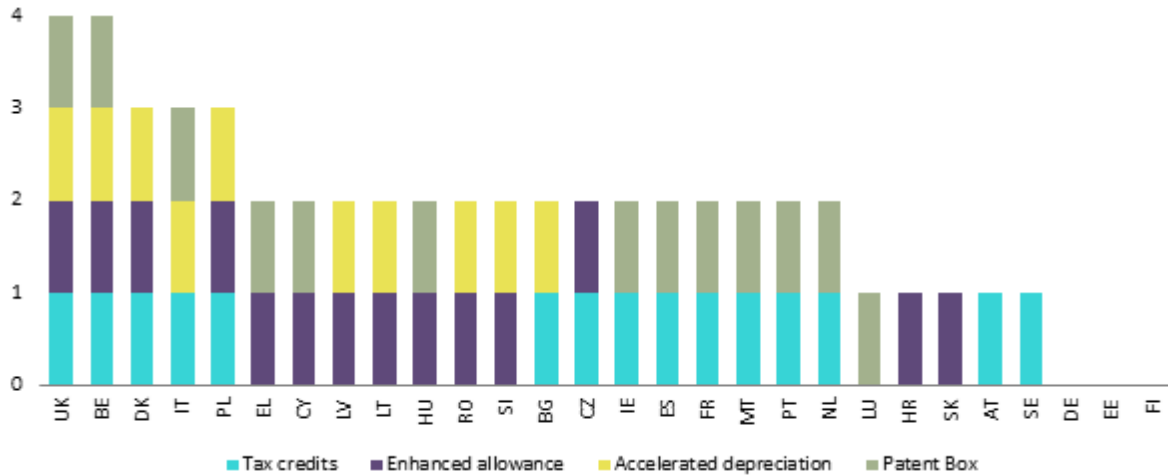


Source: DG Research and Innovation and Eurostat.

Notes: (1) IE: 2014. (2) CZ: An R&D intensity target (of 1 %) is available only for the public sector. (3)UK: An R&D intensity target for 2020 is not available. (4)IE: The national R&D intensity target of 2.50 % of GNP has been estimated to equal 2.00 % of GDP. (5)LU: The R&D intensity target for 2020 is between 2.30 % and 2.60 %. A target of 2.45 % was assumed. (6)PT: The R&D intensity target for 2020 is between 2.70 % and 3.30 %. A target of 3.00 % was assumed. (7) Total R&D expenditure is divided into four sub-sectors of performance: business, government, higher education and private non-profit. This is in accordance with the 'FRASCATI 2015 manual – Guidelines for collecting and reporting data on research and experimental development' (8) R&D intensity is defined as R&D expenditure as % of GDP.

Well-designed R&D tax incentives stimulate R&D investment and innovation. Tax allowances or credits based on real R&D costs (i.e. expense-based R&D tax incentives) are preferred to output-based schemes such as patent boxes.¹⁸ Patent boxes give a tax break on the output from R&D activities i.e. earned from exploiting intellectual property rights. Research shows that they do not stimulate R&D and may rather be used as a profit-shifting instrument, leading to high revenue losses.¹⁹ A total of 25 Member States are currently using fiscal incentives to encourage investment in R&D. The chart below shows which types of tax incentives are used in each Member State.

Graph 2.5: Number of R&D tax incentives in the EU countries, 2016



Source: CPB (2014) and update by the Commission services where available.

Notes: (1) No R&D tax incentives in DE, EE and FI. (2) The incentive can apply to corporate and personal income taxes, social security contributions and payroll taxes. (3) The graph only depicts tax incentives. Direct support is not included.

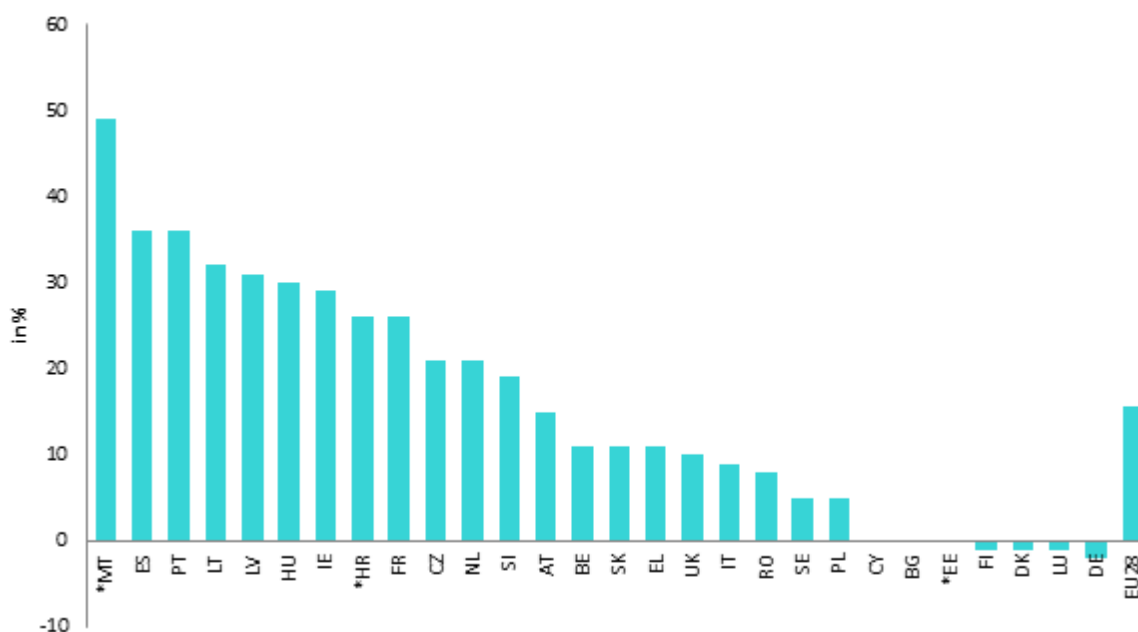
¹⁸ CPB, 2014

¹⁹ Alstadsæter et al, forthcoming

Countries are increasingly relying on tax support to stimulate R&D investment. The graph below presents implicit tax support across EU countries in 2016. The indicator combines the design features of tax incentives and characteristics of national tax systems.

The tax subsidy (so-called one minus B-index) shows the influence of R&D tax incentives on the price of business R&D (user cost). For example, a value of 10 % suggests that the price for a business to invest in R&D is 10 % lower than it would have been in the absence of taxation, whereas a value of -5 % suggests that the user cost is 5 % higher than it would have been in the absence of taxation. A value of 0 corresponds to the case of no taxation where all R&D expenses are immediately tax deductible.²⁰

Graph 2.6: Tax subsidy rates to R&D in the EU, 2016



Source: OECD, R&D Tax Incentive Indicators, <http://oe.cd/rntax>, March 2017 and European Commission (2016a) for countries labelled with an (*). Subsidy rates as applicable for large companies.

Note: The bar for the EU-28 depicts the simple average.

Innovation happens in complex systems. To take full advantage of the opportunities offered by the tax support, governments need to coherently mobilise a range of policies and engage in complementary interventions in their national innovation systems.²¹ For example, companies that want to invest more in R&D may lack access to external finance, qualified workforce or other system-level inputs to R&D such as high quality public research organisations and related public infrastructure.

The opportunity cost of business innovation investments will also be affected by the design of other taxes. For example, full loss offset, capital gains taxation, and personal taxation impact on risk-taking, venture capital, innovation-related investment and human capital formation (see part 2.1.4).

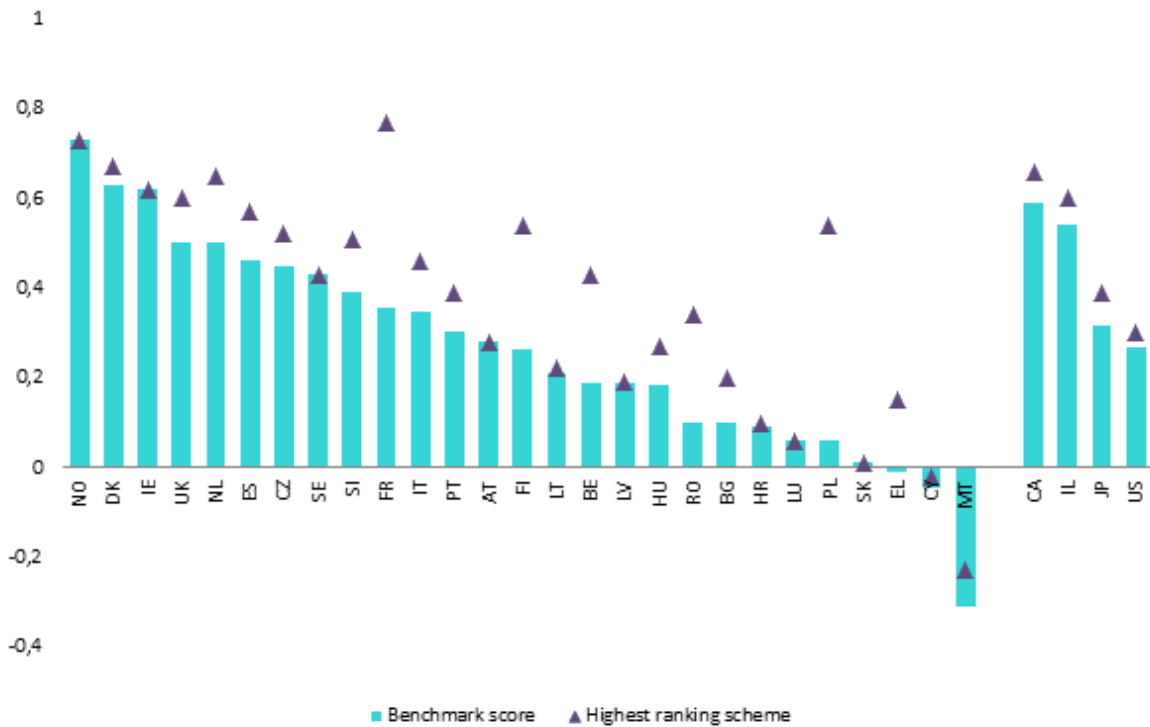
²⁰ Warda, 2001

²¹ D'Andria et al., 2017

A 2014 study carried out for the European Commission identified a number of good practices for R&D tax incentives²² and on this basis, benchmarked the national R&D tax incentives. A benchmark score equal to one would reflect all good practices. The differences in benchmark scores suggest scope to improve the design, targeting or administration of R&D tax incentives. The effectiveness of tax incentives could be improved in particular by ensuring that young and small companies are able to benefit from these incentives, by simplifying and regularly evaluating their impact.

Moreover, the benchmark is an average of R&D tax incentives offered in a country as many countries apply more than one R&D tax support scheme. A gap between the best ranking scheme and the average could indicate scope for streamlining the tax support to R&D.

Graph 2.7: Benchmark Scores for R&D tax incentives. 2014



Source: CPB (2014).

Notes: (1) The higher the score for the country, the closer its R&D tax incentives are to the best practice. (2) The benchmark scores were computed as the simple average over the R&D tax incentives used in a country. (3) The benchmarking is based on about twenty principles of good practice and uses a three-point scale: “1” for best practice; “-1” for non-recommended practice; and “0” for “neutral”.

²² See "[A Study on R&D Tax Incentives](#)". Taxation working paper N. 52 - 2014

2.1.4 Tax incentives for Venture Capital and Business Angels

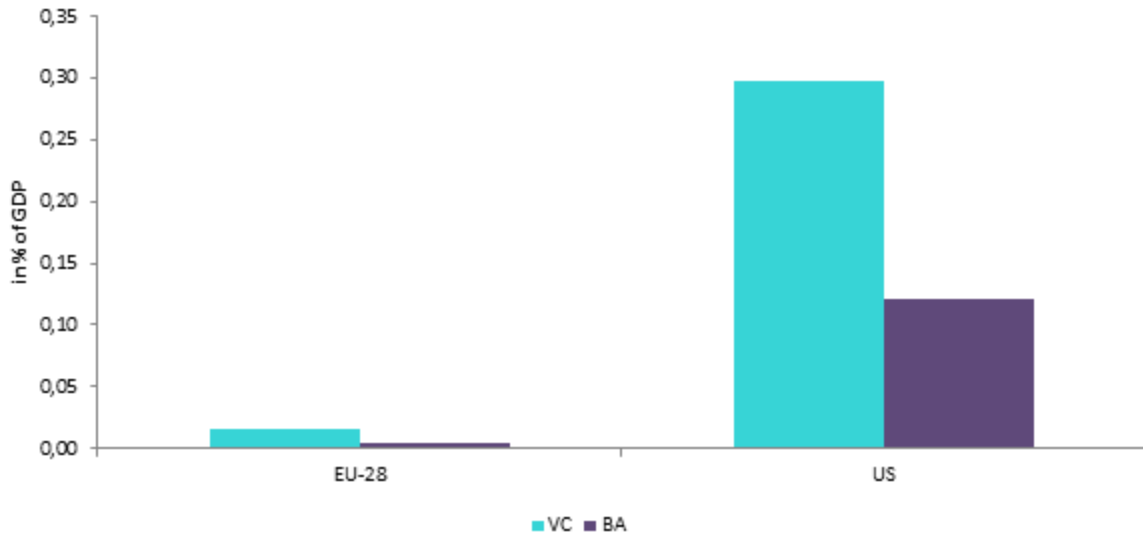
Tax incentives for venture capital (VC) and business angels (BA) have become an increasingly important part of the investment and innovation policy mix in the EU and beyond. Such incentives typically offer investors some combination of up-front tax benefit, relief on income generated over the life of the investment, and relief on gains realised upon disposal of the investment. However, the specifics of how these schemes operate, and who can access them, vary considerably from country to country.

A study on the effectiveness of tax incentives for venture capital and business angels²³ investigates the part that these tax incentives can play in fostering investment, with the intention of promoting the diffusion of best practice across Member States. In doing so, this study recognises that tax incentives form part of a broader set of policy tools. While venture capital and business angel investment generate job creation and productivity gains, a number of factors hinder its development. For example, these investments are very risky and information is often imperfect. The study shows that taxation can play a role in overcoming these barriers to investment.

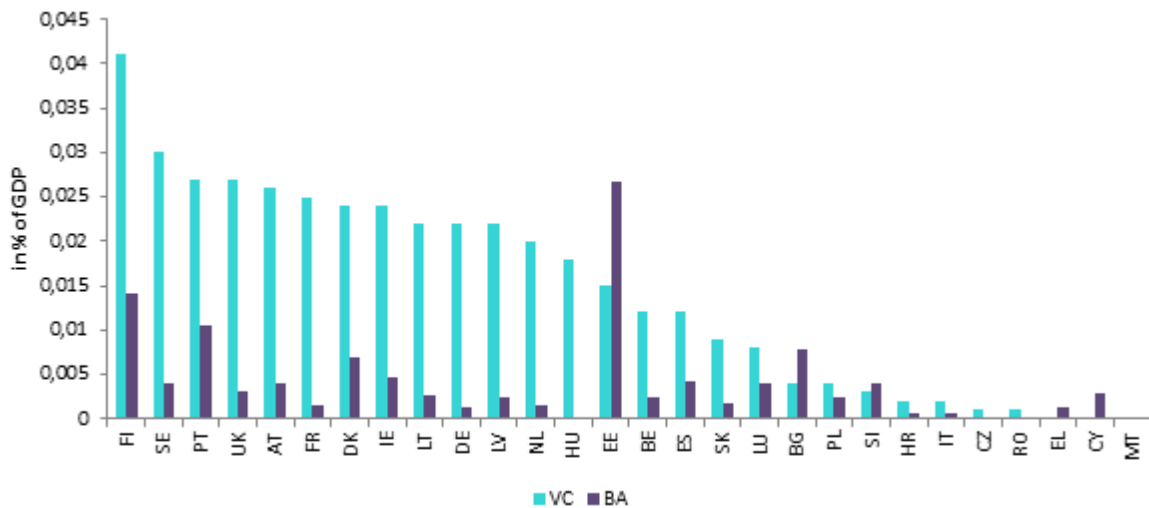
The study is an action of the Capital Markets Union project that aims at strengthening the single market by deepening the integration of investment across the European Union. The European economy is as big as the American one, but there is a clear gap between Europe's and US' VC and BA markets (see Graph 2.8-a). Disparities between Member States are even bigger than that between Europe and the US (see Graph 2.8-b).

²³ PWC & HIS, 2017

Graph 2.8: Venture Capital and Business Angel Investment as a Percentage of GDP, 2015
a – EU versus US



b - EU Member States



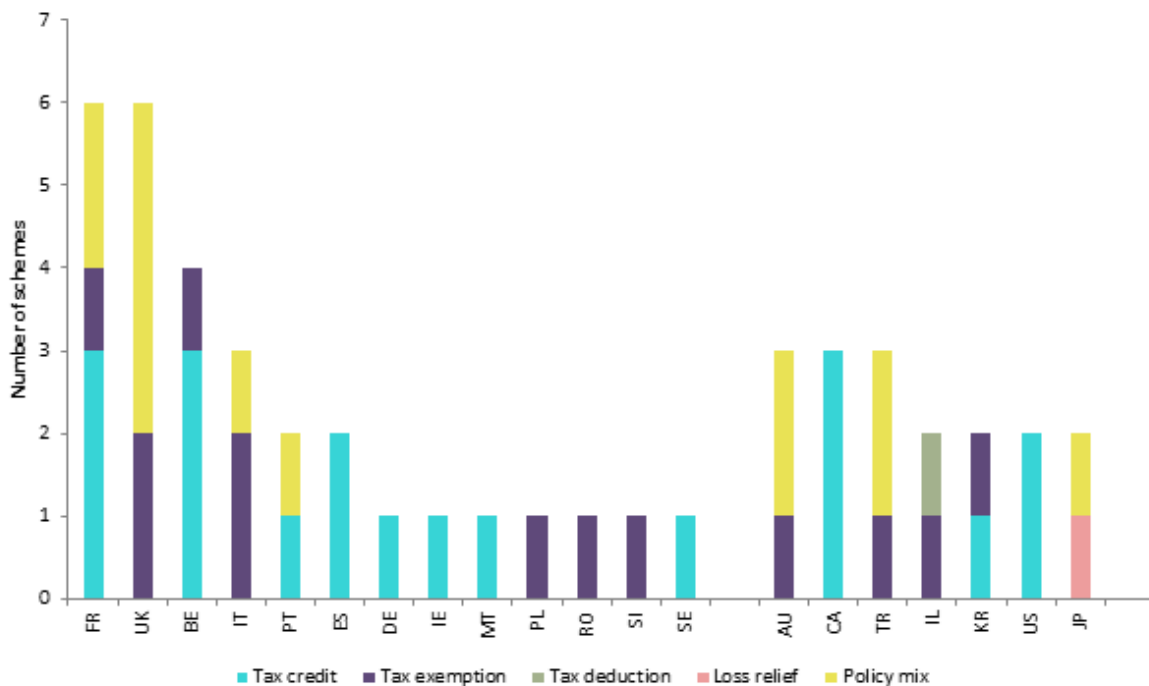
Source: PwC and IHS (2017).

Notes: (1) Data as collected in the country fiches of PwC and IHS (2017). More information on the data can be found in the annex 1 of the study PwC and IHS (2017). (2) Information on Venture Capital is missing for Cyprus and Malta. Information on Business Angels is missing for Hungary, Czech Republic, Romania and Malta. (3) The information on Venture Capital in Estonia relates to 2014. (4) EU average is a simple average based on available country data.

The study observed 47 tax incentives designed to promote venture capital and business angel investment in a sample of 36 countries.²⁴ Tax incentives were implemented by 20 of the 36 countries. In terms of the EU-28, there is a marked contrast between EU-15 and other Member States in the prevalence of tax incentives. This can be explained through differences in the level of venture capital and business angel investment activity and differences in preferences for the use of targeted tax incentives.

Tax credits are the most popular form of incentive, followed by tax exemptions on the returns (current or capital) generated by the investment. In many cases, schemes in place utilise multiple forms of incentive, with 13 doing so.

Graph 2.9: Number of VC&BA tax incentives offered by EU Member States and outside of Europe, 2016



Source: PWC & IHS (2017)

















Notes: (1) Policy mix means a combination of the incentive types. (2) The graph describes the situation in each country as at 31st October 2016, following the cut-off date of the study. After this date, new tax schemes have been created in Cyprus and Hungary while Slovenia has recently repealed the incentive in place.

²⁴ EU28 + Australia, Canada, Israel, Japan, South Korea, Switzerland, Turkey, and United States.

The study identifies desirable features in the design of venture capital and business angel tax incentives and benchmarked 47 tax schemes against these good practices. The highest ranking scheme is the UK's "Seed Enterprise Investment Scheme".

Table 2.1 below highlights the number of schemes that meet good practice standards and illustrates scope for improvement. For example, tax incentive schemes could better contribute to lowering the risk (upside and downside) of investments in SMEs and start-ups by offering upfront tax credits or loss relief on a more favourable basis than afforded by the baseline tax system. Tax relief on capital gains is a performance-related feature and would promote investment quality. Imposing a minimum holding period would help generating and capturing knowledge spillovers, providing stability to capital structure, while discouraging the abuse. More systematic monitoring and evaluation of tax incentives can support their design and reform, as well as promoting the attainment of value for money.

Table 2.1: Selected good practices for VC&BA schemes

Objectives	Good practice	Number of schemes	Scope for improvement
Addressing investor risk aversion	Upfront relief	29	
	Relief on capital gains	14	
	More favourable loss relief	3	
	Focus on new investments	20	
Targeting	Business age	21	
	Business size	35	
	Both business angel and venture capital investors covered	33	
	Permit participation of cross-border investors	37	
	Focus on equity investment	41	
	Limits on investment size	33	
	Exclusion of certain sectors	24	
	Restrict participation of related parties but grant allowance on business angels	7	
	Impose minimum holding periods	2	
Monitoring and Evaluation	Administered on a non-discretionary basis	47	
	Transparent annual monitoring of fiscal costs	10	
	Transparent annual monitoring of economic impacts	0	

Source: PWC & IHS (2017)

Note: The scope of improvement is evaluated according to the overall number of Member States which meet the respective good practice with a traffic light system: green: more than 67 % of schemes meet this good practice, yellow: 33 % to 67 % of schemes apply this practice, red: less than 33 % adhere to it.

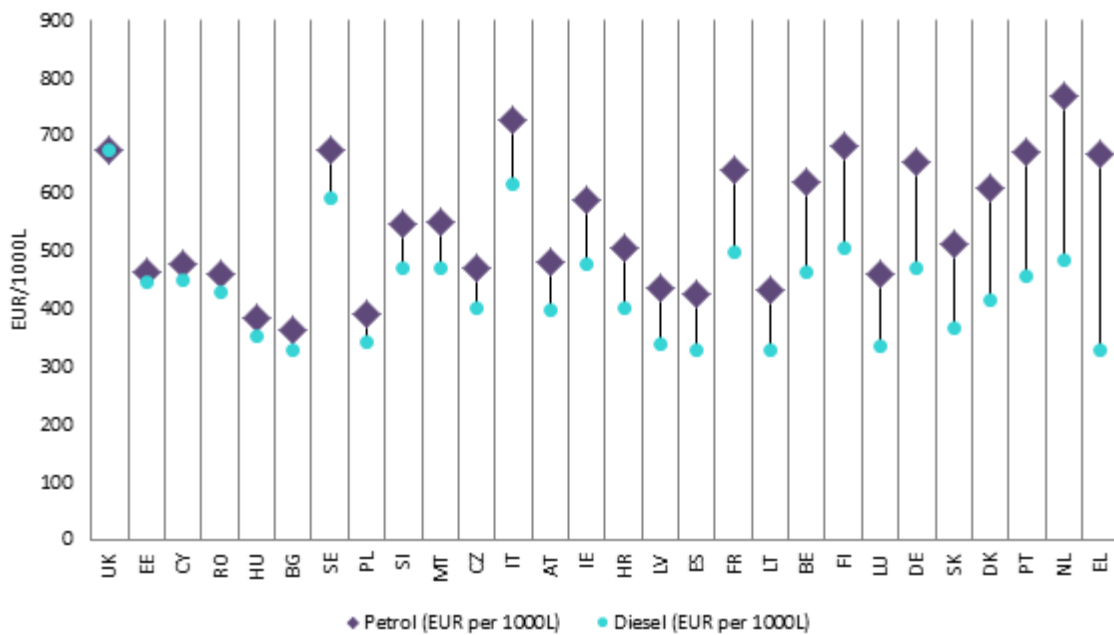
2.1.5 Environmental investment

The design of the tax system influences investors' decisions and can create incentives (or disincentives) for investment and consumption that provide wider benefits, or reduce negative externalities for society. Distortions in the tax system that favour relatively more polluting forms of technology can lead to negative environmental impacts and foregone revenue.

The graph below shows the marginal tax rates on petrol and diesel, which account for the majority of the passenger car fleet in the EU, when used in transport. In all Member States with the exception of the UK (where rates are equal) the tax rates on diesel when used as a propellant are lower than those on unleaded petrol, despite diesel having a higher carbon content and higher negative impact on ambient air quality than unleaded petrol.²⁵ Some Member States offset this advantage via registration or circulation taxation. However, while a registration tax affects a buyer's decision when purchasing a car, and an annual tax adds to the overall cost of ownership, neither affects the marginal cost of driving a car.

In order to make the tax rates applied to different fuels correspond better to the level of environmental damage they cause, a number of Member States also levy a carbon tax on energy products. This is included in the marginal tax rates shown in the graph.

Graph 2.10: Tax rates on petrol and diesel when used as propellants, 2016



Source: Commission services.

Notes: (1) Marginal tax rates show the excise duty rates applicable in Member States in July 2016. They exclude VAT but include carbon taxes. (2) Countries are ordered in ascending order by the magnitude of the ratio Diesel EUR/1000L to Petrol EUR/1000L. (3) In the UK the excise duty rates on petrol and diesel when used as propellants are equal (in EUR/1000L).

²⁵ Although it should be noted that diesel engines are on average more efficient than petrol engines.

Several Member States effectively subsidise the private use of company cars through favourable tax treatment. These countries' income tax rules often do not differentiate between the use of a company car for business and private purposes. In addition, a small number of Member States allow partial deduction of the VAT charged on the purchase of company cars intended for private use by employees. Such under-taxation of company cars encourage users to buy bigger cars and drive more, leading to higher environmental and social costs as well as significant revenue losses.

Graph 2.11: Subsidy for private use of company cars, 2015



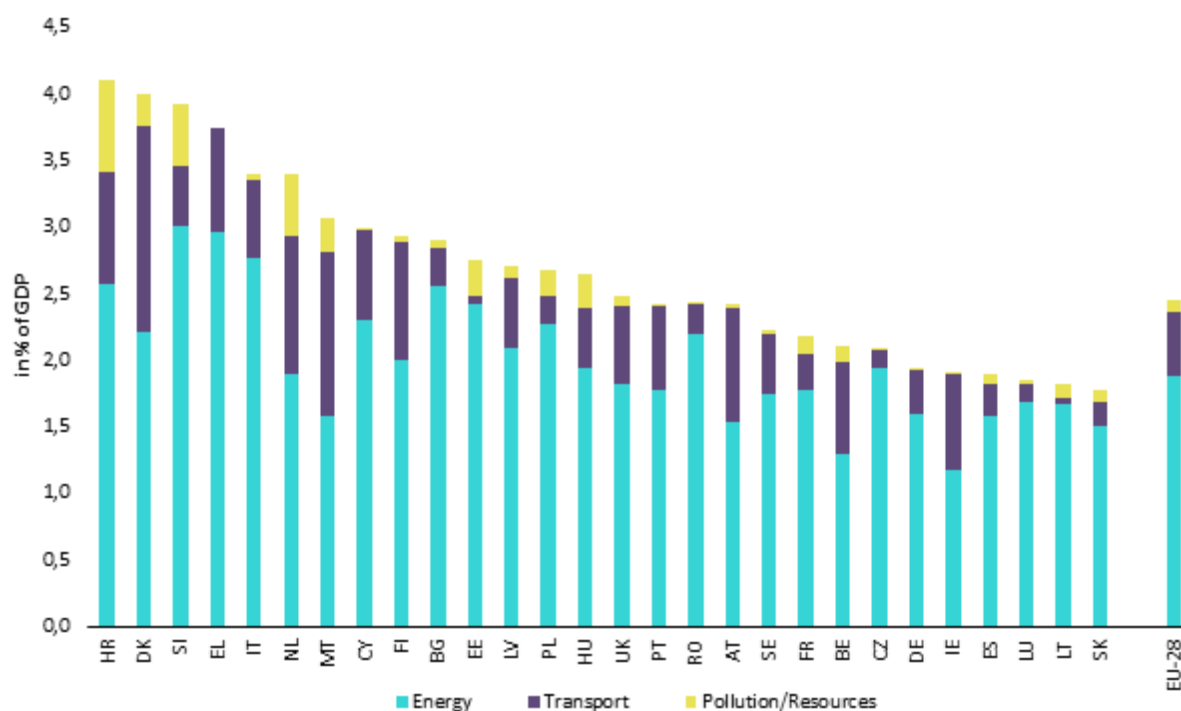
Source: European Commission (2017h)

Notes: (1) The subsidy for private use of a company car is calculated as the percentage gap between the cost to the employer of providing a car (including taxes, insurance and maintenance costs, and fuel costs) and the benefit-in-kind on which the employee is taxed under the personal income tax system. It does not reflect the way the benefit is treated for social security purposes. (2) Data unavailable for Cyprus and Croatia. (3) EU average is the weighted average.

In addition to raising revenue, environmental taxation can contribute to the achievement of environmental policy goals and help to incentivise behavioural change, by pricing in the negative externalities of polluting or other damaging activities (see also section 2.2.4). Environmental taxation comprises taxes on energy, transport, pollution and resources.

The structure of environmental tax revenue in EU Member States is shown below. Energy taxation accounts for a large majority of the revenue from environmental taxes in almost all Member States, and 77% in the EU-28.²⁶

Graph 2.12 Structure of environmental taxes, 2015



Source: European Commission (2017d), based on Eurostat data

Note: Energy taxes include taxes on energy products used for both transport and stationary purposes. Transport taxes include taxes related to the ownership and use of motor vehicles. They also include taxes on other transport equipment such as planes and on related transport services. Pollution taxes include taxes on measured or estimated emissions to air (except taxes on carbon dioxide emissions) and water, on the management of waste and on noise. Resource taxes include any taxes linked to the extraction of use of a natural resource.

²⁶ Further information on the composition and dynamics of environmental taxation in EU Member States can be found in the report *Taxation Trends in the European Union* (European Commission, 2017d)

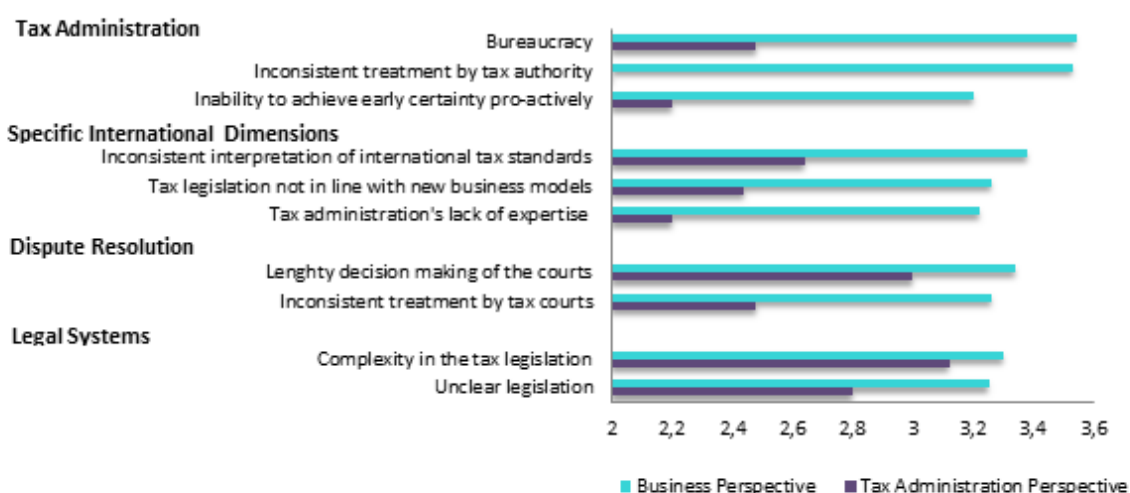
2.1.6 Enhancing tax certainty

Tax uncertainty can arise at many different stages of the tax policy and administration process. The higher the uncertainty in tax matters the more difficult it is to foresee the future tax bill from a firm perspective. Tax certainty is therefore a fundamental element for businesses looking to grow, expand and invest.

Two surveys on tax uncertainty among business and tax administrations allow identifying which sources of tax uncertainty are relatively more important for economic choices.²⁷ As shown in figure 2.1 below, according to business issues related to tax administration rank among the major drivers of uncertainty. In particular, considerable bureaucracy and inconsistent treatment by the tax authority are considered as the two most important sources of tax uncertainty. As regards tax administrations, the most important sources of tax uncertainty are related to the legal system and dispute resolution. In order to enhance tax certainty the most effective tools identified by businesses are reducing the frequency of tax changes, reducing bureaucracy, providing detailed guidance in tax regulations and announcing important changes in advance. On this matter, the views by tax administrations closely match those indicated by businesses.

All recent Commission initiatives (e.g. ATAD, ATAD2, CCCTB, dispute resolution, and VAT actions) aim at creating a level playing field for all businesses in the EU and will have positive effects on tax certainty. Among latest developments, Member States agreed to amend the current system to resolve double taxation disputes within the EU, a major contribution to strengthen tax certainty and improve business environment. Moreover, in order to avoid double taxation on cross-border investments, the Commission will promote best practice and develop a code of conduct with Member States on withholding tax relief principles.

Figure 2.1: Main sources of tax uncertainty across four dimensions for both businesses and tax administrations



Source: IMF-OECD (2017)

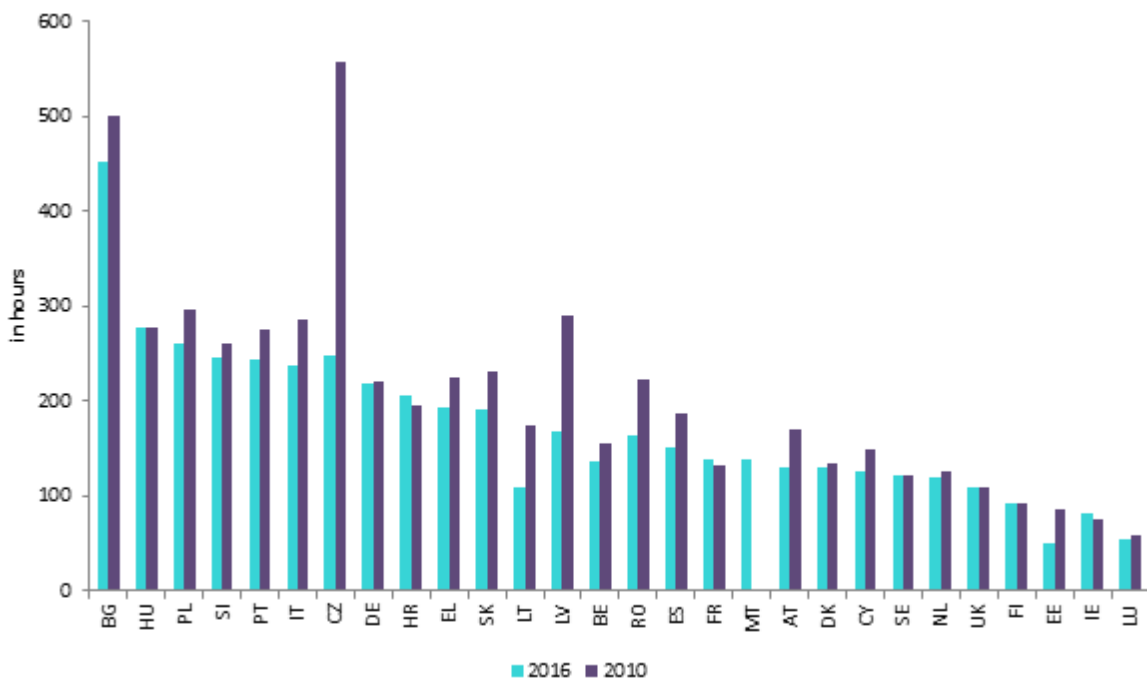
Note: The respondents were asked to rate each factor on a scale from 1 to 5 where 1 means that the factor is not important for investment and location decisions and 5 means that the factor is extremely important.

²⁷ IMF-OECD, 2017

2.1.7 Improving the tax administration

Compliance costs mostly relate to time spent rather than direct costs, such as those associated with bookkeeping. The graph below shows the number of hours needed to comply with taxes per year for a medium-sized company. Time spent include hours needed to deal with the corporate income tax, value added tax and taxes on employees, including taxes on wages and social contributions. The time needed to comply with taxes for medium-sized companies can serve as a good proxy of how high tax compliance costs are in a country.

Graph 2.13: Number of hours needed to comply with taxes per year for a medium-sized company, 2010-2016



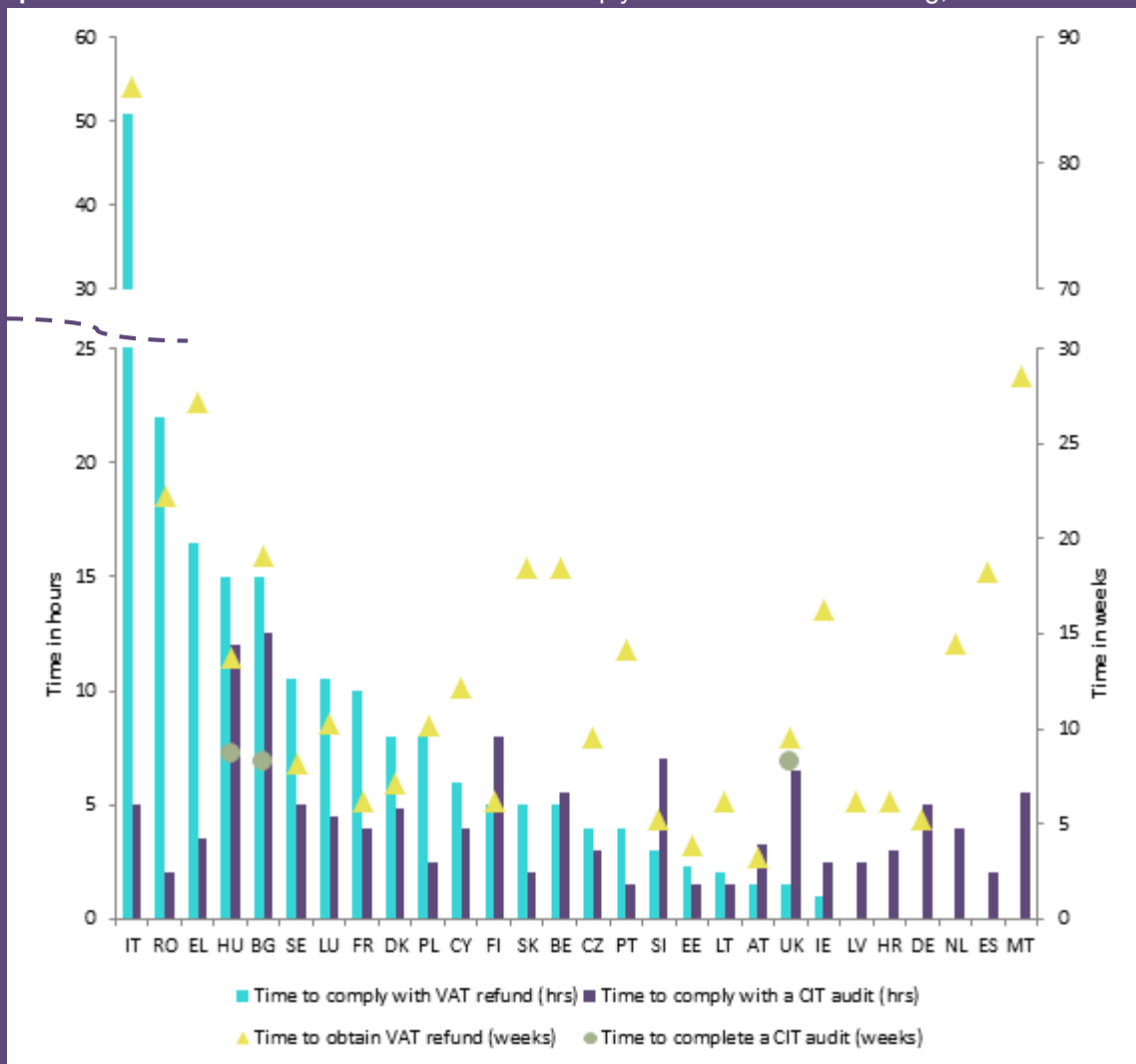
Source: World Bank (2017)

Box 2.1: Post filing index

The indicator above is one of the four sub-indicators that form the overall economic indicator "ease of paying taxes" which is part of the World Bank's indicator series "ease of doing business". So far the indicator had only captured the cost of complying with tax obligations up until the filing of a tax return and the payment of taxes due. However, since companies might also face difficulties afterwards for instance in obtaining tax refunds or when being audited, the indicator was complemented by a fourth sub-indicator in 2017.

The so called "post-filing index" captures the amount of time spent to comply with tax refunds and audits as well as the time to obtain a refund or complete a CIT audit. Graph 2.14 below depicts the indicator for the EU 28.

Graph 2.14: Number of hours/ weeks needed to comply with taxes after their filing, 2015

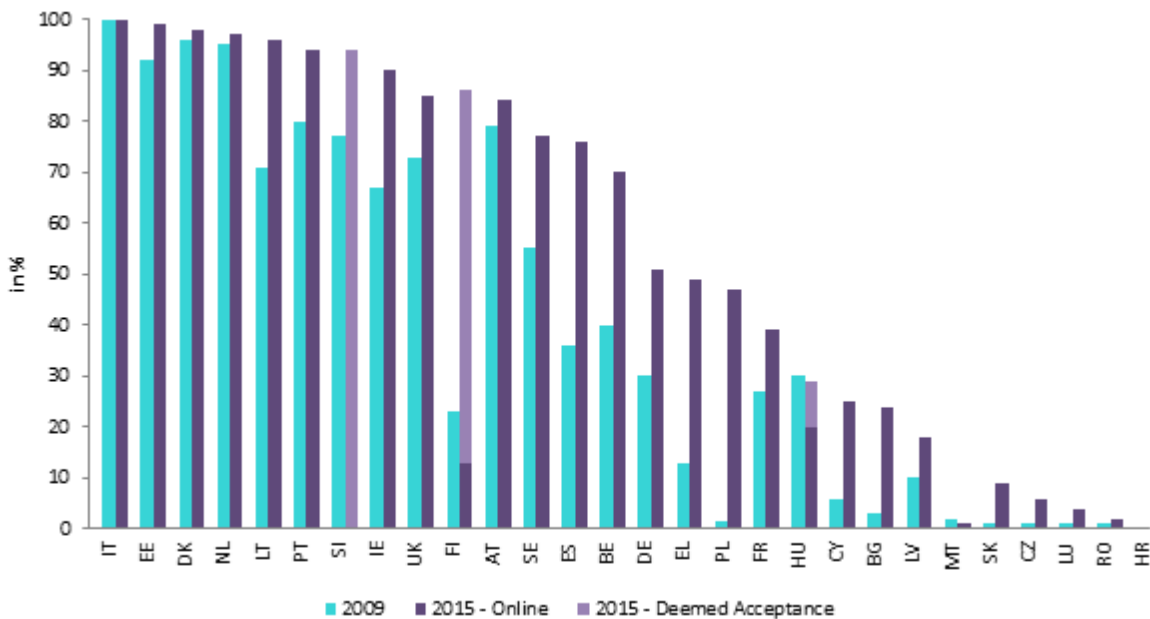


Source: PwC (2017)

Note: (1) Due to the particular assumptions a CIT audit is only likely to be triggered in three Member States. Therefore only for these countries data is available on the time to complete a CIT audit. (2) Moreover, no information is available on the time to comply with a Vat refund for LV, HR, DE, NL, ES, and MT.

Tax compliance costs are influenced not only by tax rules but also by how simple it is to deal with tax authorities. A wide offer of digital services for taxpayers, especially e-filing opportunities, can reduce compliance costs, while making tax administration more efficient and increasing compliance. The indicator shows how many personal income tax returns out of every 100 are sent back to tax authorities online – in contrast with sending them back on paper. The latest data indicate improvements in all EU countries when compared with the situation in 2009, yet the level of e-filing in some countries remains very low.

Graph 2.15: Share of e-filing of personal income tax returns (% of total), 2009-2015

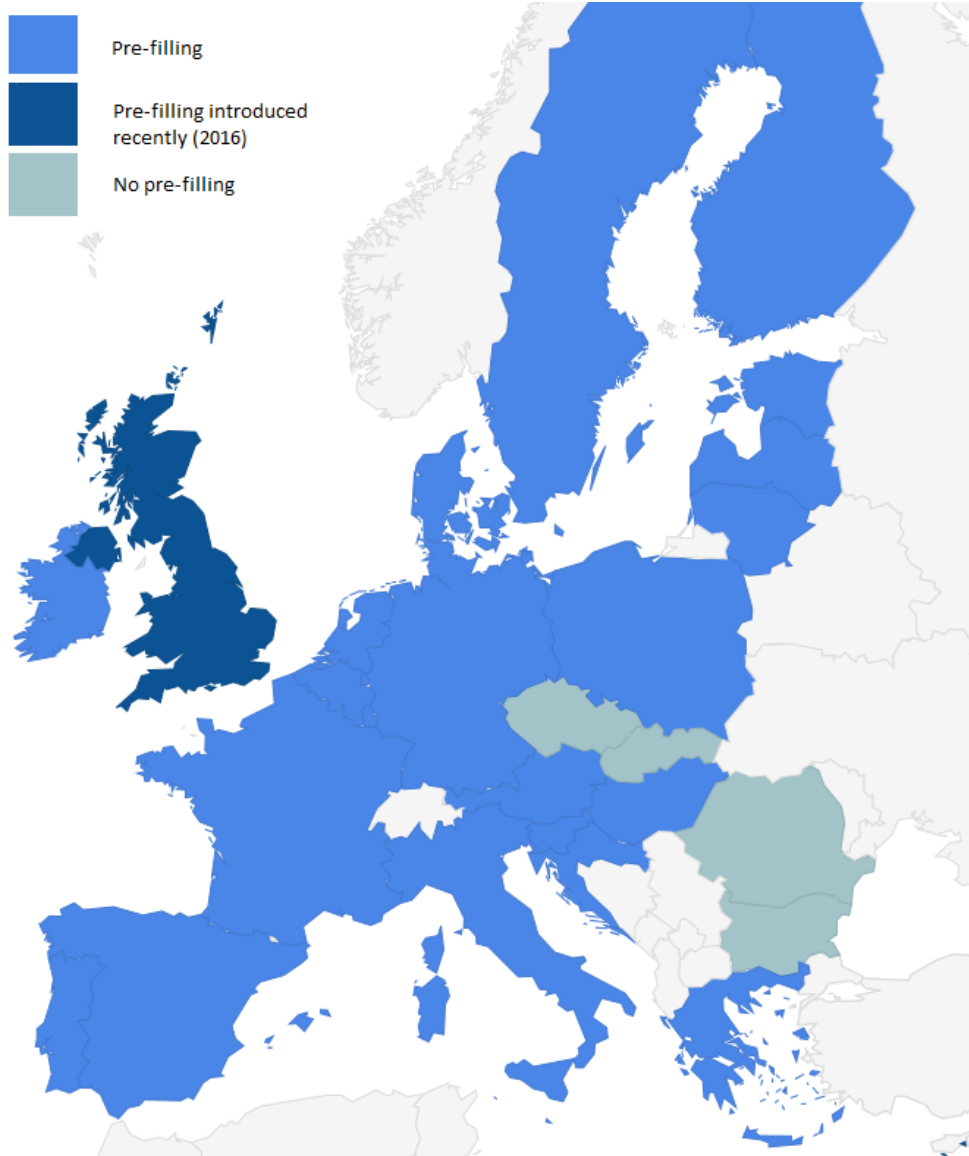


Source: OECD (2015a, 2017a).

Notes: (1) No data available for HR. No 2015 data available for BE, DE, DK, EL, LV, LT, MT, SE, UK. For these countries, 2013 data has been used for 2015. As no 2013 for EL was available, 2011 EL data has been used for 2015. No 2009 data available for SK, here 2011 has been used for 2009. (2) The “deemed acceptance” category consists of prepared returns which, after the expiry of a notice period, are deemed to have been accurately completed by the taxpayer. No data is available on whether these returns have been filed electronically or on paper. (3) The return channels not included in this graph are paper returns and “other” (this final category only applies to ES and HU).

The electronic pre-filling of personal income tax returns is one way to simplify the process for taxpayers, although other approaches, such as taxing salary or interest payments directly at source can also make a difference. A clear majority of Member States prefills personal income tax returns to assist in compliance. Prefilling is usually done on the basis of information about taxpayers that tax authorities already have at their disposal. This information usually comes from banks, employers and other third parties. The map below shows which member states pre-fill personal income tax returns, indicating progress since 2011.

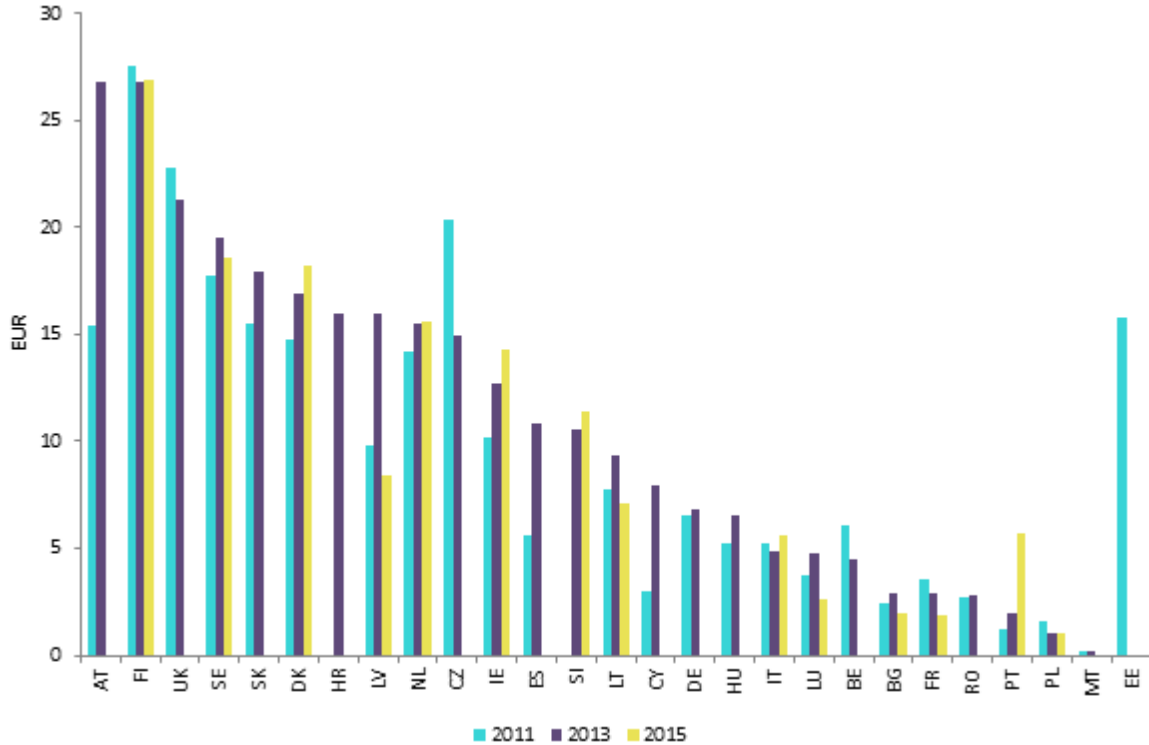
Figure 2.2: Pre-filling of personal income tax returns using third party information, 2016



Source: OECD (2015a) and desk research by Commission services

The amount of resources invested in digital technologies can be taken as a proxy indicator of how modernised a tax administration is. Research by the OECD²⁸ shows that substantial expenditure in digital technologies tends to go hand in hand with good performance.

Graph 2.16: IT expenditure for every 100 euro of total revenue body (2011-2013) and tax administration budget (2015)



Source: OECD (2015a), OECD (2017)

Note on data used: No data available for EL. No 2015 data for AT, BE, CY, CZ, DE, EE, ES, HU, MT, RO, SK, UK. No 2013 data for EE. No 2011 data for HR and SI. 2015 data for France excludes staff working in the Public Accounting Directorate. 2015 data for Luxembourg refers to the IT budget that is included in the overall budget of the tax administration. The major part of the Luxembourgish tax administration's IT budget, however, passes through the budget of another administration, i.e. the "Centre des technologies de l'information de l'Etat".

Note on change in denominator for 2015 data: The denominator for 2011 and 2013 data is total revenue body expenditure. For combined taxation and customs administrations, this would include the expenditure for the customs administration. The denominator for 2015 data is the total recurrent budget of the tax administration part only, which excludes expenditure for the customs administration.

²⁸ OECD, 2015a

Box 2.1: Collaborative Economy: tax compliance and collection

It has been argued that one of the most significant evolutions in entrepreneurship over recent times has been the development of the “collaborative economy”. **It refers to business models where activities are facilitated by online platforms that create an open marketplace for the temporary use of goods or services often provided by private individuals.**²⁹

The collaborative economy raises the issue of when and how it should be taxed. On the one hand, taxation should not hamper this innovative activity at birth. The collaborative platform allows for more flexible working arrangements, increases resource efficiency, and facilitates the circulation of information, hence creating new market places. It creates new job opportunities and may facilitate access to labour market for low-skilled workers. On the other hand, if the collaborative economy is not taxed, tax bases will erode as their market presence grows, and traditional business models will suffer from a competitive disadvantage (as they will be taxed). Similar activities should be taxed the same way, whether they take place in traditional sectors or in the collaborative economy sector. Also, the development of the sharing economy should not be a simple shift of labour forces, from the traditional economy towards new forms of work with lower social protection or deteriorated working conditions.

A recent literature review on the impact of taxes on entrepreneurship and the collaborative economy³⁰ highlights challenges that the collaborative economy is posing to the tax system. The main ones are: i) the classification of income and identification of applicable tax rules, which creates uncertainty for services providers; and ii) the fragmentation of sources of income. Both, uncertainty and more disaggregated economic activity lead to higher compliance costs for the service providers and higher administrative costs for the public administration. Higher compliance costs may deter participation in the collaborative economy or increase undeclared work.

The study identifies three types of actions that have been implemented in Member States to address compliance and collection costs:

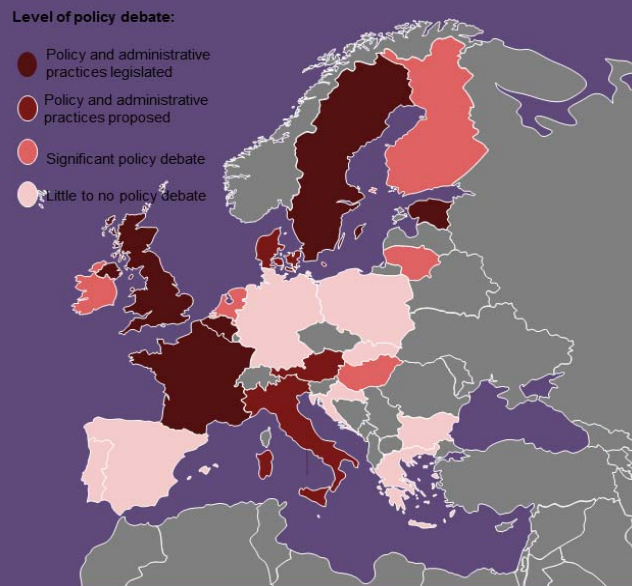
- Publication of guidance and information campaign to clarify applicable rules and the adjustment of existing rules to ensure that a tax obligation that applies in the traditional sector will also apply to the collaborative economy (e.g. tourist tax).
- The introduction of a specific/simplified regime for income generated up to a threshold (either a general threshold or one that is specific to the collaborative economy).
- The voluntary involvement of platforms either to exchange data on taxable income with the tax payers and/or the public administration on the income to declare or to directly withhold taxes for the tax administration.

Recently, EU Member States are increasingly devoting their attention to this field of the economy. Figure 2.3 below depicts the extent of policy debate on tax and the collaborative economy across Member States. Of the 28 Member States, five have already legislated one or more of the three solutions presented above (BE, EE, FR, SE, UK). Three countries (AT, DK, IT) have made proposals and five are actively engaged in tax policy debate surrounding

²⁹ European Commission, 2016b

³⁰ Dondena & IHS, 2017

Figure 2.3: Member States' tax policy and administration practices on collaborative economy



Source: Dondena & IHS (2017).

Notes: (1) based on available sources, September 2016 (2) Administrative practices encompass digitalisation of tax administration, involvement of platforms and information campaign.

Many countries have engaged in measures to improve tax administration. The most common tax administration measure is the involvement of platforms, ranging from platform's cooperation in sharing data to platforms actively withholding taxes for the tax authorities.

Table 2.2: Overview of Member States that have engaged in tax administration practices specific to the collaborative economy

	AT	BE	DK	EE	FI	FR	IE	IT	LT	NL	SK	UK
Digitisation of tax administration	x	x	x	✓	✓	✓	x	x	x	x	x	✓
Involvement of platforms	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓
Information campaign	✓	x	x	x	x	✓	x	✓	x	x	✓	x

Source: Dondena & IHS (2017).

Note: based on available sources, September 2016

Estonia has made the most significant reforms in this area. Estonia has invested in IT solutions in its public sector to increase ease of use and decrease bureaucracy. Its initiative "E-Estonia", which strives to provide all governmental services and transactions electronically, has proven how the digitalisation of tax administration can facilitate tax compliance and increase tax revenues. Moreover, Estonia has taken a proactive approach in engaging with the collaborative economy. For instance, Estonia has generated a tax declaration platform in a pilot project with one of the leading players of the development in sharing economy to simplify tax compliance for the providers. In particular, it provides a

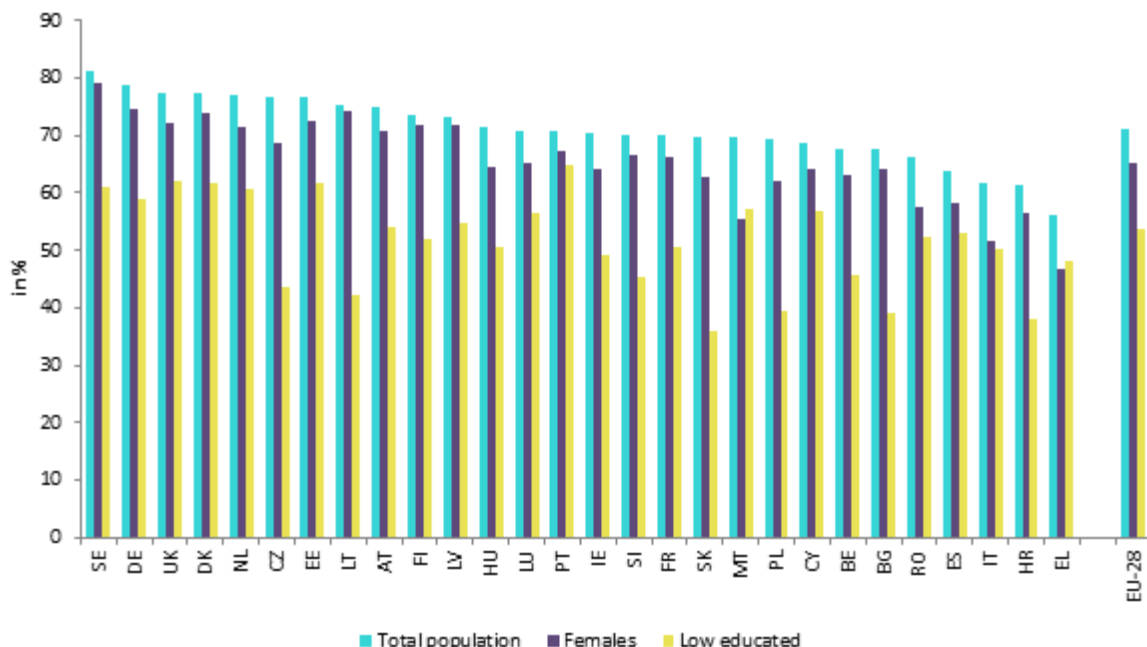
2.2 Supporting job creation and employment

As explained in section 1.2, the design of the tax system can have an influence on both demand for and supply of labour, in particular in the short run. Reducing the tax burden on labour can help to support job creation and employment. Since only a few Member States have fiscal space to consider uncompensated labour tax cuts, the financing of such tax cuts also needs to be considered, for example by shifting the tax burden to other bases where these are relatively low. Where scope for a tax shift is limited, targeted tax cuts aimed at low income earners or more responsive groups, such as second earners, can be a way to improve both efficiency and fairness.

Graph 2.17 depicts the employment rate of the total population, of females and of low educated people, for the age group 20-64. This provides an indication of Member States facing a challenge in boosting employment, overall or for specific groups. Other indicators, such as the full-time employment rate, can also be used to provide a fuller picture of labour market conditions.

While the overall employment rate is relatively high on average (but still below the EU2020 target of 75 %), the situation varies in the Member States. Likewise, the gap between the female employment rate and the employment rate for low educated people compared to total employment differs. In Lithuania, the employment rate of females is only 0.9 percentage points lower than the total employment rate, while in Malta the gap amounts to 14.1 percentage points. The largest difference in employment rates of low educated people compared to the total population can be found in Slovakia (33.9 percentage points) and the lowest in Portugal (5.9 percentage points).

Graph 2.17: Employment rates of total population; female and low-skilled, 2016



Source: Eurostat, 2017, lfsi_emp_a and lfsa_ergaed

Notes: (1) The age group considered for the employment rates is 20-64 years. (2) 'Low-educated' refers to levels 0-2 ISCED. (3) The employment rate for women is used as proxy for second earners. It is recognised that these are not necessarily the same. (4) The employment rate is not measured in full-time equivalents.

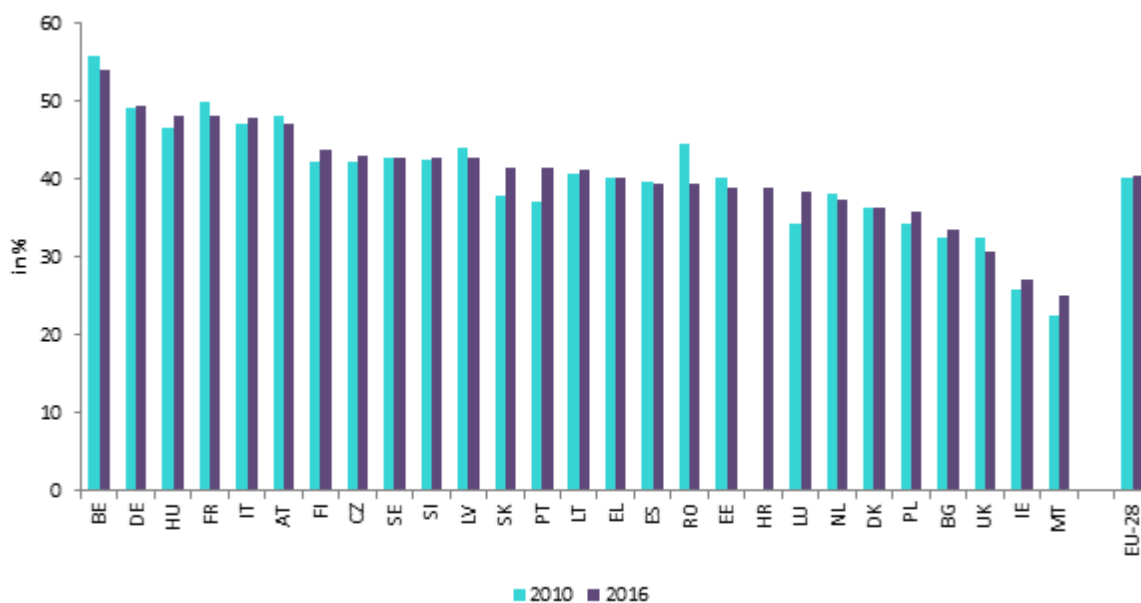
2.2.1 Overall tax burden on labour

The graph below shows the tax wedge for a single worker earning the average wage in various EU countries. The tax wedge measures the proportional difference between the costs of a worker to their employer and the employee's net earnings. It therefore measures both incentives to work (labour supply side) and to hire employees (labour demand side).

The tax wedge is defined as the sum of personal income taxes and employee and employer social security contributions net of family allowances, expressed as a percentage of total labour costs (the sum of the gross wage and social security contributions paid by the employer). The tax wedge for a single person earning the average wage is one of the indicators used by the Eurogroup in benchmarking the tax burden on labour (alongside the tax wedge for a single person at 50 % of the average wage - see below),³¹ in line with its commitment to effectively reduce the tax burden on labour.³²

Between 2010 and 2016, the average tax wedge slightly increased in the EU, with 17 Member States increasing the tax wedge on the average wage, whilst 9 reduced it.

Graph 2.18: Level of tax wedge in EU Member States for a single person earning the average wage, 2010-2016



Source: European Commission tax and benefits indicator database based on OECD Tax-benefit Model, updated 10/04/2017.

Notes: (1) Tax wedge: The tax wedge data is for single earner with no spouse or children, average wage. (2) Recent data for Cyprus is not available. 2010 data is not available for HR.

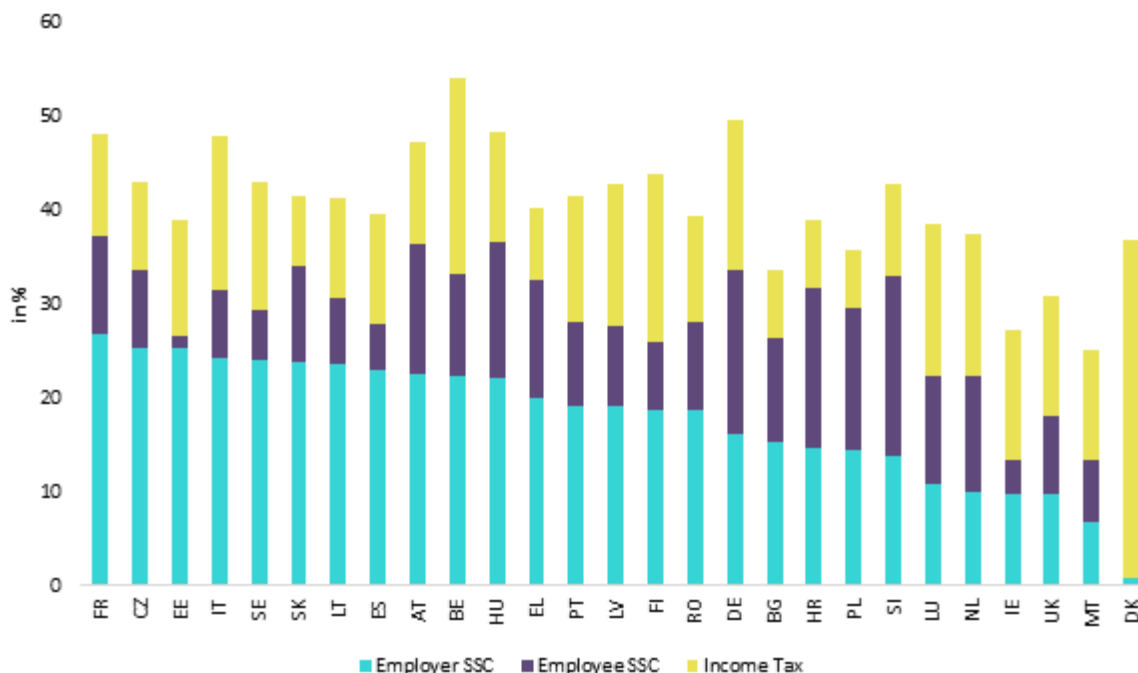
³¹ http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/144872.pdf

³² <http://www.consilium.europa.eu/en/press/press-releases/2015/09/12-eurogroup-statement-structural-reform/>

The composition of the tax wedge is important in the short run as the different elements can have an impact either on labour demand or supply. The graph below divides the tax wedge for a single worker earning the average wage into its separate components: personal income tax, employer social security contributions (SSCs) and employee SSCs.

It is ordered by employer social security contributions, as a proxy of labour demand incentives created by labour taxation in different Member States, although employee SSCs and income tax also affect labour demand, insofar as employees negotiate on a "net wage".³³ Labour supply incentives for specific groups are explored in more detail below.

Graph 2.19: Composition of tax wedge in EU Member States, 2016



Source: European Commission tax and benefits indicator database based on OECD Tax-benefit Model, updated 10/04/2017.

Notes: (1) Recent data for Cyprus is not available. (2) As the data is for single earner with no spouse or children, family allowances do not influence the level of the tax wedge. (3) MS are ranked in descending order by the magnitude of the Employer SSC.

³³ It should be noted that in the majority of Member States, social security contributions also represent an input to the pension system and can thus be seen as a form of deferred income for workers. The strength of the link between contributions and pensions differs between Member States.

2.2.2 Tax burden on low income earners

Certain specific groups, such as low income earners, can be more sensitive to changes in the tax burden on labour. Focusing labour tax reductions on low income earners can also support other policy aims, such as reducing income inequality or poverty. Depending on the structure of the tax system, options such as tax credits, tax free allowances, or changes to tax rates can affect the tax wedge for low income earners. For example, the use of a differentiated tax-free allowance, as recently brought forward in Lithuania, Estonia and Latvia, can lower the tax burden on low income earners within a flat personal income tax system. However, higher marginal tax rates are created for individuals within the income band in which the allowance is withdrawn.

The graphs below shows the tax wedge for a single earner with no children at 50 % and 67 % of the average wage, as well as the change in the tax wedge between 2010 and 2016. The tax wedge for a single person earning 50 % of the average wage is one of the indicators used by the Eurogroup in benchmarking the tax burden on labour (alongside the tax wedge for a single person at the average wage – see above).

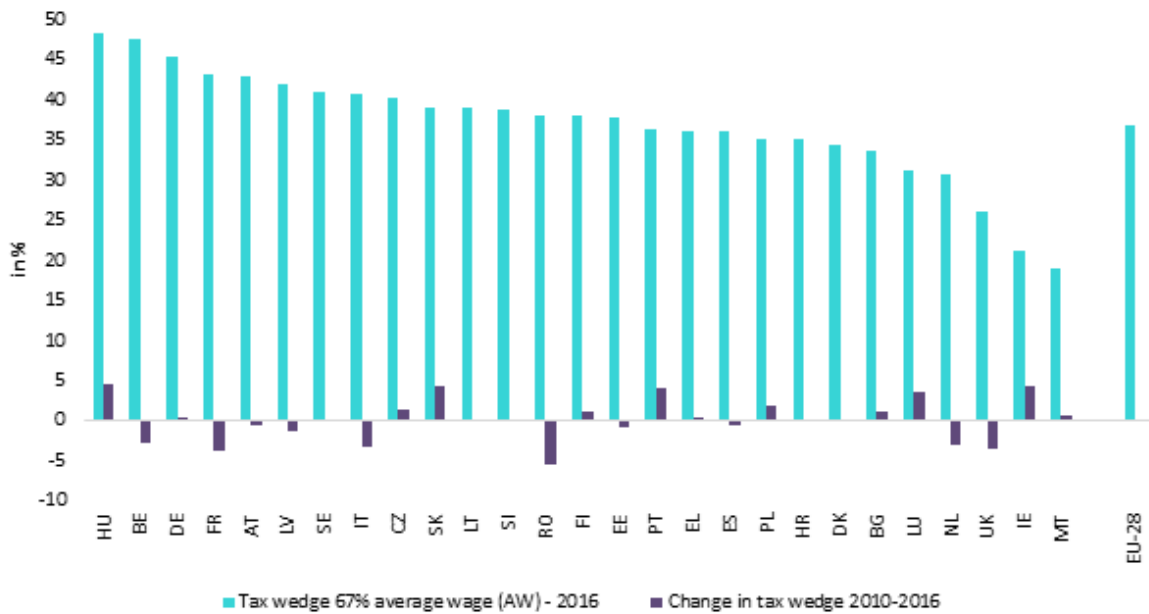
Between 2010 and 2016, the average tax wedge slightly increased for workers earning 67 % of the average wage, and slightly decreased for workers earning 50 % of the average wage, with substantial reductions in some Member States, but increases in others.

Graph 2.20: Tax wedge for low income earners in EU Member States, 2016

a) at 50 % of Average wage



b) at 67 % of average wage

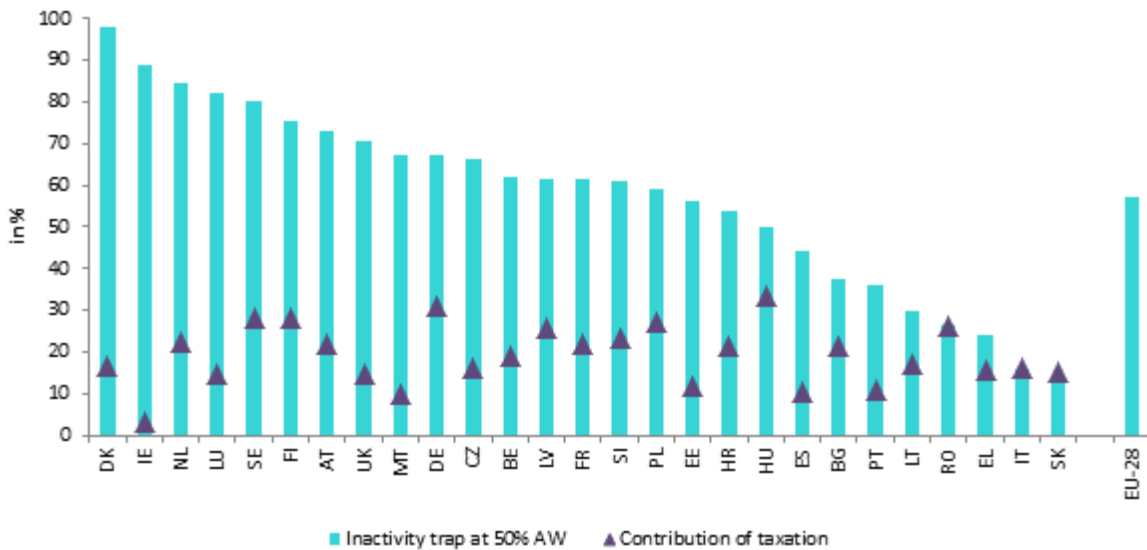


Source: European Commission tax and benefits indicator database based on OECD Tax-benefit Model.

Notes: (1) The data on the tax wedge is for a single earner with no spouse or children at 50 % and 67 % of the average wage. (2) Recent data for Cyprus is not available. 2010 data for HR is not available. (3) The tax wedge is defined as the sum of personal income taxes and employee and employer social security contributions net of family allowances, expressed as a percentage of total labour costs (the sum of the gross wage and social security contributions paid by the employer).

The inactivity trap - or the implicit tax on returning to work for inactive persons - measures the part of additional gross wage that is taxed away in the case where an inactive person (not entitled to receive unemployment benefits but eligible for income-tested social assistance) takes up a job. In other words, this indicator measures the financial incentives to move from inactivity (and social assistance) to employment. The 'trap' indicates that the change in disposable income is small and, conversely, the work-disincentive effect of tax and benefit systems is large. Taxation is one element that contributes to the total inactivity trap; other factors include the withdrawal of benefits.

Graph 2.21: Inactivity trap for low income earners in EU Member States, 2016
a) at 50 % of average wage



b) at 67 % of average wage



Source: European Commission tax and benefits indicator database based on OECD Tax-benefit Model.

Note: (1) The data on the inactivity trap is for a single earner with no spouse or children at 50 % and 67 % of the average wage. (2) 'Contribution of taxation' refers to the contribution made by taxation and social security contributions to the inactivity trap in percentage points (other contributors being, e.g. withdrawn unemployment benefits, social assistance and housing benefits). (3) Estimates are provisional.

2.2.3 Tax burden on second earners

Tax system features such as transferable tax credits and the degree of joint taxation contribute to the variation in the level of the inactivity trap for second earners, alongside features of the benefit system, such as the withdrawal of means-tested benefits.

In most Member States the contribution of taxation to the inactivity trap for second earners, in cases where the other earner earns the average wage, is relatively high. Where the contribution of taxation is higher than the trap itself, it means that other measures, such as in work benefits, compensate for the level of taxation.

It should be noted that other factors, such as the availability of affordable and high quality formal care services, including childcare, as well as well-designed work-life balance policies, can contribute to the decision over whether to return to work, or increase working hours.

Graph 2.22: Inactivity trap for second earners in EU Member States, 2016



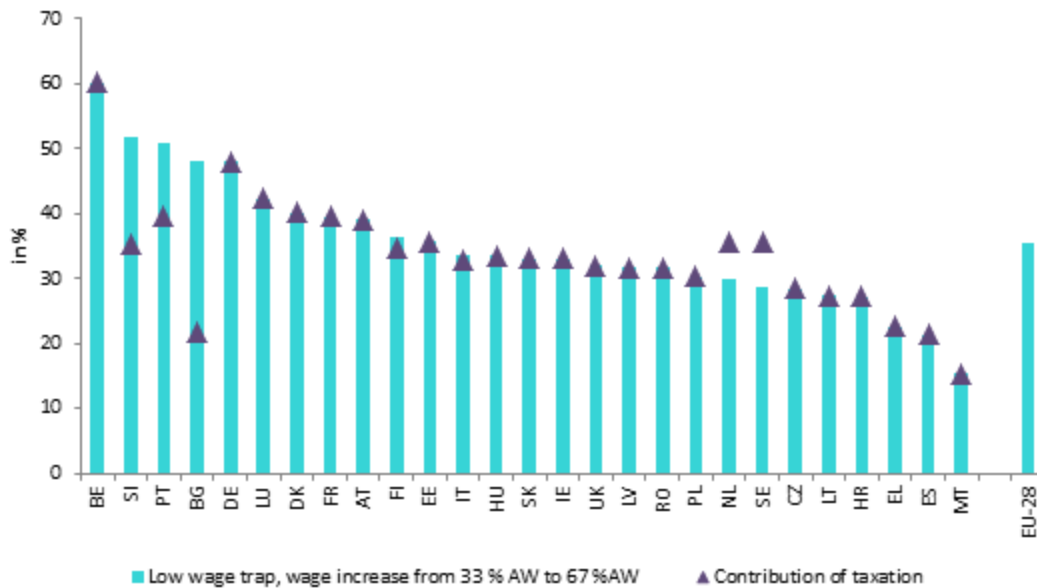
Source: European Commission tax and benefits indicator database based on OECD Tax-benefit Model.

Note: (1) The trap data is for a second earner at 67 % of the average wage in a two-earner family with two children; the principal earner earns the average wage (AW). (2) 'Contribution of taxation' refers to the contribution made by taxation and social security contributions to the inactivity trap, in percentage points (other contributors being, e.g. withdrawn unemployment benefits, social assistance and housing benefits). (3) Estimates are provisional.

The low-wage trap is defined as the rate at which taxes are increased and benefits withdrawn as earnings rise. For second earners, as with the inactivity trap, taxation plays a very significant role in determining the level of the low wage trap in most Member States. Many low-wage second earners are women working part-time.

As above, it should be noted that other factors, such as the availability of affordable and high quality formal care services, including childcare, as well as well-designed work-life balance policies, can contribute to the decision over whether to increase working hours.

Graph 2.23: Low wage trap for second earners in EU Member States, 2016



Source: European Commission tax and benefits indicator database based on OECD Tax-benefit Model.

Note: (1) The trap data is for a second earner with a wage increase from 33 % to 66 % of the average wage, in a two-earner family with two children; the principal earner earns the average wage (AW). (2) 'Contribution from taxation' refers to the contribution made by taxation and social security contributions to the inactivity trap, in percentage points (other contributors being, e.g. withdrawn unemployment benefits, social assistance and housing benefits). Recent data for Cyprus is not available. (3) Estimates are provisional.

2.2.4: Scope to shift taxes away from labour

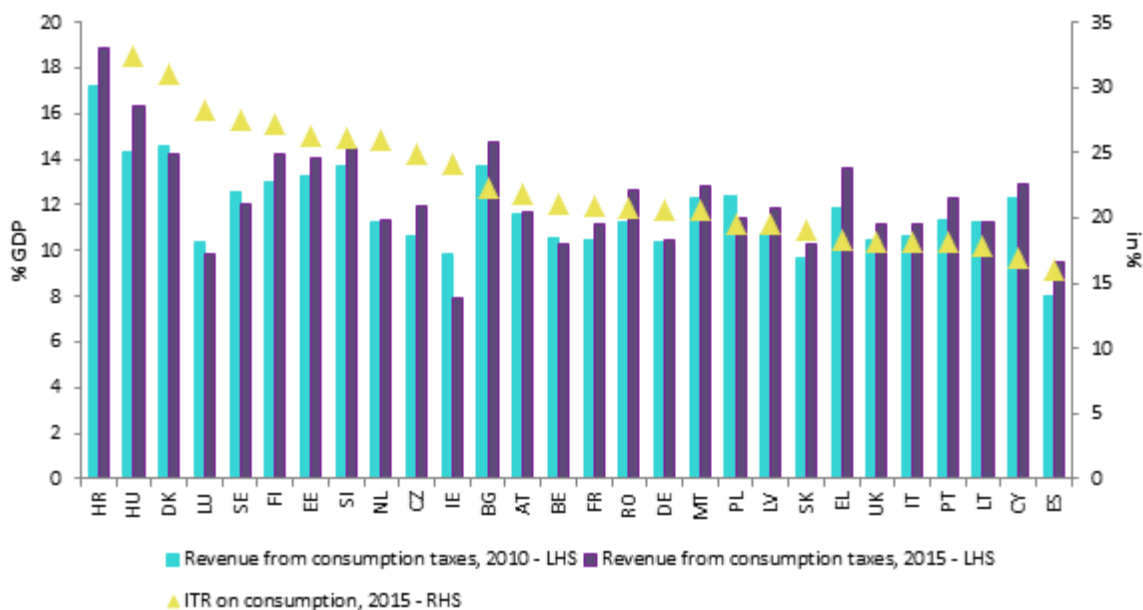
Labour tax cuts can improve work incentives and help address unemployment challenges. As set out above, since only a few Member States have fiscal space to consider uncompensated labour tax cuts, the financing of such tax cuts needs to be considered. Potential financing options could be revenue-neutral tax shifts or expenditure cuts.

A tax shift away from labour towards other revenue sources may help to stimulate growth and to increase employment and investment. It is considered that some types of tax bases are less detrimental to growth, for instance, consumption taxes, recurrent housing taxes and environmental taxes.³⁴ However, some recent economic literature points to heterogeneity of responses, non-linear effects and differences in amplitude between the short-term and long-term effects.³⁵ The detailed design of a tax is at least as important as the type of tax.

When identifying alternative sources of revenue, it is also important to consider potentially regressive distributional impacts of increasing taxation in these areas and possible remedies, as well as potential distributive impacts between generations.³⁶

The graph below shows revenue from consumption taxes as a percentage of GDP for each EU country. It also shows the implicit tax rate on consumption in Member States, which is defined as the ratio of revenue from all consumption taxes to households' final consumption expenditure.

Graph 2.24: Tax revenues from consumption taxes and implicit tax rate (ITR) on consumption, 2010-2015

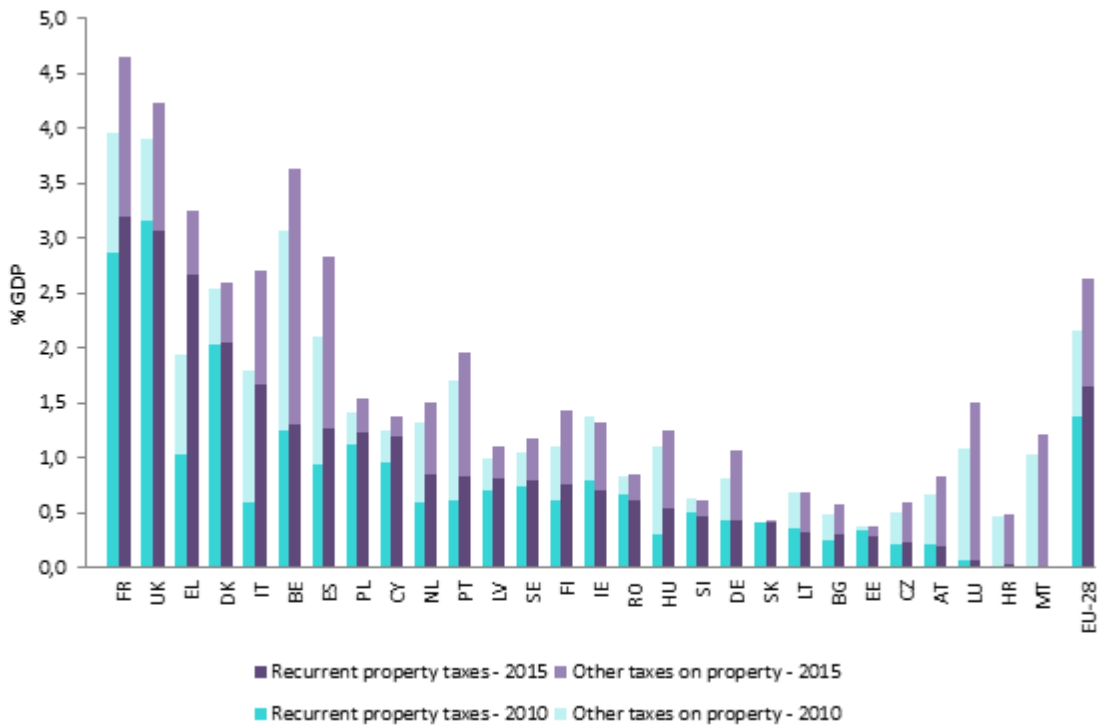


Source: European Commission (2017d) based on Eurostat data
 Note: Implicit tax rate on consumption not available for HR.

³⁴ OECD, 2010
³⁵ Baiardi, Profeta, and Scabrosetti, 2017
³⁶ Auerbach and Kotlikoff, 1987

Recurrent property taxation is a second type of taxation which could be considered to balance labour taxation reductions. The graph below shows revenue from recurrent property taxes as a percentage of GDP in EU Member States. Recurrent property taxes remain low in a majority of Member States and there may be scope to increase them, while avoiding negative redistributive impacts on low-income households. In countries where the current systems of housing taxation rely heavily on transaction taxes, an internal shift from transaction taxes towards recurrent taxes could also bring efficiency gains.

Graph 2.25: Tax revenues from property taxes as percentage of GDP, 2010-2015



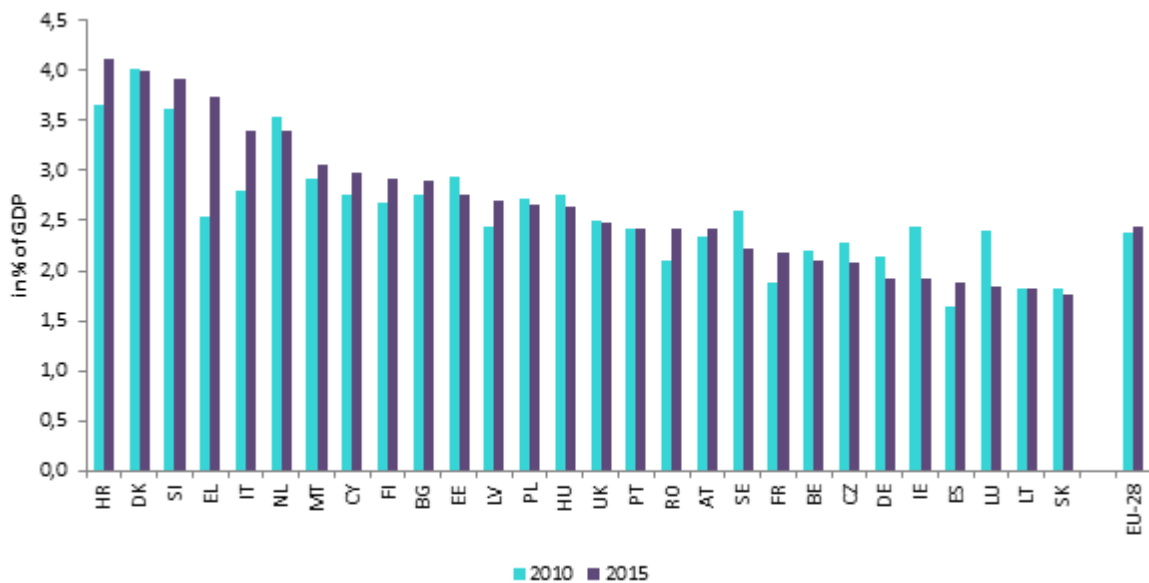
Source: European Commission (2017d) based on Eurostat data

Notes: (1) Data does not include personal income tax on imputed rents. (2) There is no recurrent real estate tax in Malta. (3) Member States are ranked in descending order by the magnitude of the recurrent property taxes in 2015 expressed as percentage of GDP (4) Taxes on realised nominal holding gains are not included.

A third type of taxation that could be considered to balance labour tax cuts is environmental taxation. In addition, environmental taxation can contribute to fairness by pricing in the negative externalities of polluting or other damaging activities and help to incentivise behavioural change (see also section 2.1.5).

The graph below shows revenue from environmental taxes, which comprise taxes on energy, transport, pollution and resources, as a percentage of GDP. Overall, revenue from environmental taxation in the EU slightly rose as a share of GDP between 2010 and 2015 (although it showed a small decrease between 2014 and 2015). As a share of total taxation it slightly decreased over the same period. Changes in environmental tax revenue can be driven not only by changes in tax rates, but also by changes in the tax base. For example, it is notable that over the same period (2010-2015) both gross inland and final energy consumption have decreased.

Graph 2.26: Environmental tax revenue, 2010-2015



Source: European Commission (2017d), based on Eurostat data.

Note: Environmental taxes are classified into four main categories - energy, transport, pollution and resource taxes. Energy taxes include taxes on energy products used for both transport and stationary purposes. Transport taxes include taxes related to the ownership and use of motor vehicles. They also include taxes on other transport equipment such as planes and on related transport services. Pollution taxes include taxes on measured or estimated emissions to air (except taxes on carbon dioxide emissions) and water, on the management of waste and on noise. Resource taxes include any taxes linked to the extraction or use of a natural resource.

2.3 Tax compliance

Improving tax compliance and thereby securing tax revenues for public policies to finance education, healthcare, infrastructure, defence etc. is essential for creating a fair society. Next to actively combat tax fraud, evasion and avoidance, a transparent and well-functioning tax administration is key to creating and preserving trust in authorities. This trust in the functioning of the system – essentially that other citizens are paying their taxes as well – is crucial for voluntary tax compliance.

Although it is by definition difficult to estimate how much money is lost to tax fraud, evasion and avoidance, this section presents indicators which aim to provide an indication of the scale of the issue.

2.3.1 Estimates of the non-observed economy

The non-observed economy (NOE) includes underground, informal and illegal activities as well as other activities that have been omitted from data collection due to deficiencies in the data collection program. While it is by no means the only explanation, one of the reasons why economic agents decide to perform economic activities underground or informally is to evade taxes. Therefore, the non-observed economy provides an indirect indication of tax evasion, although it is broader (e.g. encompassing strictly illegal activities or other informal activities that are not subject to taxation).

All EU statistical offices take into account the NOE when calculating national account statistics. The value of the NOE therefore measures economic activities, which may not be captured in the basic data sources used for compiling national accounts. Various statistical methods or adjustments are used to overcome the gaps in national accounts information that the non-observed economy creates. However, not all EU statistical offices disclose data on those adjustments.

Table 2.3: Value of the non-observed economy (NOE) as % GDP, reference years as specified

Country	NOE adjustments (% GDP)	Reference year	Country	NOE adjustments (% GDP)	Reference year
BE	4.6	2009	LT	18.9	2002
BG	13.4	2011	LU	N/A	-
CZ	8.1	2009	HU	10.9	2009
DK	N/A	-	MT	N/A	-
DE	N/A	-	NL	2.3	2007
EE	9.6	2002	AT	7.5	2008
IE	4	1998	PL	15.4	2009
EL	N/A	-	PT	N/A	-
ES	11.2	2000	RO	21.5	2010
FR	6.7	2008	SI	10.2	2007
HR	10.1	2002	SK	15.6	2009
IT	17.5	2008	FI	N/A	-
CY	N/A	-	SE	3.0	2009
LV	13.6	2000	UK	2.3	2005

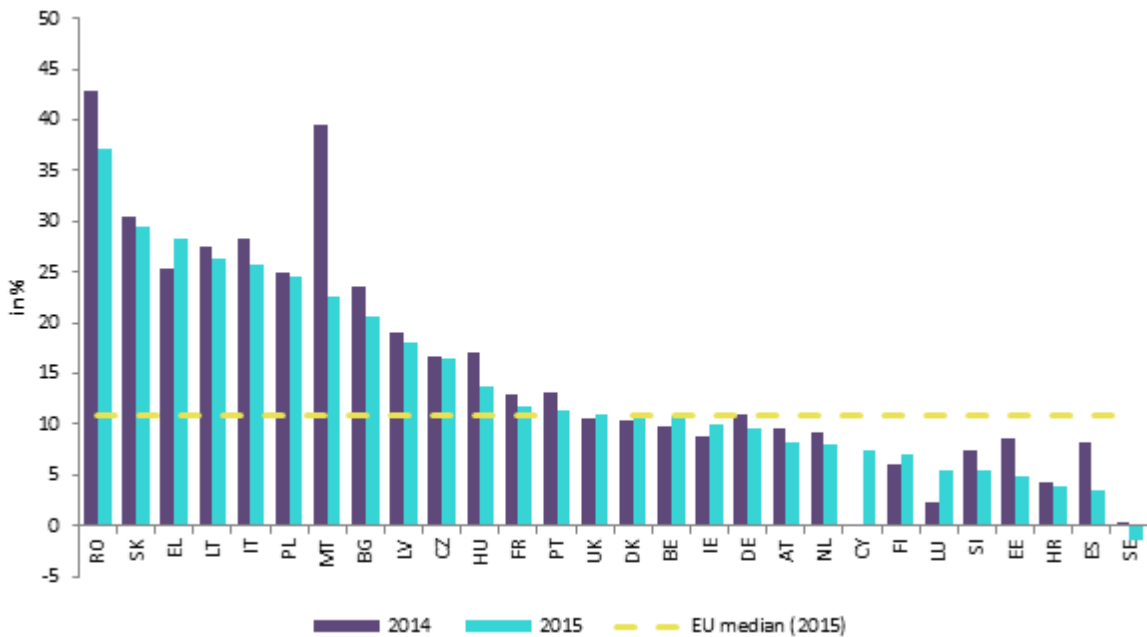
Source: OECD (2012) and UN (2008), except for Bulgaria: national statistical institute; and for Romania: national statistical institute, quoted in the annual report of the Romanian Fiscal Council.

Note: The differences in methodologies used mean that the data for different Member States are not comparable. This incomparability is due to the different sources and methods used in the countries for estimating data for national accounts components; additionally, in these sources and methods some types of non-exhaustiveness are usually covered implicitly and, therefore, the scope of the necessary explicit adjustments also differs between the countries.

Promoting a culture of compliance can be done in various ways. For example, in Lithuania a sample of 6 167 companies received warning letters from the state tax inspectorate, based on the suspicion that parts of the employees' compensation were not declared. It stated that this abnormality had been observed and that investigations might follow if the matter was not resolved. First numbers suggest that this measure could contribute to improving the situation. Similar initiatives have been implemented in other Member States as well.

Moving from the whole economy to specific taxes, there are several estimates of how much taxes should be collected but eventually are not. The VAT gap is the difference between the amount of VAT actually collected and the estimated amount of VAT that is theoretically collectable based on VAT rules. It measures the effectiveness of VAT compliance and enforcement measures in each Member State. It estimates revenue loss due to voluntary non-compliance i.e. fraud, evasion and avoidance, as well as due to bankruptcies, financial insolvencies and errors or miscalculations.

Graph 2.27: VAT gap as percentage of VAT theoretical liability, 2014-2015



Source: CASE et al. (2017).

Note: (1) Potential reasons for the negative VAT Gap in Sweden are the use of cash vs accrual revenues, underestimation of gross fixed capital formation liabilities, or incompleteness of national accounts (2) No 2014 data for CY.

The VAT gap is the only tax gap for which there are comparative estimates for almost all EU countries. However, several Member States estimate the gap for other taxes as well, as emerged from the work carried out by the Fiscalis 2020 project group on the Tax Gap.

Table 2.4: Overview of tax gap estimation in selected Member States

	CZ	EE	FI	FR	DE	IT	LV	PL	PT	SK	SI	UK
VAT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PIT	✗	✓	✗	✗	✗	✓	✓	✗	✗	✗	✗	✓
CIT	✗	✗	✗	✗	✓	✓	✗	✗	✗	✗	✗	✓
SSC	✗	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✓

Source: Fiscalis 2020 tax gap project group (2016), The Concept of Tax Gaps: Report on VAT Gap Estimations, (FPG/041)

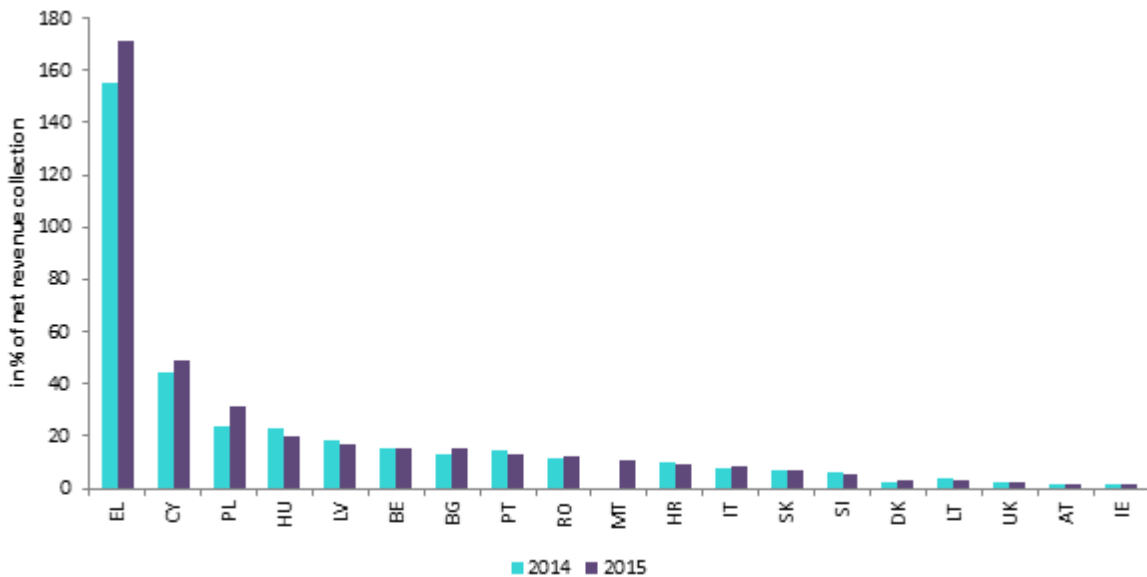
Note: Data for group members which reported tax gap estimation activity only. BE, LT and ES also took part in the group but did not report any tax gap estimation activity.

2.3.2 Tax debt as share of revenue collection

Not all taxes are paid on time. When this happens, taxes are in arrears and are defined as tax debt. Tax debtors are those taxpayers which fail to comply with payment deadlines. A high level of tax debt may be indicative of challenges with tax compliance in a broader sense than payment.

The graph below depicts the ratio of total year-end tax debt, excluding debt that is considered not collectable and the total net revenue in the years 2014 and 2015 respectively.

Graph 2.28: Total year-end tax debt (excluding debt considered not collectable) / total net revenue, 2014-2015



Source: OECD (2017)

Notes: (1) No data available for CZ, DE, EE, ES, FR, LU, NL, FI, SE, no 2014 data for MT (2) Net revenue collection is calculated as total gross revenue collected by the tax administrations (including non-tax revenue) minus total revenue refunded collected by the tax administration per year

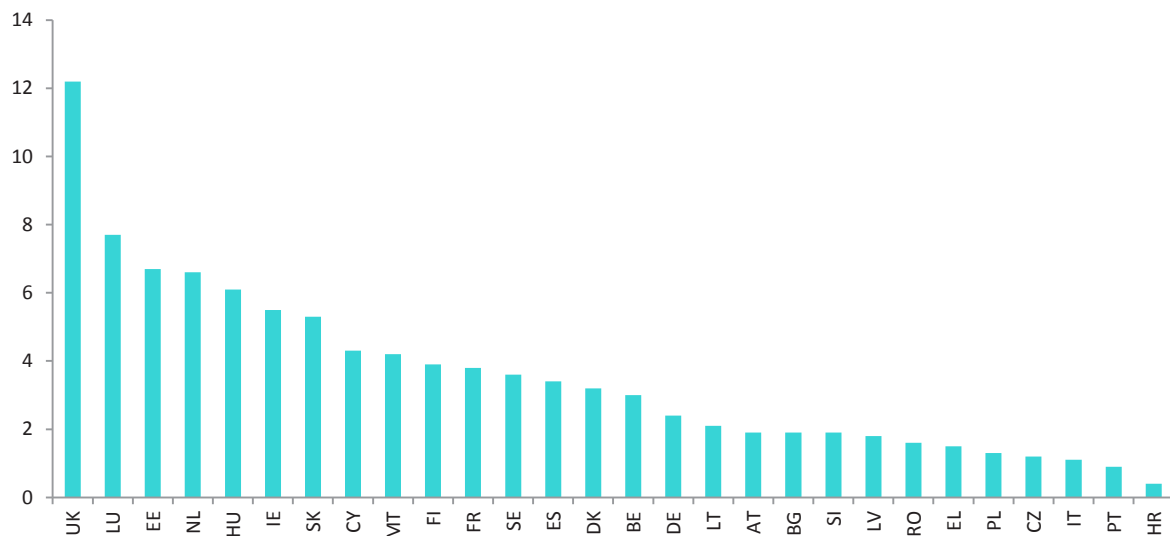
2.3.3 Estimates of tax avoidance

Tax avoidance consists in taxpayers reducing their tax liability through arrangements that may be legal but are in contradiction with the intent of the law. Tax avoidance can take various forms, mainly through intra-group loans, the location of intangibles or the manipulation of transfer pricing.

While the existence of tax avoidance practices is demonstrated in many studies, it is hard to measure revenues lost to it given the complexity of the phenomenon and data limitation. A study commissioned by the European Parliament³⁷ finds that the revenue loss from profit shifting within the EU amounts to about EUR 50-70 billion,³⁸ equivalent to at least 17 % of corporate income tax (CIT) revenue in 2013.

Other measures exist that do not attempt to measure the total revenue loss, but are nonetheless indicative of the problem of tax avoidance and of the route it takes. For example, rather than investing directly in a host country, multinational enterprises (MNEs) may funnel the investment through a third country to take advantage of treaty provisions not found between the host and the home country of the investment. This practice enables MNEs to minimize dividend repatriation costs. The graph below shows the attractiveness of Member States for MNEs that engage in treaty shopping strategies.

Graph 2.29: Attractiveness of treaty shopping: centrality index



Source: van't Riet and Lejour (2017)

Note: Centrality index refers to the GDP-weighted percentage of tax optimal repatriation routes which include the respective country. It is a theoretical calculation, taking into account the cost of dividend repatriation according to bilateral tax treaties signed between 108 countries.

³⁷ Dover et al., 2015

³⁸ The method captures profit shifting within the EU, excluding Spain, Hungary and Finland. It is based on the CIT-efficiency method that attributes all differences between the CIT/Gross Operating Surplus of individual MS with the EU average to profit shifting.

2.3.4 Overview of relevant tax rules

Multinationals that engage in aggressive tax planning reduce their tax liability by taking advantage of the technicalities of a tax system or by playing on mismatches between two or more tax systems. Aggressive tax planning (ATP) can result in double deductions (e.g. the same loss is deducted both in the state of source and in the state of residence) and double non-taxation (e.g. income which is not taxed in the source state is exempt in the state of residence). It is therefore essential to look at Member States' tax rules in order to assess whether they could potentially be used in aggressive tax planning schemes.

A study by Ramboll Management Consulting and Corit Advisory (2015) categorises tax rules and practices depending on their role in ATP structures. Firstly, there are rules that can prompt ATP structures (i.e. these tax rules are the main source of the tax benefit offered by an ATP structure). Secondly, there are rules that do not prompt ATP structures by themselves but are necessary for an ATP structure to achieve its tax benefits. Thirdly, there are rules that can counter ATP structures (i.e. anti-abuse rules).

The below table gives an overview of the absence of two types of anti-abuse rules across Member States: interest limitation and thin capitalisation rules, which aim at discouraging artificial debt arrangements designed to minimise taxes, and controlled foreign companies (CFC) rules, which aim at deterring profit shifting to a low/no tax country. It is worth noting that the Anti-Tax Avoidance Directive, adopted by the Council in July 2016, provides for interest limitation rules and CFC rules.

Table 2.5: Overview of some anti-tax avoidance rules missing in Member States' national laws, 2017

	BE	BG	CY	EE	HR	LU	MT	NL	RO	SI	AT	CZ	IE	LV	LT	PL	SK	DE	EL	FI	HU	PT	FR	IT	SE	UK	DK	ES	
Interest limitation or thin-capitalisation rules	✓	✓	✗	✗	✓	✓	✗	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Controlled Foreign Companies Rules	✗	✗	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Source: Ramboll Management Consulting and Corit Advisory (2015) and desk research by Commission services

The absence of withholding taxes generally aims at preventing double taxation. For example, the elimination of withholding taxes on dividends within a group of companies is a key principle underpinning the EU Parent/Subsidiary Directive. However, it may also facilitate aggressive tax planning under certain circumstances. At the same time, the existence of withholding taxes prevents shifting profits tax-free, and thereby discourages or impedes aggressive tax planning.

The table below shows which countries apply a withholding tax (exceeding 0 %) on interest, dividends or royalties flowing to third country jurisdictions.

Table 2.6: Withholding taxes in EU Member States towards third country jurisdictions, 2017

	HU	MT	CY	EE	LU	NL	IE	SK	UK	AT	DE	FI	SE	BE	BG	CZ	DK	EL	ES	FR	HR	IT	LT	LV	PL	PT	RO	SI
Royalties	✗	✗	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Interests	✗	✗	✗	✗	✗	✗	✓	✓	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dividends	✗	✗	✗	✗	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Source: ZEW (2016b) and desk research by Commission services

Notes: (1) The above table focuses on the domestic withholding tax (WHT) rates, i.e. the rates that are specified in national corporate tax law. It does therefore not reflect the WHT rates specified in double tax treaties. (2) A cross means that the Member State does not apply a withholding tax (exceeding 0 %). (3) The Dutch government has announced its intention as of 2018, to abolish withholding tax on dividends (with the exception of low tax jurisdictions and abuse situations) but introduce withholding taxes towards low-tax jurisdictions on royalties and interests.

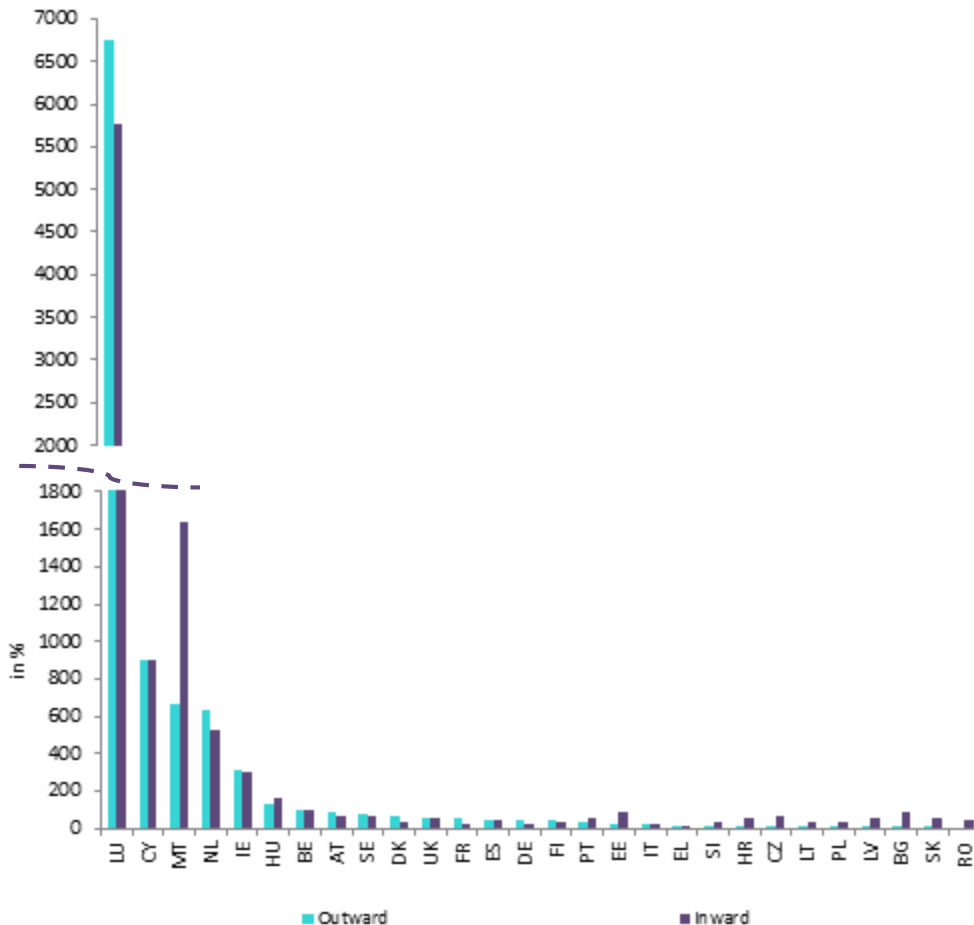
2.3.5 Financial activity

Countries whose tax rules are used in tax avoidance structures are generally characterized by (abnormally) high financial flows compared to their real economic activity. It is therefore relevant to look at information on a possible disconnection between financial and real economic activities, which might be an indication of tax avoidance.

In that respect, it is useful to look at foreign direct investments (FDI) as they capture the investments made cross border between related companies. The below graphs therefore contrast FDI data with the GDP of the country.

It should be stressed that such indicators do not in themselves suffice to draw final conclusions whether a country is being used for tax avoidance purposes. Other factors influence the ratios (for example smaller countries tend to have higher ratios of FDI to GDP). However they provide useful indications as to whether the issue of aggressive tax planning should be further investigated for a given Member State.

Graph 2.30: FDI positions, 2015

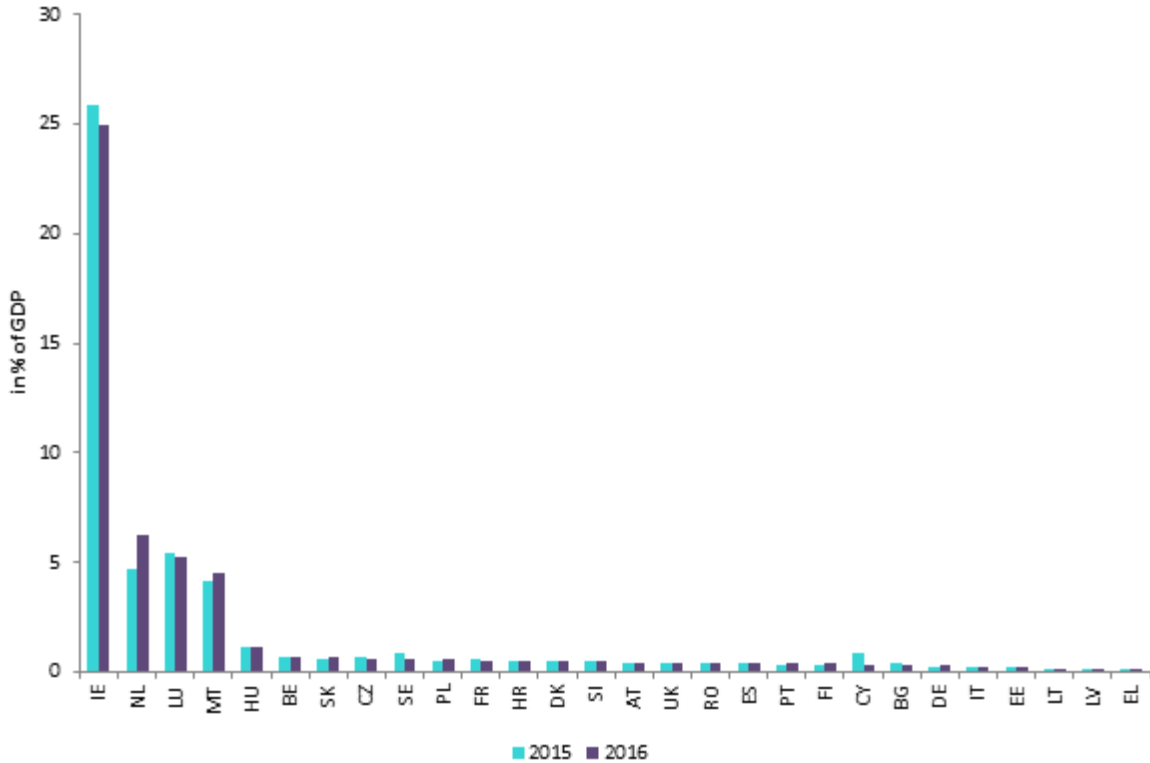


Source: Commission services based on Eurostat, 2016, bop_fdi6_pos and nama_10_gdp

Notes: (1) Foreign direct investment is the category of international investment in which an entity resident in one country (the direct investor) acquires a lasting interest in an enterprise resident in another country (the direct investment enterprise) including through Special-Purpose Entity (SPE), a legal entity created to fulfil narrow, specific or temporary objectives. A direct investment enterprise is one in which a direct investor owns 10 % or more of the ordinary shares or voting rights (or the equivalent for an unincorporated enterprise). (2) Inward FDI or Direct investment in the reporting economy (DIRE) denotes investment by foreigners in enterprises resident in the reporting economy. Outward FDI or Direct Investment Abroad (DIA) accounts for investment by resident entities in affiliated enterprises abroad. (3) FDI stocks (or positions) denote the value of the investment at the end of the period.

Some tax avoidance strategies play on the location of intangible assets. A high share of royalty payments relative to GDP might therefore be indicative of loopholes in tax legislation allowing for tax avoidance. Again, such an indicator does not in itself suffice to draw final conclusions whether a country is being used for tax avoidance purposes.

Graph 2.31: Charges paid for the use of intellectual property, 2015-2016



Source: Commission services based on Eurostat, 2016, bop_its6_det. and nama_10_gdp

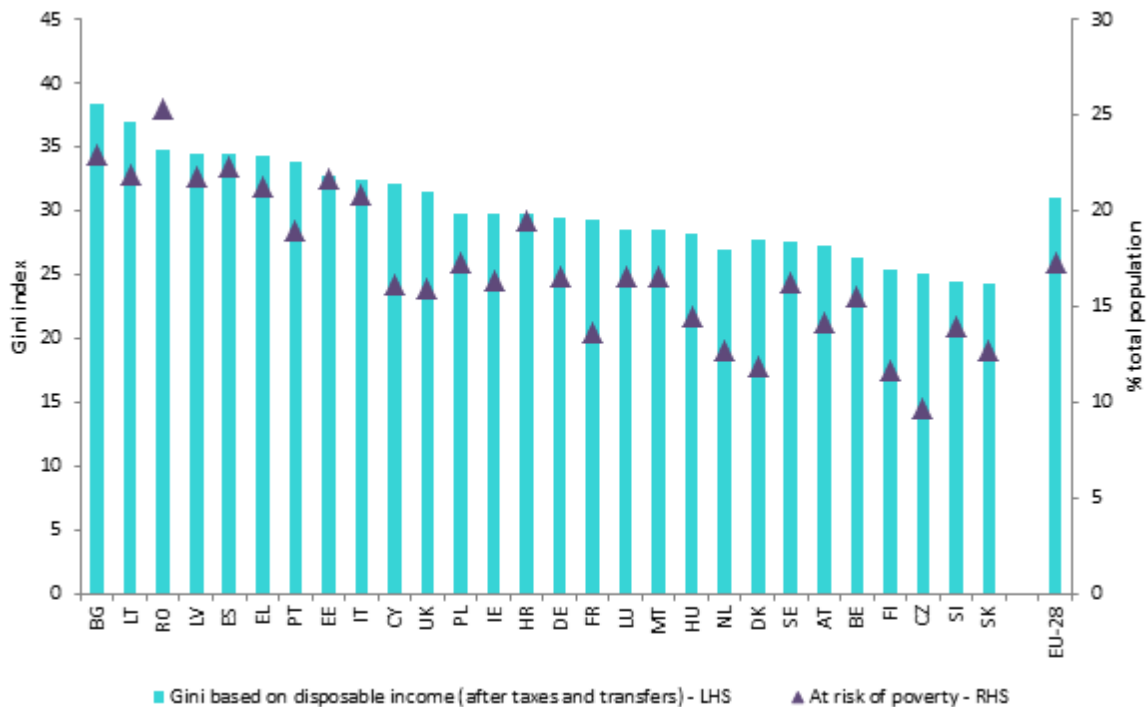
2.4. Correcting inequality and supporting social mobility

This section focuses on the role of taxation in mitigating inequality and fostering social mobility. It sketches out how equal EU societies are and to what extent they allow for social mobility. The section also provides an indication of the impact of the tax system in different Member States.

2.4.1. Inequalities in Europe

The graph shows complementing indicators for income inequality: The left hand side depicts the level of income inequality according to the Gini index based on disposable income after taxes and transfers. The right hand side depicts the population at risk of poverty in the Member States. Although the EU has one of the world's most advanced systems of welfare state, there are still some marked inequalities.

Graph 2.32: Level of income inequality in EU Member States, 2016

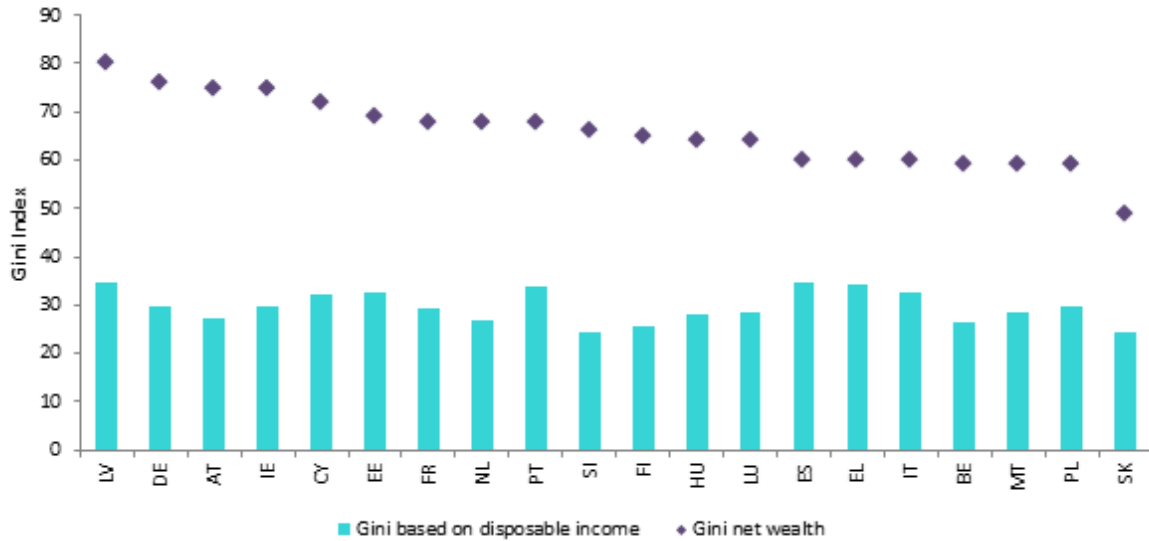


Source: Eurostat, EU-SILC. 2016 ilc_li02 and ilc_di12

Notes: (1) Left axis: Gini coefficients. The scale ranges from 0 to 100. The value 0 corresponds to perfect equality (same income to everybody) while 100 corresponds to maximum inequality (all income distributed to only one person and all the others have nothing). Pensions are included in social transfers. (2) Right axis: At risk of poverty rate as percentage of the total population. The indicator is used in complement of the Gini coefficients to closer reflect social challenges in EU Member States. It depicts the share of the total population earning less than 60 % of the median equivalised income after social transfers (3) 2016 data unavailable for IE therefore 2015 data used. 2016 data of Gini index unavailable for IT and LU, therefore 2015 data used (4) EU-28 average is calculated as the population-weighted average of individual national figures. (4) EU-SILC 2016 data are based on income generated in 2015 (with the exception of IE and UK).

The increasing accumulation of private wealth in Europe over the past 40 years and the rise in inequalities sparked an intense public debate on the fairness of existing tax systems. Wealth inequality exceeds that of income.³⁹ This has led to the recognition that inequality needs to be addressed from a joint income and wealth perspective. However, redistributive policy analysis still mostly focuses on income-related taxes and transfers and largely disregards wealth-related taxation.

Graph 2.33: Level of income equality (2016) and wealth inequality (2014)



Source: European Commission services; computations based on ECB, 2016 and Eurostat, EU-SILC 2016, ilc_di12

Notes: (1) Net wealth is defined as the difference between households' total assets and their total liabilities. (2) No comparable data available for BG, CZ, DK, HR, LT, SE, RO, UK. (3) EU-SILC 2016 data are based on income generated in 2015 (with the exception of IE and UK).

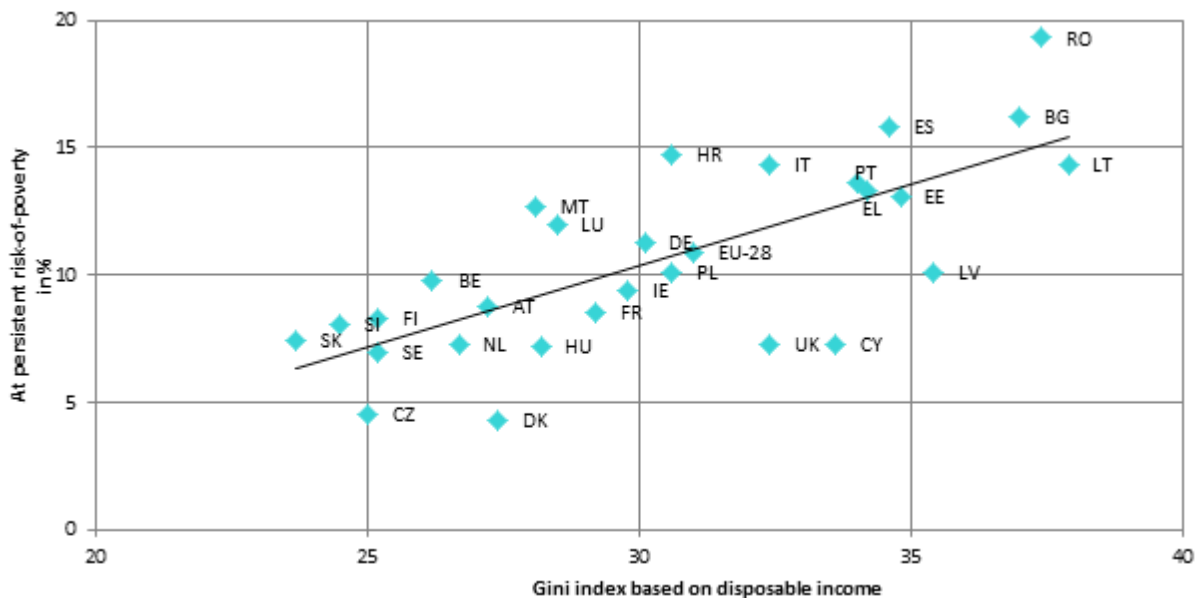
³⁹ OECD, 2015b

2.4.2 Social Mobility in Europe

Fairness and social mobility build on the perspective for a brighter future, that everyone has the same chance in life of developing his/her own project and to move up on the income scale. Greater inequality is associated with less social mobility across generations.⁴⁰ Social mobility can be both intra-generational and inter-generational.⁴¹ Intra-generational mobility refers to the chance of moving up or down (for example along the income ladder) during the life course. Intergenerational mobility refers instead to which extent an individual's chances are related to their parents' education, class or income.⁴²

This chapter explores the link between inequalities and indicators of intra-generational and intergenerational mobility. One relevant indicator to appreciate the level of intra-generational mobility is the persistence of the risk of poverty. The graph below links this indicator with a measure of inequality (expressed by the Gini index of disposable income). It appears that there is a positive correlation between those two, suggesting that intra-generational mobility tends to be lower in more unequal societies.

Graph 2.34: Correlation between inequality and persistent risk of poverty, 2015
Correlation coefficient: 0.73 (significant at 5 %)



Source: Eurostat, EU-SILC, 2015, ilc_di12 and ilc_li21

Notes: (1) The scale of Gini coefficients ranges from 0 to 100. The value 0 corresponds to perfect equality while the value of 100 corresponds to maximum inequality. (2) The "at-persistent-risk-of-poverty" rate is defined as the percentage of the population living in households where the equivalised disposable income was below the at-risk-of-poverty threshold for the current year and at least two out of the preceding three years. (3) Since 2016 data for the indicator "at-persistent-risk-of-poverty" are not yet available for several Member States, we use for the purpose of this graph also the 2015 data for the Gini based on disposable income (4) EU-28 average is calculated as the population-weighted average of individual national figures. (5) EU-SILC 2015 data are based on income generated in 2014 (with the exception of IE and UK).

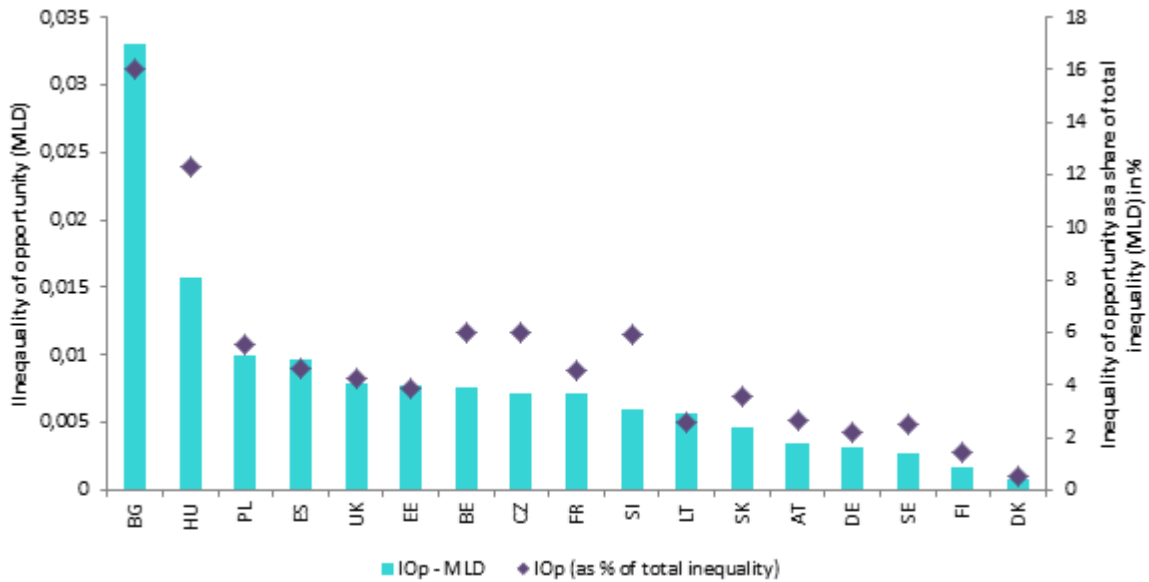
⁴⁰ Corak, 2013

⁴¹ European Commission (2017f)

⁴² One could also look at absolute social mobility which measures whether living standards have increased overall from one generation to the next, but it is not the focus of this analysis.

An important aspect of social mobility is intergenerational mobility which is closely linked to equality of opportunities. "Inequality lowers mobility because it shapes opportunity".⁴³ Inequality of opportunity is driven by circumstances beyond individual control. The graph below depicts the level of inequality of opportunity and for which share of total inequality it accounts.

Graph 2.35: Inequality of opportunity, 2011



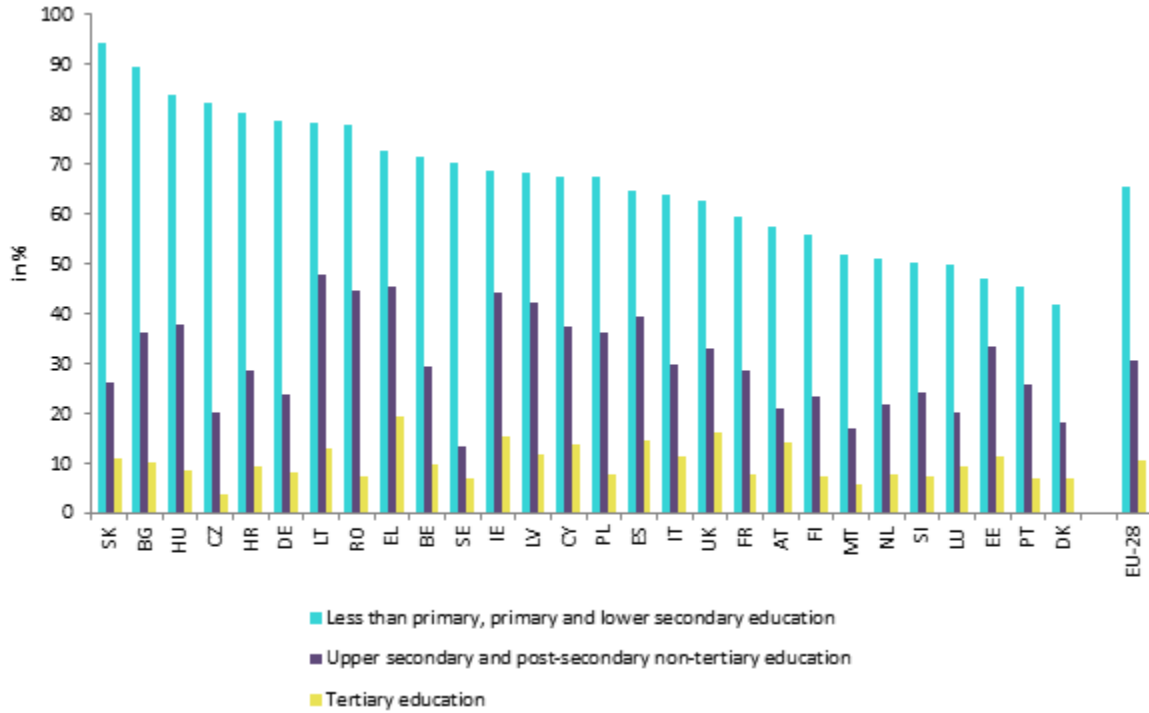
Source: Graph based on own computations in Brunori P. (2015) using EU-Silc data

Notes: (1) Mean logarithmic deviation (MLD) is a measure of income inequality. A value of zero implies perfect income equality. Countries are presented in descending order by the magnitude of inequality (MLD) (2) This indicator isolates the part of inequality in outcomes that is explained by three characteristics: (i) gender, (ii) parents' occupation, and (iii) parents' earnings. As there are additional dimensions of circumstances beyond individual control, the indicator captures lower bound estimates.

⁴³ Corak, 2013

One important driver of intergenerational mobility is the parents' level of education. Graph 2.36 depicts to which extent the percentage of children at risk of poverty and social exclusion is linked to the level of education of their parents. It suggests that the level of parents' education largely influences the children's prospects.

Graph 2.36: Percentage of children under 18 at risk of poverty or social exclusion by educational attainment level of their parents, 2015



Source: Eurostat, EU-SILC, 2015, ilc_peps60

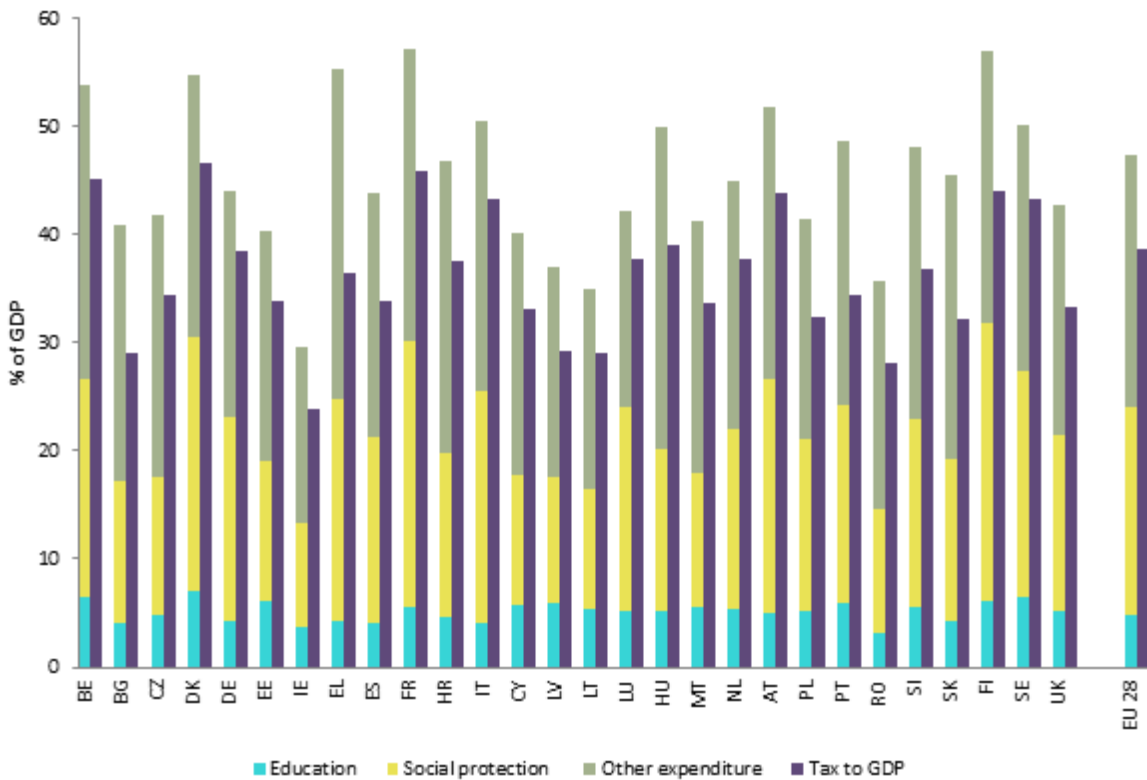
Note: (1) EU-28 average is calculated as the population-weighted average of individual national figures. (2) EU-SILC 2015 data are based on income generated in 2014 (with the exception of IE and UK).

2.4.3 Addressing inequalities and fostering social mobility

Taxation has a role to play in mitigating inequalities and/or supporting social mobility, be it through pre-distribution, redistribution or correcting/incentivising behaviours.

There are different social models in Europe and the amount of public money necessary to finance them varies. Graph 2.37 (below) shows money spent on education, social protection and other expenses in Member States. Providing access to quality education or healthcare is crucial for fostering social mobility. The figure suggests some correlation between the amount of tax collected and that of government expenditure.

Graph 2.37: Government expenditure & tax, 2015



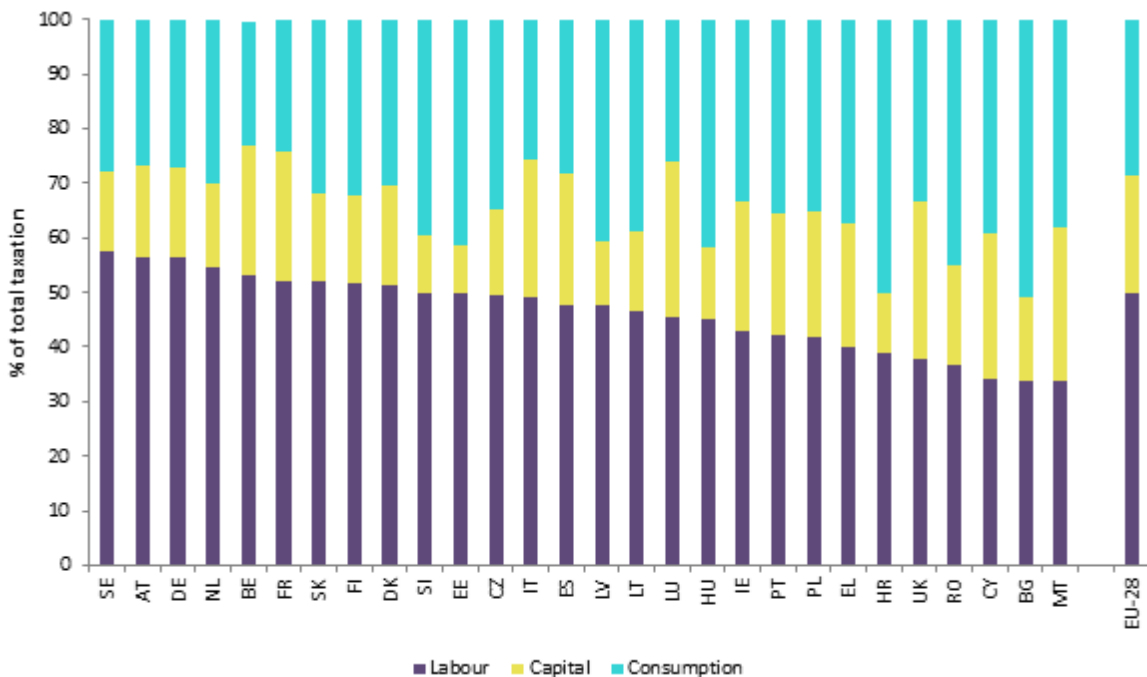
Source: DG Taxation and Customs Union, based on Eurostat data

Note: The tax-to-GDP ratio shows the total receipts from taxes and compulsory actual social security contributions. Other sources of revenue (such as the sales of goods and services (issuance of licences, rentals of produced assets), property income (interests, dividends, rent income), other current transfers (from international institutions), other subsidies on production, and other capital transfers and investment grants) are not shown.

Securing sufficient funds to finance public expenditures should rely on a) the right mix of taxes, taking into account investment (see section 2.1), and employment (see section 2.2) considerations and b) ensuring that each member of a society pays his/her fair share, be it through effective enforcement and/or increasing voluntary compliance (see section 2.3).

Member States differ in the design of their tax systems according to tax rates and the choice of which activities to tax. Graph 2.38 shows the structure of taxation by economic function in Member States, illustrating the variation between countries. Capital taxation (including corporate income taxation) may be a relevant means to ensure fairness in opportunities and a more equal distribution of wealth, with due consideration for efficiency aspects. However, there are practical difficulties in enforcing tax compliance of capital taxation, in particular if the capital is held by individuals.

Graph 2.38: Structure of taxation by economic function of the tax base, 2015



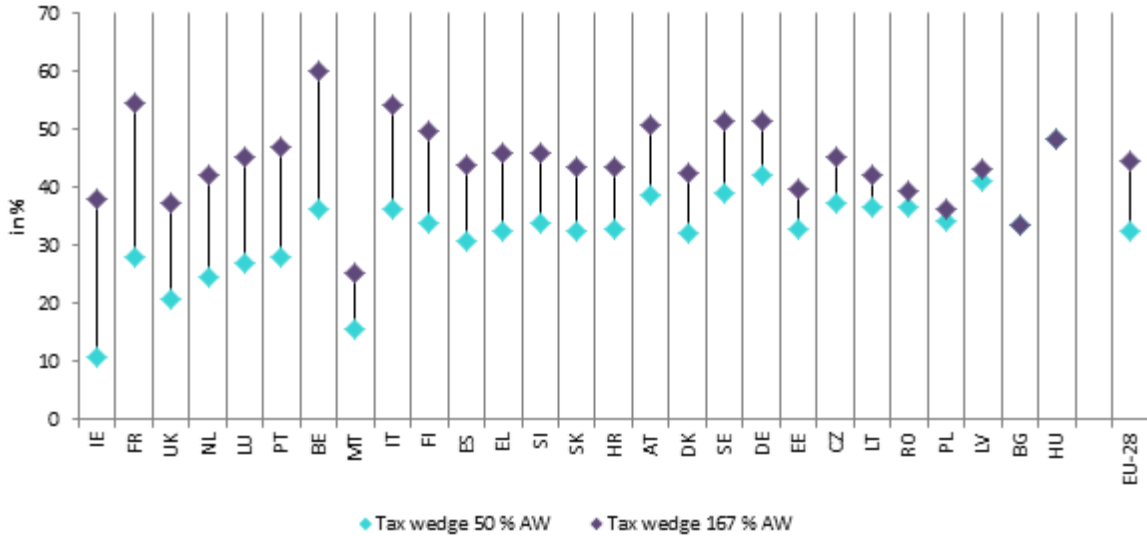
Source: European Commission (2017d) based on Eurostat data

Note: For the purpose of this graph, 'Capital' taxation includes all other categories not classified as labour or consumption (amongst others corporate income taxation).

The graph below shows the degree of progressivity of labour income taxation by comparing the tax wedge on high income and low income earners (represented respectively by individuals earning 167 % and 50 % of the average wage). The progressivity is theoretical, based on standard rates. It does not reflect tax fraud, avoidance and evasion.

Progressivity of personal income taxation is one important redistributive measure of tax and benefit systems. The progressivity of the income tax systems and in particular the tax burden placed on low income earners is also relevant to employment creation, which is a route out of poverty and social exclusion.

Graph 2.39: Degree of progressivity of labour income taxation in EU Member States, 2016



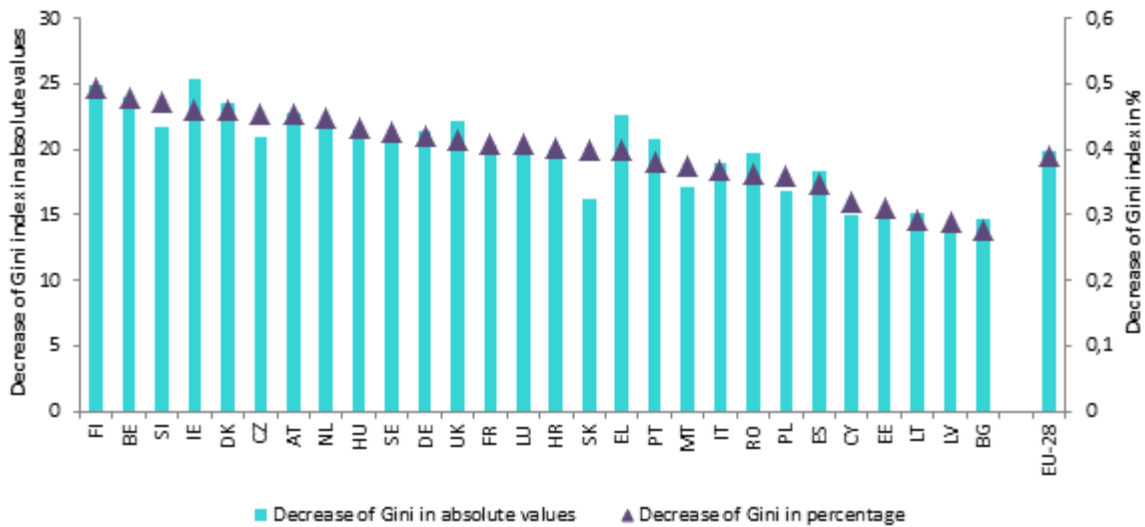
Source: European Commission tax and benefits indicator database based on OECD data.

Notes: (1) The data on the tax wedge is for a single earner with no children. (2) Recent data for Cyprus is not available. (3) Countries are ordered in descending order by the magnitude of the ratio of the tax wedge at 167 % average wage compared to the tax wedge at 50 % average wage.

Graph 2.40 depicts the corrective power of tax and benefit systems, by comparing the Gini of market income (i.e. before taxes and transfers) with the Gini of disposable income after taxes and transfers. The difference is expressed both in absolute and relative terms.

The graph illustrates that whilst tax-and-benefit systems act to combat income inequalities in all Member States, the scale of their effect differs. Income inequality remains high in certain Member States, including some where the redistributive effect of tax and benefits is relatively low.

Graph 2.40: Corrective power of the tax and benefit systems in EU Member States, 2016



Source: Commission services calculations based on Eurostat data

Notes: (1) Difference between the Gini coefficients for market income inequality (i.e. before tax and benefits) and disposable income inequality (i.e. after tax and benefits). Income data are adjusted for household size (equalisation). The scale of Gini coefficient is from 0 to 100. The value 0 corresponds to perfect equality (same income to everybody) while 100 corresponds to maximum inequality (all income distributed to only one person and all the others have nothing). (2) No 2016 data available for IE, IT, and LU, 2015 data used instead (3) EU-28 average is calculated as the population-weighted average of individual national figures. (4) EU-SILC 2016 data are based on income generated in 2015 (with the exception of IE and UK).

Box 2.2: Social mobility through entrepreneurship

When it comes to supporting social mobility, one angle to reflect upon is the role that entrepreneurship can potentially play on the movement of individuals and families across wealth and income classes. The discussion below builds on the outcome of the 2017 Tax Fairness Conference (see box 1.1) and its panel discussion on social mobility, as well as on findings from the literature.⁴⁴

Quadrini (1999) finds that while entrepreneurs' households accumulate 46 percent of all wealth, the data also point out that entrepreneurship contributes positively to income mobility. That is, entrepreneurship reduces the persistence of economic status over time. Specifically, Quadrini examines 5-year changes in wealth by considering workers and entrepreneurs and three wealth categories. Four types of households are considered: staying workers and staying entrepreneurs, switching workers (workers who become entrepreneurs) and switching entrepreneurs (entrepreneurs who become workers). Quadrini shows that upward mobility within the wealth distribution is more frequent for staying entrepreneurs and switching workers than it is for staying workers and switching entrepreneurs. In other words, both surviving entrepreneurs and new entrepreneurs are able to increase their relative position within the wealth distribution. This suggests that being a successful entrepreneur is one important channel through which individuals and households are able to move up the income and wealth ladder, even reaching the top of the income and wealth distributions as the Forbes list of the richest men and women evidences.

Aghion et al. (2016) also find that, even though innovation is a source of top income inequality, it does not increase broad inequality while it enhances social mobility and growth.

While Akcigit (Tax fairness conference 2017) confirmed the above findings, he also pointed to the fact that parents' education is an important determinant for becoming entrepreneur. Children of the very income rich seem to be much more likely to become entrepreneurs. Akcigit also underlined that equal access to quality education is an important factor to foster social mobility.

To a certain extent, a parallel can be drawn between traditional entrepreneurs and micro-entrepreneurs active in the collaborative economy. The collaborative economy can be a chance for micro-entrepreneurs to develop their own activities. Collaborative platforms offer a market place and flexibility. For some low-skilled workers, it can also be a route out of poverty in case of persistent unemployment. However, one needs to be cautious on that issue. Micro-entrepreneurs may also face uncertainty, forced part-time jobs with rather precarious work conditions (i.e. what is sometimes called "bogus self-employment"), which may be exacerbated by exclusion (formally, or de facto) from aspects of social protection (see also the section on collaborative economy in chapter 2.1).

There is no "one size fits all" tax policy to support upwards mobility. A good policy mix allies i) incentives to labour market participation and risk taking through facilitating entrepreneurship or young and innovative enterprises, ii) ensuring an adequate safety net while iii) ensuring that opportunities are not captured by a few.

⁴⁴ See Dondena & IHS (2017)

3

Tax re

Tax reforms in the EU & policy options

This section presents tax reforms announced or implemented between June 2016 and June 2017⁴⁵ in order to foster growth and fairness.⁴⁶ It complements the analysis presented in Chapter 2, by looking at the most recent developments that are not yet visible in the indicators. Building on this analysis, there are general policy recommendations and principles that every Member State could take into account in reforming its tax system to make it fairer and more growth-friendly. Finally, the section presents some more specific reform options and inspiring examples.

3.1 Recent reforms

3.1.1 Stimulating investment

There has been a renewed focus on lowering tax rates (see graph 1.4). In 2017 five EU Member States implemented cuts in their CIT headline rates (HR, HU, IT, LU, SK, UK). Further cuts are announced or already scheduled in four Member States (EE, FR, LU, UK). Only Slovenia increased its headline tax rate. Tax rate cuts are not necessary as part of a tax reform to stimulate investments. Alternative reform options, such as addressing debt bias and stimulating R&D as well as other investment incentives are discussed in section 2.1 of this report.

Measures to narrow the base had a more targeted focus on stimulating investment and on smaller or innovative companies. Measures enlarging the tax base included base broadening to finance tax cuts (e.g. Croatia has lowered its rate, while removing the allowance for reinvested profits) restrictions in loss reliefs (LV, LU, PT, ES, and UK) and anti-avoidance measures (see section 3.1.3).

Portugal has taken measures to address the debt bias, by now granting its allowance for corporate equity (ACE) to all companies (not only SMEs). Belgium, Italy and Cyprus continue to apply ACE regimes. Italy has decreased the rate applied in its ACE scheme from 4.75 % to 1.6 % in 2017 and 1.5 % in 2018.

Member States increasingly give priority to incentivising investment into young and innovative firms. As most countries reformed and expanded their R&D tax incentives during the crisis years thus partly compensating for cuts in direct R&D spending which took place due to fiscal consolidation efforts, tax reforms in this respect were less frequent in 2016-2017. Italy extended both its allowance on investment costs as well as its tax credit system, and increased their generosity. In the context of overhauling its R&D tax incentive scheme,

⁴⁵ This concerns the coverage of this chapter. In exceptional cases, recent announcements of tax reforms have been taken into consideration in chapter 2, in case they were relevant for a particular analysis.

⁴⁶ More details about reforms in individual member states and taxation trends since 2004 can be found in the Taxation Trends report published by DG TAXUD (European Commission 2017d).

Poland not only increased the general tax deduction but also introduced special provisions for SMEs. In addition, a number of countries have taken measures targeted at small companies or adapted thresholds or rates of their existing schemes (FR, HU, LU, LV, NL, PL, PT, RO). Hungary simplified its small business tax and reduced the respective tax rate, both effective as of 2017. Moreover, some Member States put a special emphasis on start-ups. Latvia introduced a new tax regime for such companies. Focusing on the entrepreneur himself, Ireland introduced a reduced capital gains tax for entrepreneurs, while Finland implemented a 5 % entrepreneur deduction into its personal income tax law. With respect to equity investment, Hungary, Portugal and Cyprus introduced tax incentives for investors providing finance into young enterprises.

There have been reforms to embrace digitalization and engaging with the collaborative economy. On the one hand, Member States increasingly rely on digital integration to smoothen and facilitate tax compliance. While in 2016 this development started by offering more digital services, we now see a trend towards making their usage compulsory. For instance, Bulgaria passed a bill that requires the electronic submission of corporate tax returns from 2018 onwards. Slovenia implemented several rules such as pre-filled tax forms and additional options for the payment of tax debts that are expected to simplify compliance and result in a liquidity effect for businesses. On the other hand, Member States are increasingly devoting their attention to the collaborative or sharing economy. Especially France, Estonia and the UK are taking a leading role in this regard by developing innovative solutions in collaboration with businesses.

Going forward, it seems important to focus on creating a coherent framework for investment, particularly by designing better fiscal incentives and making tax compliance simpler. Firstly, for R&D tax incentives, the focus could be on facilitating access to young and smaller companies and monitoring implementation. Secondly, the design and monitoring of tax incentives for equity investments into start-ups and innovative companies is essential to ensure that they are well targeted. In a recent study commissioned by the Commission, PwC & IHS highlighted best practices in tax incentives for venture capital and business angel investment. These can be used as guidelines to further elaborate existing schemes to increase their efficiency and targeting. Thirdly, the overall system of tax support could be reviewed to ensure it is coherent. For instance, some countries apply reduced rates for SMEs.

However, focusing solely on size can discourage companies from growing as this would imply the loss of their preferential treatment and higher taxation. Instead, tax incentive design should target entrepreneurial firms based on a combination of criteria, such as age and size (financial and headcount) and/or innovative performance. Finally, to move towards taxpayers' empowerment, tax administrations can build the digital services of the future adopting a "user first" approach.

The use of data analytics will become more and more important. To foster progress, tax administrations can incentivize the use of self-services. Meanwhile, tax administrations could encourage taxpayers to use digital channels through communication, education and assistance. In parallel, tax administrations could keep track of progress, using metrics and scoreboards to visualise and communicate to stakeholders how well they are performing in turning tax compliance into an almost invisible and costless day-to-day activity.

3.1.2 Developing a more employment-friendly environment

The overall tax burden on labour in the EU increased slightly between 2010 and 2016, although reforms since 2014-15 have begun to reverse this trend. As in the previous year, several Member States reduced labour taxation in 2016-17, in some cases with a particular focus on low wage earners. Generally, labour tax reductions have been only partly compensated by shifts to other tax bases – a trend which continued in 2016-17. Consumption and recurrent property taxes have generally increased since 2010. This trend continued in 2016-17 for recurrent property taxation, while changes in consumption taxes were more minor. The average level of environmental taxation in the EU increased slightly as a share of GDP compared to 2010, although it has slightly fallen again in 2015 compared to 2014 levels (it has also slightly decreased as a share of total taxation). In 2016-17 developments were more often in the direction of raising environmental taxes.

Overall, developments in personal income taxation (PIT) were in the direction of lower rates. Croatia undertook a reform that reduced tax rates and simplified the system by reducing the number of tax brackets. Portugal is gradually eliminating the solidarity surcharge over the course of 2017, starting with the lowest two tax brackets. Finland implemented a general earned income tax reduction, by lowering the lowest and highest tax rates, increasing the maximum amount of the earned income tax credit and increasing various deductions. The UK further increased the tax-free allowance and revised upwards the threshold for the higher rate tax bracket. Denmark legislated for an increase in PIT rates from 2018 due to the gradual abolition of the Public service obligation⁴⁷ by 2022.

Some countries targeted reductions at low earners, sometimes combining this with increases in progressivity. For example, Estonia increased the tax-free allowance, and introduced measures to gradually withdraw it for those earning more than the average wage. Likewise, Lithuania and Latvia further increased their maximum differentiated tax-free allowances and Poland increased the tax-free amount for low income taxpayers, while decreasing it for high income taxpayers. France introduced a 20 % income tax reduction for low earners from 2017. In the area of second earners, Luxembourg (one of five Member States that applied a joint taxation model as a general standard) legislated to introduce the option of separate filing for married couples from 2018.

A number of countries introduced PIT deductions or credits to support specific aims. For example, France introduced a tax credit on the payroll tax to support employment and skills, and Hungary introduced tax deductions to support labour mobility. Ireland introduced an income tax rebate for purchases of new homes up to a given value. Several countries increased tax allowances or tax credits for children, including Czech Republic, Germany, Estonia and Lithuania. Lithuania also increased the tax credit for disabled people and Malta introduced an income tax rebate for pensioners. **Tax Incentives have also been used to foster the use of complementary pension schemes.** In Luxembourg, the tax allowance granted for complementary pension schemes will be set at EUR 3 200 for all taxpayers, replacing the progressive allowance ranging from EUR 1 500 to EUR 3 200 depending on the taxpayer's age. In June 2017, the Commission launched a proposal for a Pan-European Personal Pension Product, together with a recommendation that Member States give the

⁴⁷ The Public Service Obligation is a charge levied to support renewable energy

same tax treatment to Pan-European Personal Pensions as to similar existing national products.⁴⁸

Social security contribution (SSC) rate reductions occurred in a number of Member States, including in Finland, for employers in Lithuania, and for the health contribution in Hungary. Ireland implemented a further 0.5 % reduction in Universal Social Charge rates and Croatia halved the employee social contributions for pension insurance. However, Bulgaria increased SSCs for employees and employers. **Changes to thresholds and ceilings also occurred in some Member States.** Spain increased the lower and upper SSC thresholds (by 8 % and 3 % respectively), decreasing contributions for low to middle-income earners in particular. Slovakia revised the maximum SSC assessment base upwards (to seven, rather than five, times the average salary), increasing contributions for high earners. Romania removed the maximum ceiling for calculation of pension and health fund contributions and increased the ceiling for health insurance from pension income, but also introduced a ceiling for social health insurance contributions and reintroduced the exemption for health contributions from other income.

As in previous years, labour tax reductions were generally only partly compensated by shifts to other tax bases. Nevertheless, some relevant reforms have occurred.

Changes to consumption taxes were generally relatively minor, except in Romania where the standard VAT rate lowered by a further 1 percentage point. A number of Member States raised excise duties on tobacco or alcohol, and some (EE, IE, PT and UK) announced or implemented taxes on soft drinks or other sugary products. By contrast, Finland removed the tax on ice cream and sweets. Greece introduced a number of taxes on specific goods.

Developments in environmental taxation generally moved in the direction of increasing taxes. Increases in excise duties for energy products took place in some Member States, including Finland and Estonia. Belgium took steps to reduce environmentally damaging distortions, raising the excise duty rate on diesel and lowering it on petrol, and introduced the possibility for employees to opt for a mobility budget instead of a company car. Estonia announced the introduction of a registration fee for cars and Portugal increased its tax rate on vehicles. In Greece, the base for the motor vehicle registration was aligned with the retail value. Sweden introduced a new tax on chemicals and introduced tax reductions for certain more environmentally-friendly products or activities, including environmentally adjusted cars, biofuels and a decreased real estate tax for hydroelectric power. The UK introduced reforms to the company car tax to incentivise ultra-low emission vehicles. Luxembourg also reviewed the tax treatment of company cars, based on CO₂ emissions. By contrast, Denmark increased the threshold for the application of the 150 % registration fee, and the UK froze the fuel duty rate. Latvia cancelled electricity tax exemptions for renewable energy and removed exemptions for the road user tax, while abolishing the car and motorcycle tax.

A number of Member States increased recurrent property taxation. Croatia introduced a simple recurrent real estate tax and decreased the real estate transfer tax, while removing exemptions for owner-occupiers, and Finland increased the minimum real estate tax rates. In Portugal additional recurrent property tax rates were introduced for high value residences. By contrast, Luxembourg set the deemed rental income for owner-occupiers to zero, and temporarily halved the tax rate for capital gains on dwellings or land, while Denmark

⁴⁸ European Commission (2017g)

continued the land tax freeze. In Malta, the duty exemption for first-time buyers extended to end of 2017.

While average employment levels are improving in the EU, there remains scope in some countries to use tax reforms to further boost employment. For countries looking to labour tax cuts to support job creation and enhance work incentives, there is in general a need to identify new revenue sources. The right financing depends on the overall design of the tax system.

3.1.3 Fighting against tax fraud, evasion and avoidance

Enforcement has been and is a crucial tool to make tax systems fairer. It is about using the power of public authority to its fullest to compel taxpayers to do the right thing, including cross-border cooperation, effective audits and access to information and intelligence, including by providing stronger safeguards to individuals who denounce serious harm of public finances. Making the legal framework stronger has also been central to tackle tax avoidance. In 2016-17, Member States continued to take action to improve their systems, continuing the trend from recent years and complementing EU-level action.

In 2016-17, several reforms have aimed at improving tax compliance. To fight against VAT fraud, Estonia has introduced the obligation to report electronically business-to-business transactions exceeding EUR 1 000 (both purchase and sales) to the tax authority. This allows for automatic cross-matching and detection of VAT fraud, without spending resources on traditional tax audits. This increases the tax morale and trust as only suspicious cases are investigated. Latvia and Poland introduced reverse charge mechanisms in sectors subject to high risk of fraud, shifting the obligation to declare and pay VAT from the supplier to the purchaser. Italy introduced quarterly VAT filing obligations to fight tax evasion while Cyprus made the on-line submission of VAT returns compulsory. The UK introduced measures to tackle VAT evasion by non-EU traders who sell through online marketplaces and store goods in UK fulfilment houses prior to sale to UK customers via the internet. To reduce evasion opportunities, Slovenia and Austria have introduced compulsory certified cash-registers. Bulgaria has introduced a tax relief for effected non-cash payments - natural persons who have carried out non-cash payments amounting to 80 % or more of their aggregated annual taxable income may use in certain conditions a 1 % deduction from the annual personal income tax. The UK introduced measures to ensure that trading profits from developing UK land are always subject to UK tax by introducing specific rules to tax the full amount of such profits whether or not the person to whom they arise is UK resident.

In some Member States, stricter penalties have been introduced. Luxembourg introduced the concept of 'aggravated tax fraud', which would constitute a criminal offence. Furthermore, to enhance VAT compliance, joint liability has been introduced for managers and companies, which have not met their VAT obligations.

Increasing compliance relies on increasing cooperation. In Malta, a new Joint Enforcement Task Force was created to ensure further cooperation between different tax administration departments (Inland Revenue, VAT and Customs Departments, with the participation of the Tax Compliance Unit) and to facilitate information sharing among them. Luxembourg aims at increasing cooperation between judicial authorities for the spontaneous exchange of tax related information and enhanced investigative activities.

Member States continued efforts to curtail tax avoidance. Some Member States introduced measures to address tax avoidance. The Netherlands amended specific interest

deduction limitations to address certain artificial corporate structures. The UK extended the scope of their hybrid mismatch rules by introducing additional measures tackling tax avoidance arrangements that cause mismatches. Moreover, the UK tackled current and historic use of disguised remuneration schemes, which are used to avoid income tax and National Insurance contributions. Dividends paid to companies based in jurisdictions that do not have a tax treaty in force with the Slovak Republic will be subject to withholding tax at the rate of 35 %. The Irish Budget 2017 provided for a compliance programme to tackle offshore tax evasion.

Corporate tax initiatives at EU level will strengthen Member States' anti-abuse framework and boost tax transparency. In that respect, it is worth noting that the first automatic exchanges of information on all advance cross-border tax rulings and advance pricing arrangements have effectively started in 2017. First exchanges of country-by-country reports should start in 2018. The Anti-Tax Avoidance Directive (ATAD),⁴⁹ which sets out legally-binding anti-abuse measures, will enter into force in 2019. The Commission complemented the Directive with measures to tackle tax loopholes ('hybrid mismatches') in relation to third countries (ATAD 2), which Member States adopted at the end of May 2017. Furthermore, Member States, among which Belgium, the Netherlands, Malta or Cyprus, took measures to adjust their patent box regimes in line with Action 5 of the Base Erosion and Profit Shifting project⁵⁰ as endorsed by the Code of Conduct for Business Taxation.

However, despite reforms and progress achieved, tax evasion and fraud continue to pose a major challenge for Europe. According to the latest available figures for the VAT gap, tens of billions of euro are lost each year to non-compliance, which, however, includes not only fraud and evasion but also avoidance, bankruptcies, financial insolvencies as well as miscalculations, and this for VAT only.

The fight against tax evasion, avoidance and aggressive tax planning remains a priority of the Commission as is reflected by the numerous initiatives in this area. The Commission has adopted in June 2017 new rules on the mandatory disclosure of aggressive tax planning schemes. Cross-border tax planning arrangement that bear certain characteristics or "hallmarks", including the use of losses to reduce tax liability, the use of special beneficial tax regimes, or arrangements through countries that do not meet international good governance standards, will have to be reported to the tax authorities. The obligation to report will be borne by the intermediaries – including tax advisors, accountants, lawyers, and financial advisors – or by the taxpayer depending on circumstances. Member States will automatically exchange the information that they receive on the tax planning schemes through a centralised database. In July 2017 the European Parliament and the Council adopted a Directive on the fight against fraud to the Union's financial interests by means of criminal law,⁵¹ which will, among others, improve fight against certain VAT-related criminal offences. The Directive will also be essential for the future European Public

⁴⁹ It is also planned that some provisions of the ATAD will enter into force later.

⁵⁰ see OECD, 2015c

⁵¹ The Directive (EU) 2017/1371 of the European Parliament and of the Council of 5 July 2017 on the fight against fraud to the Union's financial interests by means of criminal law, published in the Official Journal of the European Union no L 198, 28.7.2017.

Prosecutor's Office,⁵² which will be competent to investigate and prosecute the crimes defined by the Directive.

The modernization of the VAT system supports the fight against fraud. In December 2016, the Commission adopted a proposal to modernise VAT for cross border e-Commerce and in October 2017, the Commission has adopted a proposal for a deep VAT reform,⁵³ which will fight the growing risk of tax fraud, as well as simplify VAT obligations for companies. The charge of VAT on cross-border trade between businesses, with a 'One Stop Shop' for companies to make declarations and payments using a single online portal, is expected to reduce cross-border VAT fraud by around 80 %. In spring 2018 the Commission will propose a full technical adaptation of the VAT directive to reflect the changes needed to practically implement the VAT definitive regime.

Therefore, reforms at national level have to be seen in the broader context of the EU and international agreements. In summary, a number of reforms have been undertaken or announced by Member States in order to fight tax avoidance. However, more could be done. Coordination across Member States is of importance in order to effectively tackle the issue and address spillover effects.

3.1.4 Mitigating inequalities and facilitating social mobility

Enhancing fairness was another consideration for tax reforms in 2016-17. PIT cuts targeted at low and middle-income earners have been implemented in numerous Member States, driven by the aim of enhancing fairness in addition to boosting employment. As already discussed in 3.1.2, some countries introduced measures expanding earned income tax credits (EITC). In addition to increasing work incentives, these measures shall serve as means to alleviate poverty and increase overall fairness. In Luxembourg, a rather comprehensive reform of the personal income tax, reviewing tax brackets and tax rates with a view to increasing overall progressivity, went into force beginning of 2017.

Several Member States have increased tax rates on interest and dividends. The latter follows a broader trend that can be observed in several Member States since 2009, after a decrease of the tax burden on dividends in the preceding decade. In 2017, tax rates on dividends or interest income increased in Belgium, Luxembourg and Latvia, while in Slovakia, a 7 % withholding tax on dividends has been introduced. Lithuania reduced the non-taxable threshold from EUR 3 000 to EUR 500 of interest rates on deposits and debt securities as well as the income from the sale of those securities, while Estonia abolished tax exemptions on deposit interests.

The Netherlands reviewed the taxation of personal capital income. In the Netherlands, the tax base of personal capital income includes a notional return levied on worldwide net assets. Prior to 2017, this notional return was set at 4 %. As of 1 January 2017, the notional return will progress with the value of assets in three different brackets and continues to be taxed at a flat 30 % rate.

⁵² Cf. Commission proposal of 17 July 2013 for a Regulation on the establishment of the European Public Prosecutor's Office, COM (2013) 534. The proposal is at the final stage of the legislative procedure, which is envisaged to be completed by November 2017.

⁵³ Commission proposal of 4 October 2017 for amending Directive 2006/112/EC as regards harmonising and simplifying certain rules in the value added tax system and introducing the definitive system for the taxation of trade between Member States, COM(2017) 569 final.

In the area of inheritance and gift taxation, developments were relatively few, but generally tended towards reduced rates or exemptions for transfers. Denmark decreased inheritance tax rates for businesses inherited by family members or foundations, and Malta decreased stamp duty concessions for business inheritance. In Luxembourg, capital gains derived from the transmission of businesses can benefit, under certain conditions, from a tax deferral. Finland decreased all inheritance and gift tax rates, with larger reductions for close relatives, but abolished the tax exemption for life insurance payouts to close relatives. By contrast, Spain extended the net wealth tax for 2017.

Disposable income inequality levels remain high in some Member States where there seems to be some room for manoeuvre to improve the fairness of the tax design. Despite last years' trend to increasingly target labour tax cuts on low income earners, further tax reductions targeted at this group could contribute to both jobs creation and greater social fairness. In Member States where social fairness is an issue, more efforts to consider the progressivity of the tax system as a whole could help to fairly spread the tax burden across tax payers.

3.2 Reform options

Taking into account what makes a fair and efficient tax system (Chapter 1), the specific situations in Member States (Chapter 2) and the general reform trends outlined above, there are various reforms options available to Member States looking to improve their taxation system.

3.2.1 Stimulating investment, innovation and entrepreneurial initiative

Options for Member States aiming to do more to boost investment through tax policy means include:

Encouraging risk-taking and alternative sources of financing, focussing on efficiency-enhancing measures and designing better fiscal incentives:

- Encouraging investment through equity as a complementary source of financing to debt, notably by reducing the debt bias for businesses under tax provisions (see example of AGI under the CCCTB).
- Moving from depreciation to immediate expensing of investment.
- Improving the efficiency of the tax system by allowing for a comprehensive loss offsets. Imperfect loss offset systems can have a significant impact on incentives to invest.
- Improving the effectiveness of tax incentives in promoting R&D in the private sector by ensuring that young and small companies are able to benefit, simplifying and regularly evaluating their impact. The CCCTB includes an R&D tax incentive that follows these principles.
- Ensuring that tax incentives for business angel and venture capital investment do address investor risk aversion, promote investment quality and uptake, and are well targeted, for example at investments in innovative start-ups and young SMEs facing access to finance problems.
- Concentrating efforts on monitoring and simplifying tax incentives that have the potential to boost real investment. A multitude of tax reliefs does not allow for proper monitoring, makes the system more complex and represents public resources that could be put to a better use.

Taking a proactive approach to embracing the digitalisation of the economy:

- Increasing efforts to digitalise tax administration to facilitate tax compliance and equip the system to new realities for instance by making tax administration more customer-centric, expanding the use of digital services, such as third-party information to prefill tax returns and e-filing, while cutting red tape for all taxpayers and for small and medium-sized companies and entrepreneurs in particular.
- Keeping tax laws stable, pro-actively managing changes. If changes need to happen, engage taxpayers in advance to help them to adjust and give them timely, tailored information, using a variety of channels.
- Simplifying and clarifying the application of tax rules to the collaborative economy; facilitating and improving tax collection by using the possibilities provided by collaborative platforms, who are encouraged to cooperate with national authorities.

3.2.2 Shifting the tax burden away from labour and focusing on the most reactive groups

For Member States that face challenges around employment and the tax burden on labour, potential reform options could include:

Finance labour tax cuts by relying on alternative tax bases:

- Given budgetary constraints, labour tax cuts could be financed by relying on alternative tax bases such as consumption, environmentally harmful activities, and property, where the tax burden on those bases is comparatively low. The distributional impacts of such a shift are also a consideration and could be mitigated through targeted transfers where appropriate.

Focusing labour tax cuts on groups most reactive and facing the highest challenges:

- Focusing labour tax cut on groups facing the greatest unemployment challenges and precarious work conditions such as low-skilled, young people, elderly and long term unemployment rather than generic tax reductions.
- Removing or amending features of the tax system that create high marginal tax rates for second earners, for example by tapering the withdrawal of income-related child tax credits, and moving from joint to individual taxation systems for couples.

3.2.3 Strengthening administration, closing loopholes and promoting a culture of compliance

Reform options for Member States looking to combat tax fraud, evasion and avoidance include:

More cooperation and a stronger administrative capacity & legal framework:

- Combating tax fraud, evasion and avoidance making full use of enhanced transparency and cross-border cooperation tools – such as automatic exchange of information, sharing of analysis of data between countries, multilateral controls and joint audits. Making tax authorities more modern and digital to prevent and fight evasion, fraud and avoidance.
- Strengthening the legal framework, for example by closing loopholes in domestic legislation or reinforcing anti-abuse provisions.

Promoting trust, transparency and a culture of tax compliance:

- Communicating effectively to taxpayers the value delivered through tax revenues; monitoring and showing results of tax administrations' performance.
- Strengthening taxpayers' tax morale using communication and education campaigns to explain why it is important that everyone pay their fair share, targeting in particular young people - the taxpayers of tomorrow.
- Cooperating with businesses to improve tax compliance while using behavioural economics insights to nudge taxpayers to do the right thing at the right time. Insights from behavioural sciences can be used to identify specific behaviours biases (e.g.; information overload) and activate consequent behavioural levers (e.g. social norms) to elicit a virtuous behaviour.⁵⁴
- Reinforcing at national level the protection and safeguards of whistleblowers who, acting in good faith, denounce serious threats or harm to the public interest.

⁵⁴ European Commission, 2014

3.2.4 Correcting inequalities and promoting social mobility

In addition to the potential reforms outlined on labour taxation above, Member States that face particular challenges in social fairness could consider:

Mitigating inequalities of income and wealth:

- Reducing post-market inequalities through redistribution by strengthening progressive personal income taxation;

Increasing equality of opportunities

- Tackling pre-market inequalities by providing healthcare and access to quality education as well as lifelong learning opportunities
- Securing sufficient funds for those measures through revenues from the fight against tax fraud, tax evasion and aggressive tax planning but also considering the right tax mix including taxation of wealth, capital income of individuals, property taxes.

Incentivising behaviour that facilitates social mobility

- Reducing tax burden on targeted population with the aim of creating jobs, as employment is one route out of social exclusion and poverty.
- Considering the role of entrepreneurship in support of social mobility

Glossary

Allowance for corporate equity (ACE) A corporate tax system where interest payments and a defined return on equity can both be deducted from the corporate income tax base. (It moves the system closer to financing neutrality between debt and equity at the corporate level.)

Allowance for growth and investment (AGI) is a corporate tax system where interest payments and a return on equity can both be deducted from the corporate income tax base. It moves the system closer to financing neutrality between debt and equity at the corporate level. It goes some steps further than ACE because it removes tax avoidance by cascading the benefits (the funds injected in a group benefit from deductibility only once), uses an incremental system based on a moving reference year and allows for negative allowances.

A **Business Angel (BA)** is a knowledgeable private individual, usually with business experience, who directly invests part of his or her personal assets in new and growing unquoted businesses. Besides capital, business angels provide business management experience for the entrepreneur.

Comprehensive business income tax (CBIT) A type of corporate tax system where neither interest payments nor the return on equity can be deducted from corporate profits, and are thus fully taxed at the normal corporate income tax rate. It equalises the tax treatment of debt and equity finance at the corporate level.

Controlled foreign companies attribute a proportion of the income of a controlled foreign company to its resident controlling shareholder and tax that shareholder to that income if certain conditions are met (usually that the tax rate in the foreign country is lower than a set percentage of the tax rate in the country applying the CFC charge).

Direct tax A direct tax is a tax levied on a situation that is durable by nature and directly upon a specific (legal or natural) person via a notice of assessment. E.g. personal income tax, corporate income tax, wealth tax.

Effective average tax rate (EATR) is a tax rate calculated from the nominal tax rate and the definition of the tax base. Particularly, this effective tax rate is based on total investment income.

Effective marginal tax rate (EMTR) is a tax rate calculated from the combination of the nominal (i.e. statutory) tax rate and the definition of the tax base (i.e. the taxable profit). In particular, this effective tax rate is based on additional investment income.

Environmental taxes Taxes on energy, transport, pollution and resources (excluding VAT, as this is levied on all products). **Energy taxes** include taxes on energy products used for both transport (e.g. petrol and diesel) and stationary purposes (e.g. fuel oils, natural gas, coal and electricity). **Transport taxes** include taxes related to the ownership and use of motor vehicles. They also include 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 carbon dioxide emissions) and water, on the management of solid waste and on noise. **Resource taxes** include any taxes linked to the extraction or use of a natural resource (e.g. taxes on licence fees paid for hunting and fishing rights).⁵⁵

European Semester The European Semester is the first phase of the EU's annual cycle of economic policy guidance and surveillance. Each year, during this first phase, the European Commission analyses Member States' budgetary and structural reform policies, provides

⁵⁵ This definition is based on 'Environmental taxes — a statistical guide' (European Commission, 2013).

proposals for the council's recommendations to each Member State, and monitors their implementation. In the second phase of the annual cycle, known as the National Semester, Member States implement the policies agreed.

Implicit tax rate on consumption The ratio of revenue from all consumption taxes to households' final consumption expenditure.

Implicit tax rate on energy The ratio of total revenue from energy taxes to final energy consumption.

Inactivity trap The inactivity trap measures the financial incentive for an inactive person not entitled to unemployment benefits (but potentially receiving other benefits such as social assistance) to move from inactivity to paid employment. It is defined as the rate at which the additional gross income of such a transition is taxed.

Indirect tax An indirect tax is a tax levied on a material or legal event of accidental or temporary nature and upon a (legal or natural) person that can often be an intermediate and not the person responsible for this event (hence the indirect character of the tax). E.g. Value-added tax, import levies, excise duties.

Low-wage trap The low wage trap measures the financial incentive to increase a low level of earnings by working additional hours. It is defined as the rate at which the additional gross income of such a move is taxed.

Social security contributions Mandatory contributions paid by employers and employees into a social insurance scheme set up to cover pensions, healthcare and other welfare provisions.

Tax avoidance According to the OECD glossary of tax terms, tax avoidance is defined as the arrangement of a taxpayer's affairs in a way that is intended to reduce his or her tax liability and that - although the arrangement may be strictly legal - is usually in contradiction with the intent of the law it purports to follow.

Tax evasion Generally comprises illegal arrangements where liability to tax is hidden or ignored, i.e. the taxpayer pays less tax than he is legally obligated to pay by hiding income or information from the tax authorities.

Tax fraud A form of deliberate evasion of tax which is generally punishable under criminal law. The term includes situations in which deliberately false statements are submitted or fake documents are produced.

Tax wedge on labour The difference between the 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 personal income tax and compulsory social security contributions.

Thin capitalisation rules Restrictions on the deductibility of interest payments made by corporations with excessive debt to equity ratios.⁵⁶

VAT collection gap The difference between VAT revenue actually collected by the government and the theoretical net VAT liability for the economy as a whole, under the country's current VAT system. The theoretical net liability is estimated by identifying the categories of expenditure that give rise to irrecoverable VAT and applying the appropriate VAT rates to the respective estimates of expenditure in the different categories.

Venture capital (VC) is defined as investment in unquoted companies by venture capital firms who, acting as principals, manage individual, institutional or in-house money. In

⁵⁶ Adapted from Arnold & McIntyre, International Tax Primer, Second Edition, Kluwer International, 2002

Europe, the main financing stages included in venture capital are: early-stage, covering seed and start-up, and expansion. Strictly defined, venture capital is a subset of private equity. Offsetting the high risk the investor takes is the expectation of higher than average return on the investment.

Withholding tax According to the OECD, a withholding tax refers to a tax on income imposed at source, i.e. a third party is charged with the task of deducting the tax from certain kinds of payments and remitting that amount to the government. Withholding taxes are found in practically all tax systems and are widely used in respect of dividends, interest, royalties and similar tax payments. The rates of withholding tax are frequently reduced by tax treaties.

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Annex A: Notes

Choice of indicators

The indicators in *Tax Policies in the EU: 2017 Survey* are drawn from various sources. The indicators presented provide a useful tool for identifying areas where policies could be improved. However, these results will always need to be interpreted alongside in-depth country analysis before any conclusions can be made as to appropriate policies. This type of in-depth analysis is beyond the scope of this report; it is instead carried out as part of the European Semester.

The Tax Policies in the EU survey does not claim to be comprehensive and there are inevitably other indicators that could have been used. Factors taken into account in the choice of indicator include completeness (wherever possible, data is presented for all 28 Member States), clarity and reliability. Choosing indicators is a particular challenge in certain areas – for example, it is by definition difficult to estimate how much money is lost to tax fraud, evasion and avoidance. Despite the measurement challenges, this report looks into indicators which are generally considered as relevant and which can help to better understand the size or relevance of the features or phenomena examined.

Where available and relevant, the average for the EU-28 is presented alongside the country-specific data. This is intended to assist readers in understanding the relative levels in different Member States and should not be interpreted as suggesting that the EU average represents an ideal level.

State Aid

Member States must ensure the compliance of all their tax measures with EU State aid rules and notify to the Commission all relevant measures, to the extent they are not covered by the General Block Exemption Regulation⁵⁷ and the De Minimis Regulation⁵⁸. This report is without prejudice to a possible State aid assessment of national tax measures by the Commission.

⁵⁷ Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty, OJ L 187, 26.6.2014, p.1-78

⁵⁸ Commission Regulation (EC) No 1407/2013 of 18 December 2013 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to de minimis aid, OJ L 352, 24.12.2013, p.1-8

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