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Polycrisis, Megatrends – Tax Policy Trends and Responses

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Abstract: The EU relies heavily on labor taxation including social security contributions (accounting for more than half of all EU-27 tax revenues), though it can discourage labor market participation. Besides, ageing, digitalization, global markets, new forms of work and increasing labor mobility question the residence-based principle of personal income tax. The sustainability of the social security system can be promoted by additional behavioral tax (linked, for example, to the consumption of unhealthy products or the use of risky services). In the former socialist countries analyzed in this study (Croatia, Bulgaria, Latvia, Estonia, Hungary, Poland and Romania), the share of consumption taxes in total tax revenue is above 38%, well above the EU average. In countries with high consumption tax rates and significant consumption tax revenues, both labor and capital income tax revenues are typically below the EU average. The share of environmental taxes in tax systems is low, both on average in the EU and in the examined countries (although most of them are at or above average). Nonetheless, in the former socialist countries, the share of property taxes is lower than the EU average (for historical reasons, property taxation is less accepted by their societies). According to a Commission study published in 2024 (see: "Growth-Friendly Taxation in a High-Inflation Environment," European Commission, European Economy Economic Brief 079), strengthening property taxation would help to make the tax system fairer, although not in a time of high inflation and crisis. Harnessing the potential of digitalization contributes to efficient and effective tax

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administration and can also reduce administrative costs, thus facilitating compliance. Latvia, Hungary and Poland recorded an exceptionally large improvement in VAT compliance, with VAT gaps falling between 2013 and 2021 by over 15 pp, which turned them into the best performers in the EU (Romania still faces challenges in the field of tax avoidance, VAT compliance gap and inefficient tax auditing). Tax administrations in most of the analyzed countries are therefore well adapted to the challenges of digitalization. The future tax system must implement a desirable green tax reform shifting a part of the tax burden away from labor to tax bases linked to environment taxes and other behavioral taxes – regarding the sustainability of the tax system as the European and national budgets face significant financial pressure due to the polycrisis, megatrends and EU loans.

1. Introduction

We live in the age of polycrisis: European economies experience multiple crises affecting them simultaneously. Historically high inflation last year and the energy crisis are just the tip of the iceberg. What type of challenges have to be faced? What global or region-specific crises does Europe have to face? Besides urgent emergencies, European economies also have to face other challenges, referred to as megatrends,[1] that have long-term structural impacts on economies and societies. And what types of solutions can the tax policy offer to tackle crises and megatrends? This study systematizes these challenges and the tax policy measures that seek to respond to them at the EU governmental level and in certain Member States (especially in Hungary, Poland, Estonia, Latvia, Romania, Bulgaria and Croatia). In the presented analysis, in addition to synthesizing the legislation and the literature examined, statistical data will be processed and compared. The source of international comparative data is the European Commission documents. As the Commission's publications on taxation for 2023 were available at

1 European Commission, "Annual Report on Taxation 2023. Review of Taxation Policies in EU Member States," Publications Office of the European Union, Luxembourg 2023. Hereinafter: European Commission, 2023.

the time of writing[2] and they cover either 2020 or 2021, the study essentially covers trends in the period 2008–2020/2021.

2. Polycrisis, Megatrends

In the last decade and a half, there have been several economic crises. After European economies managed to recover from the crisis of 2008/2009, the COVID-19 virus caused a global pandemic that stalled the economic prosperity from 2020 and disrupted consumption, production and global value chains. Amid the recession due to the COVID-19 epidemic, the negative impacts of the energy crisis caused by the Russian-Ukrainian war, the sanctions introduced against Russia and Russia's limitation of supplies have spilled over pushing up energy prices and inflation to levels not seen in decades. Exceptional economic circumstances required extraordinary government interventions at both national and EU governmental levels – putting public finances under significant pressure.

The demographic changes in Europe – as a long-term challenge – involve a pressing issue, the migration crisis. Since 2015, migration has been an ongoing and growing burden on Member States' social systems and budgets.[3] At the EU level, the present multiannual financial framework (from 2021 to 2027)[4] provides increased commitment appropriations in a new chapter (4. Migration and Border Management) to cover some of the costs of migration, but there are debates among Member States on border protection and the so-called migration quota. The large number of refugees from Ukraine further deepens social and economic tensions resulting from migration.

Meanwhile, in terms of impact, the most serious emergency is the climate crisis which needs to be tackled much more effectively than it is at present. The possibility of preventing and remedying the environmental

2 Completion date of the study April 30, 2024.

3 Csaba Lentner, *East of Europe, West of Asia. Historical Development of Hungarian Public Finances from the Age of Dualism to the Present* (L'Harmattan, Paris 2020), 303.

4 Council Regulation (EU, Euratom) 2020/2093 of 17 December 2020 laying down the multiannual financial framework for the years 2021 to 2027 (O.J.E.C. L433I, 22 December 2020), 11–22.

damage caused by the climate crisis is increasingly being questioned because governmental and social measures are insufficient.[5]

These crises – primarily the environmental crisis – may threaten not only the quality of life but also the living conditions in European countries and therefore require immediate solutions.

Besides urgent emergencies, European economies also have to face the challenge of megatrends[6] that have long-term structural impacts on economies and societies. These megatrends are noticeable and global, and will also influence government interventions in the future, including tax policy measures.

What megatrends do European societies have to face? According to the European Commission, they are technological advancement (especially digitalization), globalization and changes in global trade (for example, supply-chain shifts, offshoring versus onshoring), ageing population, labor market shifts, increased inequalities, climate change and environmental degradation. Unlike the Commission, the urgency of tackling climate change already requires emergency solutions, so goes beyond the megatrend category and is a crisis that needs to be addressed immediately. However – even if not mentioned by the Commission – it is worth mentioning the growing and high level of public debt of European countries as a megatrend. These megatrends are briefly identified below.

Looking at a broader time horizon, socio-economic changes, such as unsustainable population growth, increasing social inequalities and migration are global processes that require actions. The demographic challenges in Europe involve a more pressing issue – migration – and sometimes are different to global trends, as Europe has an ageing population[7] similar to other developed economies. Social problems have a long-term impact on the structure of the economy and the tax system. The ageing of European societies results in a decline in working age population alongside increased age-related public expenditure and increased automation of tasks.

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[5] The climate risks are so important that the central banks gain specific tasks to maintain sustainability. See: János Kálmán, Gábor Hulkó, and András Lapsánszky, "Sustainability Objectives and Central Banks," *Chemical Engineering Transactions* 107, no. (2023): 331–6.

[6] European Commission, 2023.

[7] According to the European Commission (2023), 31, the EU's population is ageing and projected to start declining by 2030.

The longer life expectancies and lower fertility rates, the development of medicine and the increase in the average age put the health care and pension systems' sustainability, and the European welfare states at risk.

Increasing inequality is a global concern. Globalization and technological advancement have a double impact on this phenomenon. While they have contributed to progress and increased overall wealth, they have also led to the growing gap between richer and poorer individuals. Furthermore, the COVID-19 pandemic has aggravated many existing disparities. Inequalities in the EU are generally lower than in the rest of the world and indicators have improved in many areas over the past two decades. However, income inequality dynamics vary widely across regions and social groups (e.g. poverty among children and single-parent households), and the EU average hides an increase in Southern Europe, especially during the financial and sovereign debt crises.[8] Redistributive tax policy measures should therefore continue to complement social benefits to reduce disparities.

As far as technological advancement is concerned, digitalization and globalization are two megatrends that complement and intensify each other. These phenomena reshape labor markets. The automation of work processes and the development of artificial intelligence could lead to the disappearance of certain professions or their replacement by machines. However, digitalization can also help to increase employment by creating new forms of work (such as teleworking and platform work) and increasing labor mobility. The positive labor market effects of digitalization (such as remote working, platform work and increasing labor mobility) not only provide the maintenance of the income tax base but also bring new tax policy challenges (questioning the residence-based principle of personal income tax). Globalization[9] also expands the markets and increases workers' access to international labor markets.

Due to globalization, expanding markets prompt higher levels of labor and capital mobility (even capital remains more mobile)[10] and also facilitate aggressive tax planning (ATP) for multinational companies and tax competition of states (resulting in overall reduced tax rates and tax revenues).

8 European Commission, 2023: 33.
9 European Commission, 2023: 16.
10 European Commission, 2023: 32.

These processes led the OECD to make global efforts on base erosion and profit shifting (BEPS), resulting in the two-pillar approach of the Inclusive Framework.[11]

Digitalization generated new developments: big data and crypto assets. On the one hand, big data offers opportunities to improve the efficiency and effectiveness of tax procedures and the exchange of information between tax authorities. On the other hand, the increasing relevance of crypto assets calls into question the taxation of such assets and their derived income.[12]

3. Tax Policy Trends in the EU and Certain Member States

Not only do the crises and the megatrends affect tax policy measures, but they are also influenced by the government's approach to the role of the state and state interventions, and even more by the specialties and limitations of the current tax system. This chapter focuses on EU trends (EU average) examining the taxation practices of Member States (MSs), with particular regard to certain former socialist countries (such as Hungary, Poland,[13] Estonia, Latvia, Romania, Bulgaria and Croatia).

In 2021, the average tax burden was 40.1% of the GDP in EU Member States, which was higher than the OECD average of 34%, and that of Japan (33%) and the US (27%).[14] This could lead to the conclusion that European societies are very comprehensive welfare states which require funding. Even if the average value hides significant differences between EU Member States, the largest tax-to-GDP ratios were in Denmark (48.1%) and France (45.1%), and the lowest ratios were in Ireland (21.1%) and Romania

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[11] Éva Erdős, "Current Challenge in Fighting Against Tax Avoidance in the European Union: Link Between Sustainability and Taxation," *Curentul Juridic* 25, no. 4 (2022): 109–21.

[12] Zsolt Halász, "Regulating the Unregulateable," *Hungarian Yearbook of International and European Law* 10 (2022): 217–30; Zsolt Halász, "Állami pénzkibocsátás vs virtuális fizetőeszközök," in *Magistra et Fautrix: Halustyik Anna emlékére*, ed. Zsolt Halász (Pázmány Press, 2019), 167–82; Zsolt Halász, "Legal Risks and Challenges Related to Virtual Currencies," in *Fostering Innovation and Competitiveness with FinTech, RegTech, SupTech*, eds. Iustina Alina Boitan and Kamilla Marchewka-Bartkowiak (IGI Global: Hershey (PA), 2021), 142–60.

[13] Due to the COVID-19 and energy crisis, the examination of the Polish date and tax measures was carried out in 2023 with the support of the International Visegrad Fund (62310052). This study is published as a direct outcome of the project.

[14] European Commission, 2023: 23.

(26.5%).[15] This shows that the role of the government is below the EU average in the countries surveyed and particularly low in Romania (by EU standards; see Table 1).

Table 1. Tax revenue as % of GDP (2020)

Taxes	Croatia	Hungary	Poland	Estonia	Latvia	Bulgaria	Romania	EU-27 average
consumption	18.2	14.1	12.4	13.3	13.4	14.1	10.0	10.8
VAT	12.1	9.8	8.0	9.1	8.6	9.2	6.1	6.9
labor	14.1	16.3	14.4	18.1	15.7	11.5	13.0	21.5
PITs	3.6	5.3	5.3	6.2	6.1	3.5	2.4	9.9
capital	4.7	5.9	8.9	2.7	2.5	5.0	3.3	7.9
CITs	2.3	1.2	2.3	1.7	0.7	2.2	1.9	2.4
environmental	3.3	2.2	2.5	2.4	3.1	3.0	1.9	2.2
property	1.1	1.1	1.7	0.3	1.0	0.7	0.6	2.3
total	37.0	36.3	35.7	34.0	31.5	30.6	26.3	40.2

Source: own compilation (based on European Commission, 2022).

Shifting the focus of the research to tax revenues by tax base regarding EU average, the tax structure is characterized by labor taxes including social security contributions from employers and employees (around 20% of GDP) being almost twice as high as consumption tax revenues (10–12% of GDP). This is complemented by capital taxation (approx. 8% of GDP). In the last one and a half decades, there has been an increase in labor tax revenues to 21.5% of GDP (in 2020) and less reduction in capital and consumption taxes. On this basis, the taxation of income and capital is generally dominant (almost 30% of the GDP) in the EU Member States, regarding the average tax burden (40.1% of GDP) in 2020.[16]

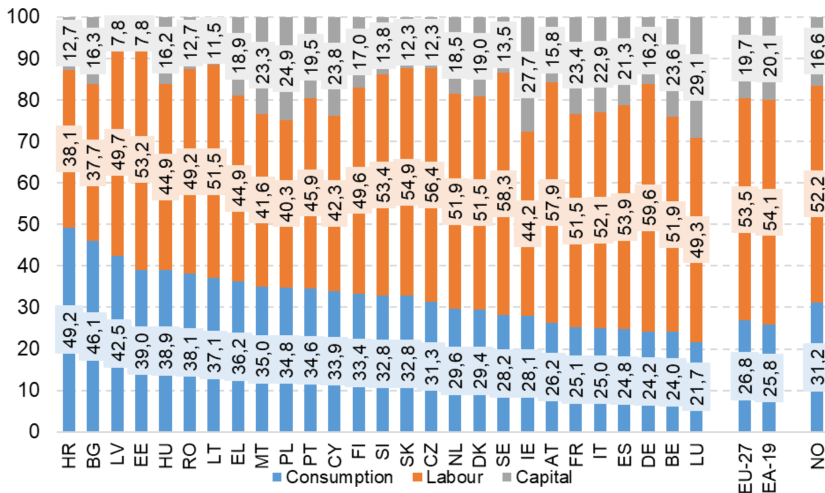
If the distribution of tax revenues by tax base is examined, the difference is much more striking and the details vary in some Member States. Between 2008 and 2021, labor tax revenues (including social security contributions) accounted for 52% of total tax revenues, tax revenues on capital

15 Ibid.

16 European Commission, 2023: 24–5.

income for 20% and consumption tax revenues for 28% of total tax revenues in general on average in the EU-27.[17] Therefore, the EU-27 in general relies heavily on labor taxation. However, the structure of taxation differs markedly among Member States.

Figure 1 shows the distribution of tax revenue according to the type of tax base regarding total taxes in 2020.[18]



* NO = Norway

Figure 1. Distribution of tax revenue according to the type of tax base, 2020 (% of total taxes; European Commission, 2022).

The share of labor taxes (including PIT and social security contributions) in total tax revenue is above 56% in Germany, Sweden, Austria and the Czech Republic, well above the EU average of 53.5% (see Figure 1). These countries are typical examples of welfare state policies. Top statutory personal income tax rates decreased from 44.8% (2000) to 38.9% (2022) in

[17] "Taxation Trends in the European Union. Data for the EU Member States, Iceland and Norway," European Commission (EU), Luxembourg, 2022, 32. Hereinafter: European Commission, 2022; European Commission, 2023: 26.

[18] The figures for 2021 are almost identical to those for 2020. See: European Commission, 2023: 27.

the EU. The top PIT rate varies substantially in the EU, ranging from 10% in Bulgaria to over 55% in Denmark.[19] In Bulgaria and Croatia, the tax burden on labor within the tax system is extremely low (under 40%).

The indicator measuring the effective tax burden on labor is the implicit tax rate (ITR) on labor. The ITR on labor contains the overall tax burden on all employed labor (it is calculated by dividing taxes and social contributions on employed labor income by the total compensation of employees and payroll taxes). The ITR is used for examining the share of different taxes and duties within labor taxation.

Figure 2. Composition of the implicit tax rate on labor, 2020 (%; European Commission, 2022, 44).

In most Member States, social security contributions of employees and employers account for a much greater share of labor taxes (two-thirds of the ITR on average) than PIT. According to Figure 2, the ITR on labor was 38.1% in 2020 in the EU-27, a stable figure since 2013. Even though the level of the ITR on labor varied across Member States. The highest ITRs were in Italy (44.1%), Belgium (40.9%) and Austria (40.8%), and the lowest in Malta (23.6%), Bulgaria (25.4%) and Croatia (28.1%) in 2020. In Denmark,

[19] European Commission, 2022: 38–9.

the tax burden on labor shows a unique picture, as social contributions are very low, so general taxation largely finances welfare spending. In Romania, on the other hand, PIT is only 13% of the ITR on labor, with 79% of the contribution made by employee social contributions (similarly to Lithuania).[20]

Table 2. Distribution of the ITR on labor (2020, %)

Member State of the EU	PIT	Employees' SSC	Employers' SSC and payroll taxes	ITR
Croatia (HR)	5.5	11.4	11.2	28.1
Hungary (HU)	10.4	13.6	14.1	38.2
Poland (PL)	6.0	14.3	13.7	33.9
Estonia (EE)	9.6	1.0	21.4	32.1
Latvia (LV)	10.3	5.7	13.6	29.6
Bulgaria (BG)	6.3	6.8	12.3	25.4
Romania (RO)	4.2	24.6	2.3	31.1
EU-27	12.7	8.5	16.8	38.1

Source: own compilation (based on European Commission, 2022, 44).

All of the countries surveyed have a lower tax burden on personal income than the EU average with the value of ITR below the EU average (in Hungary it is in line with the EU average). The ITR is exceptionally low in Bulgaria and Croatia. Romania and Estonia show an interesting disparity. In Romania, social security contributions paid by employees dominate labor taxes, while in Estonia it is social and payroll taxes paid by the employer that dominate.

The share of tax revenue on capital income (mainly income of corporations, besides income of households and self-employed) is very high in Luxembourg and Ireland, but also significant in Poland, so capital taxes are the dominant fiscal revenue in these countries (see Figure 1). Not always is there a correlation between tax rates and tax revenue share. Regarding top

[20] European Commission, 2022: 42–3.

statutory corporate income tax rates, the lowest rate is in Bulgaria (10%) and Hungary (10.8%),[21] in terms of CIT revenue as a share of GDP, Bulgaria is 16th in the EU ranking, while Hungary is 26th.

In the last 10 years, the overall implicit tax rate (ITR) on capital increased in most Member States (excluding Cyprus, Hungary, Luxembourg, Slovenia, Denmark, Ireland, and Romania) and following similar trends, the ITR on capital income increased in most countries (except Cyprus, Luxembourg, Greece, Hungary, Romania, Finland and Slovenia).[22] A significant decrease was observed in Hungary[23] and Cyprus.[24] In 2020, the ITR on capital was almost 60% in France, while in Belgium and Denmark, its values were close to 40%. These three countries are also among those with the highest revenue from property taxes.[25]

Capital tax rates (see Table 2) and capital tax revenues of GDP (see Table 1) are at a lower rate than the EU average in the countries surveyed, though Hungary[26] and Bulgaria apply a super-low tax rate to encourage tax competition in the Central-Eastern-European region.

Where the tax rate is high, there is progressive taxation, and different tax policy measures are used to alleviate the tax burden on businesses: typically, a lower tax rate is applied up to a relatively high threshold of profits or the tax base is determined in a specific way. For example, in Poland, from 2020, the corporate tax rate is 9% up to €2 million, above which a tax rate of 19% is applied. In Estonia (although changes to corporate tax rates

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21 In Hungary, the general corporate income tax rate is 9%, the lowest in the European Union. Besides, local governments are entitled to levy local business tax (of a maximum of 2%), which is included in the value of 10.8. Meanwhile, actors in certain sectors (especially utilities) are required to pay special sectoral income taxes. For local business tax and other Hungarian local taxes, see: Gábor Kecső, "Reforms of Local Finance and Taxation in Hungary: Milestones and Junctions Since 1990," *Polgári Szemle: Gazdasági és Társadalmi Folyóirat* (Special Issue) 16 (2020): 332–44.

22 The order of countries shows the volume of decrease.

23 Csaba Lentner and Vitéz Nagy, "Public Finance Reforms and Corporate Sector Impact: A Study of Hungary," *Corporate Ownership and Control* 18, no. 3 (2021): 191–200.

24 No data are available for Malta. European Commission, 2022: 50, 51.

25 European Commission, 2022: 49.

26 Éva Erdős and Mónika Kispál, "Development of the Main Features of Hungarian Tax Policy Before and After the Pandemic Period," *Curentul Juridic* 95, no. 4 (2023): 45–59.

and dividend taxation are planned from 2025)[27] and Latvia, CIT is paid only on distributed profits, not earned profits, and from 2021, Poland also introduced it as an optional, lump-sum scheme similar to Estonian CIT.[28]

Table 3. Top statutory corporate income tax rates (including surcharges), 2020, 2022 (%)

	Croatia	**Hungary**	**Poland**	**Estonia***	**Latvia***	**Bulgaria**	**Romania**	**EU-27 average**
Top statutory CIT rate	18.0	10.8	19.0	20.0	20.0	10.0	16.0	21.4
CIT revenues (% of GDP)	2.3	1.2	2.3	1.7	0.7	2.2	1.9	2.4
capital tax revenues (% of GDP)	4.7	5.9	8.9	2.7	2.5	5.0	3.3	7.9

Source: own compilation.[29]

Figure 1 shows that the share of consumption taxes in total tax revenue is above 38% in Croatia, Bulgaria, Latvia, Estonia, Hungary and Romania, well above the EU average. In countries with high consumption tax rates and significant consumption tax revenues, both labor and capital income tax and the revenue derived from them are typically below the EU average (see the examined countries).

The main consumption tax is the harmonized value added tax (VAT). After a period of hikes (2009–2013), the EU-27 average standard VAT rate stabilized and then remained unchanged between 2017 and 2022 at 21.5%.[30] Nonetheless, among the examined countries, only in Hungary (standard rate 27%; reduced rates 18% and 5%) and Croatia (25%; 13% and 5%) is the standard VAT rate above the EU average (21.5%).[31] Croatia

27 “Estonia: Significant tax changes in 2024 and 2025,” Ernst & Young Global Limited, accessed April 2, 2024, https://www.ey.com/en_gl/tax-alerts/estonia---significant-tax-changes-in-2024-and-2025.

28 “Poland: Corporate – Taxes on Corporate Income,” PwC, accessed April 2, 2024, https://taxsummaries.pwc.com/poland/corporate/taxes-on-corporate-income.

29 European Commission, 2023: 58,

30 European Commission, 2022: 34.

31 In Bulgaria, the standard (and reduced) VAT rates are 20% (and 9%), in Latvia: 21% (5%, 12%), in Estonia: 20% (9%) and in Romania: 19% (9%, 5%). Some countries, such as Sweden 25% (12%, 6%), Finland 24 (14% and 10%) and Greece 24% (13% and 6%) have higher

and Hungary have similar tax structures, with a high share of consumption taxes compared to the EU-27 average, but low taxes on labor and capital. In Croatia, the consumption taxation, and also the VAT tax revenue-to-GDP ratio is the highest in the EU, while the capital (21st) and labor (23rd) tax burdens are at the bottom of the EU ranking.[32] Another interesting feature of the Croatian tax system is the high share of environmental taxes. Hungary comes second in the EU ranking of consumption tax and VAT. In Hungary, in addition to VAT, certain goods and services are subject to special consumption taxes[33] (Hungary has the highest tax burden in the EU for such special consumption taxes). Another specific feature of the Hungarian tax system is a low corporate tax rate,[34] that is 9% (ranked 26th in the CIT tax revenue to GDP ranking), however, the overall taxation of capital is higher (revenues from capital taxes are the 16th in the EU ranking) due to the additional burden on certain sectors (e.g. banking and insurance, energy, pharmaceuticals) – reducing the concentration of the tax system.[35] In Bulgaria, as in Croatia and Hungary, consumption taxes are the dominant source of revenue, and revenues from labor taxation are particularly low relative to GDP (26th in the EU ranking).

Besides, there are some countries where the share of consumption tax revenue in total tax revenue is high, though the standard VAT rate is under the EU average. This may be due to a relatively low total tax burden. This is the case in Romania, where the overall tax burden is only 26.5% of GDP and the standard VAT rate is 19%. Latvia and Estonia also have a higher

standard VAT rates, and the lowest standard VAT rates are in Luxembourg 17% (8% and 3%) and Malta 18% (7% and 5%). All countries now have a standard VAT rate above the 15% minimum set by the Directive – Council Directive 2006/112/EC of 28 November 2006 on the common system of value-added tax (O.J.E.C. L347, 11 December 2006), 1–118, 97. §.

32 European Commission, 2022: 69–192.

33 Examples of special consumption taxes include the financial transaction tax, insurance tax (formerly accident tax), public health product tax, etc.

34 Szilárd Hegedűs and Csaba Lentner, "Analysis of the Competitiveness of the Hungarian Tax System in an International Environment," *Pro Publico Bono: Magyar Közigazgatás* 10, no. 4 (2022): 56–77.

35 See: Gabriella Csűrös and Dóra Lovas, "The Boomerang Effect: Sectoral Extraordinary Taxes in Hungary (2006–2024)," *Rivista di Diritto Tributario Internazionale (International Tax Law Review)*, no. 1, (2023): 189–217; Péter Darák and Dóra Lovas, "Az adórendszer deszantosai: a különadók," *Jogtudományi Közlöny*, no. 11 (2023): 481–91.

share of consumption taxes than the EU-27 average, especially considering that the overall tax burden is well below the EU-27 average. Estonia has the highest taxes and duties on imports excluding VAT (contributing to high levels of consumption taxation), and the lowest share of property tax revenue compared to the EU-27 average. Both countries have low taxes on capital, which promotes tax competition among former socialist countries. The case of Lithuania and Estonia draws attention to the importance of implicit tax rate, showing low PIT rate while at the same time (especially in Estonia) significant social security contributions paid by employers. While Poland also has a relatively high VAT rate (standard: 23%, reduced rates: 5% and 8%), the high taxation of capital reduces the weight of consumption taxes in the tax system.

Even though the main taxes are labor, consumption and capital taxes, it is worth broadening this analysis to include other taxes, such as property and environmental taxes. The table below also provides instructive data (during the COVID-19 pandemic and before the energy crises) in some former socialist countries already examined in the context of consumption taxes.

Table 1 shows that the share of environmental taxes in tax systems is low, both on average in the EU and in the countries analyzed (although most of them are at or above the EU average!). However, in the former socialist countries, the share of property taxes is lower than the EU average for several reasons.[36] First, under socialism, the state provided housing on a broad basis as a matter of right (with state-owned housing at below-market utility costs). On the one hand, during the socialist era, the state tried to provide housing on a broad basis as a basic right (state-owned housing at below-market utility costs)[37] and public wages were not taxed (e.g. state employment operated with lower wages rather than labor taxes) with a low tax burden, as the economy was based on a different distribution mechanism. After the change of regime, society had to face not only a growing tax burden and significantly increasing market-based utility costs but also a steady increase in property prices aimed at catching up with Western

36 Juraj Nemec and Glen Wright, eds., *Public Finance: Theory and Practice in Central European Transition* (NISPAcee, Bratislava 1997), 134–6.

37 Especially in blocks of flats in towns.

European price levels. Wages, however, have not yet caught up and are lagging. In addition to these historical causes, the high administrative cost of property taxes, in particular value-based property taxes, also impede effective property taxation in former socialist countries.

What was the impact of the COVID-19 pandemic on the tax system of Member States? In case of economic recession or depression, the GDP is expected to decrease faster than tax revenues which increases the tax-to-GDP ratio (tax burden as a share of GDP). The COVID-19 pandemic has had a similar impact on most EU countries. Furthermore, the proportion of revenue from labor taxes increased in all Member States except Hungary,[38] where it decreased by 0.8%, and minor decreases (0.1%) were observed in Finland and Poland.[39] In Hungary, the reason for decreasing labor tax revenues was the reduction of social contributions (paid by the employer).[40] In Poland, the reason was the reduction of personal income tax rates and extending the use of tax relief in the framework of the Polish Deal ("Polski Ład") plan to rebuild the Polish economy after the COVID-19 pandemic.[41]

In 2020, there was a 0.3% drop in corporate income tax revenues as a share of GDP (compared to 2019) associated with the COVID-19 pandemic (driven by the decrease in corporate revenue), but in 2021, the CIT revenue increased (by 0.6% of GDP) compared to 2020 in line with the economic recovery. However, there were also differences at the national level below the EU averages, for example, Latvia saw a decline of about 0.6 percentage points.

In 2020, the share of VAT in GDP decreased from 7.1% to 6.9%, as consumption was heavily affected by the COVID-19 pandemic. This, combined with (temporary) rate cuts on certain products resulted in a decline in VAT revenues.[42] In 2021, VAT revenues increased again both in absolute nominal terms and as a share of GDP (to 7.4% of GDP in EU-27) because

38 For details, see: Hegedűs and Lentner, "Analysis of the Competitiveness of the Hungarian Tax," 56–77.

39 European Commission, 2022: 31.

40 From 2022, the rate of employer social contribution was reduced from 15.5% to 13%. This was in line with the increase in the statutory minimum wage, which caused additional costs for businesses during the crisis. See: Act LII of 2018 on Social Contribution Tax.

41 "Polski ład," gov.pl, accessed March 2, 2024, https://www.gov.pl/web/polski-lad.

42 European Commission, 2022: 31.

of the increase in consumption that followed the end of pandemic-related restrictions. The same trend is visible for all consumption taxes.[43]

Revenue from environmental taxes takes only a small and declining share of the overall tax revenue. According to the Commission, environmental taxes decreased in 2020 at the EU level.[44] The decline was explained by some of the COVID-19 measures that restricted mobility, which, in turn, reduced the revenue from energy taxes on transport fuels. In 2021, they accounted for only 2.2% of GDP and about 5.5% of total tax revenues in the EU. Energy taxes contributed the most with 4.3% of total tax revenues, transport taxes accounted for 1.0%, and pollution and resource taxes for 0.2%, so energy taxes represent the lion's share of environmental tax revenues, accounting for 78% of total environmental tax revenues. This is the case despite the decrease in energy tax revenues observed during the pandemic.[45]

So far, an outline of general trends and directions for change has been presented. In the following, some EU-level and national responses to crises and megatrends shall be discussed in detail.

4. Tax Policy Responses to Crises and Megatrends in the EU and Some Selected Countries

4.1. Opportunities of Digitalization

Harnessing the potential of digitalization contributes to efficient and effective tax administration (in particular risk assessment, tax audit and enforcement) and can also reduce administrative costs, thus facilitating compliance.

The EU promotes e-taxation, the digitalization of tax administration (such as e-invoicing or Central Electronic System of Payment – CESOP) and enhances the administrative cooperation between national taxation authorities.[46] An excellent example of this is the Council Directive (EU)

43 European Commission, 2023: 131.

44 European Commission, 2023: 16.

45 European Commission, 2023: 108–9.

46 Éva Erdős, "The Current Results and Legal Instruments of the Tax Environment Affecting the Digital Economy in the European Tax Law," *Miskolci Jogi Szemle* 16 (Special Issue), no. 1 (2021): 95–106.

2023/2226 (referred to as DAC 8)[47] amending the Directive on Administrative Cooperation (DAC) 2011/16/EU concerning the reporting and automatic exchange of information on revenues from transactions in crypto-assets[48] and on advance tax rulings for the wealthiest (high-net-worth) individuals.

VAT, harmonized by the EU, is not only one of the most important revenues for Member States and EU budgets. It is also the tax most subject to abuse. According to the European Commission, EU Member States lost around €61 billion in VAT in 2021, compared to 93 billion euro in 2020, and 134 billion euro in 2019.[49] The VAT gap is the estimated overall difference between the expected theoretical VAT revenue and the amount actually collected. Since the EU-wide VAT compliance gap reached the highest level in 2013, VAT compliance gaps have decreased in nearly all Member States. Nonetheless, Latvia, Hungary, Poland and Slovakia recorded an exceptionally large improvement in VAT compliance, with VAT gaps falling between 2013 and 2021 by over 15 pp. Before the reforms, the gaps in these four Member States were significantly above the EU median while currently, they belong to the best performers in the EU.[50] In contrast to these EU countries, Romania has seen a persistent and high VAT compliance gap in recent years.[51] The smallest gaps were observed in the Netherlands, Finland, Spain and Estonia.

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[47] Council Directive (EU) 2023/2226 of 17 October 2023 amending Directive 2011/16/EU on administrative cooperation in the field of taxation (O.J.E.C. L, 2023/2226, 24 October 2023).

[48] Zsolt Halász, "Legal Issues Related to Virtual Devices in the Field of Tax Law," *Iustum, Aequum, Salutare* 16, no. 4 (2020): 35–44; Zsolt Halász, "Legal Challenges Related to Virtual Currencies Especially in the Field of Taxation," in *Common Challenges Once and Now*, eds. Csaba Zágon and Andrea Szabó (Magyar Rendészettudományi Társaság Vám- és Pénzügyőri Tagozat, Budapest, 2020), 123–32.

[49] "Value Added Tax VAT," European Commission, accessed April 2, 2024, https://taxation-customs.ec.europa.eu/taxation-1/value-added-tax-vat/vat-gap_en.

[50] European Commission et al., *VAT GAP in the EU – Report 2023* (Publication Office of the European Union: Luxembourg 2023), 31.

[51] "Romania: Technical Assistance Report-Enabling the Large Taxpayer Office to Reduce the Tax Gap," International Monetary Fund, Fiscal Affairs Dept., accessed April 10, 2024, https://www.elibrary.imf.org/view/journals/002/2016/284/article-A001-en.xml.

4.2. Energy (Supply) Crisis May Result in Growing Environment Taxes?

For many reasons, 2022 was an extraordinary year across Europe. One proof of this is Council Regulation 1854/2022/EU, adopted in autumn 2022, which, among other things, made it compulsory for all Member States to levy a temporary solidarity contribution on the excess profits of EU companies operating in the energy sector (crude oil, natural gas, coal and refining).

Why was this extra profit tax extraordinary? The EU obliged Member States to levy tax by a regulation (not by a directive), only for actors in the energy sector. The extra profit tax is an additional tax besides the standard corporate tax aiming at the windfall profit, i.e. extra (above average) profit resulting from energy crisis. This is a process in the opposite direction to the tax competition observed in corporate taxation. Even though this tax is a temporary one (planned to operate in 2022–2023), its rate (33%) is a significant takeaway. Being a solidarity tax (serving a redistributive function), it must be used for supporting households, companies in energy-intensive industries, etc., which makes it a Pigouvian (targeted) tax. It also questioned the validity of the principle of non-retroactivity, and thus the principle of legal certainty, since the introduction of extra tax was during the year with regard to the whole tax year.

The use of crisis taxes is not new in European MSs, however, it is exceptional. Besides, as a result of the recent crisis, more Member States have become ready to use this extraordinary tax policy measure (the crisis tax) that is apparently coupled with the permissive attitude of the European Union to state aid rules.

The case of Hungary is a prime example, where the government (ruling since 2010) has introduced crisis taxes to address both previous (2008/9) and current economic crises. In the 2010s, the Hungarian crisis taxes seemed to be a pioneer and hazardous method as the legality of their regulation was the subject matter of a number of EU proceedings (preliminary rulings, infringement proceedings).[52] From 2022 Hungary also levied crisis taxes[53] as extraordinary sectoral taxes, representing a more intensive

[52] For details, see: Gabriella Csűrös, "Tax System in Hungary and its Changes Due to the Crisis – Pioneer or Hazardous Method of Sectoral Taxation?," in *Tax Authorities in the Visegrad Group Countries. Common experience after accession to the European Union*, eds. Marcin Burzec and Paweł Smoleń (Wydawnictwo KUL, Lublin 2016), 85–113.

[53] For details, see: Csűrös and Lovas, "The Boomerang Effect," 189–217.

intervention in market processes than earlier but, appearing to have learnt from past experience, it obtained permission from the EU. Namely, Hungarian crisis taxes have been the subject of fewer EU proceedings and, so far, the crisis taxes have not been considered contrary to EU law. The EU's changing – or inconsistent – approach is visible in the reasoning of the Tesco judgement (2020) after the Hervis judgement (2012).[54]

The energy (supply) crisis has increased energy and green taxes but only as temporary, crisis taxes.

4.3. Green Tax Reform – Missed and Misunderstood

Even if an extra profit tax has been levied on the energy sector under pressure from the EU, it is not essentially for environmental purposes. Green tax reform has not yet been implemented, as environmental taxes represent a low share of tax revenue in all EU Member States (Table 1). The examined Central and Eastern European countries perform in line with the EU average; in fact, most apply environmental taxes (as % of GDP) above the EU average (e.g. Croatia, Latvia).

Nonetheless, in 2011, the Commission proposed that tax systems should be redesigned by broadening tax bases and shifting the tax burden away from labor to tax bases linked to consumption, property and pollution. The desirable green tax reform in line with the 2020 Strategy meant a growing share of environmental taxation in the tax system without raising the total tax burden.[55] In the last decade, the tax structure has not changed substantially, in fact, labor taxes have increased in recent years.

In some EU Member States, there has been a slight shift in tax revenues from labor to environmental taxes between 2002 and 2019 (Estonia, Bulgaria, Latvia, Poland, Romania, Croatia, and six other countries).[56] This is the trend in almost every examined former socialist country, with Hungary being the only country to show a minimum change in the opposite

54 CJEU Judgment of 5 February 2014, Hervis Sport- és Divatkereskedelmi Kft. v. Nemzeti Adó- és Vámhivatal Közép-dunántúli Regionális Adó Főigazgatósága, Case C385/12, ECLI:EU:C:2014:47; CJEU Judgment of 3 March 2020, Tesco-Global Áruházak Zrt. v Nemzeti Adó- és Vámhivatal Fellebbviteli Igazgatósága, Case C-323/18, ECLI:EU:C:2020:140.

55 COM(2011) 168 final, Smarter energy taxation for the EU: proposal for revision of the Energy Taxation Directive, Brussels, 13 April 2011.

56 Slovenia, Greece, Belgium, France, Finland and Italy.

direction.[57] In contrast, in most of the more economically advanced Western European Member States, tax revenues shifted from environment to labor (especially in Denmark, Germany, Norway, Portugal, and also in EU-27).[58] Regarding the tax bases, environmental taxation should include energy and transport taxation (as pollution and resources have smaller tax bases) according to the EU. More experts[59] suggest that environmental taxes may have a double positive effect as they help to achieve environmental goals by changing behavior and generating public revenue with positive macroeconomic effects.

The Commission proposed a reform of the Energy Tax Directive already in 2021 (in the framework of the European Green Deal), but its adoption is still pending. One of the contradictory provisions of the current Energy Tax Directive is that heavily polluting shipping and aviation (except for private purposes) are exempted from energy taxation. Even though the EU reformed the Emissions Trading System (ETS) and adopted the Carbon Border Adjustment Mechanism (CBAM),[60] what is still missing is the pressure for green tax reform. Even in the last communication of the Commission regarding the management of climate risk and protecting prosperity – there is no mention of the need for urgent or any tax policy actions.[61] After all, environmental taxes also function as behavioral taxes.

57 For more details on the Hungarian case, see: Kecső Gábor et al., "Fiscal Policies to Mitigate Climate Change in Hungary. Climate and Environment Taxation in Hungary," in *Fiscal Policies to Mitigate Climate Change*, ed. Marilyne Sadowsky (Intersentia: Cambridge, Antwerp, Chicago 2023), 456–84.

58 European Commission, 2023: 110.

59 See: Jaume Freire-Gonzáles, "Environmental Taxation and the Double Dividend Hypothesis in CGE Modelling Literature: A Critical Review," *Journal of Policy Modelling*, no. 1 (2018): 194–223; Maruf Rahman Maxim, Kerstin K. Zander, and Roberto Patuelli, "Green Tax Reform and Employment Double Dividend in European and Non-European Countries: A Meta-Regression Assessment," *International Journal of Energy Economics and Policy*, no. 4 (2019): 342–55.

60 The EU Emission Trading System (EU ETS) is the world's first international greenhouse gas (GEG) emissions trading system and has been in place since 2005. The CBAM: Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism (O.J.E.C. L130, 16 May 2023), 52–104.

61 COM(2024) 91 final, Managing climate risks – protecting people and prosperity, Strasbourg, 12 March 2024.

4.4. Behavioral Taxation

Any tax which aims at inducing a change of behavior in any activity that generates (negative) externalities can be deemed a behavioral tax. Behavioral taxes typically encompass environmental taxes targeting energy, transport, resources, and pollution; and health taxes, including taxes on alcohol, tobacco and other unhealthy food and beverages. According to Kirchler, earmarking could increase acceptance of taxes,[62] and earmarking could at the same time serve as a justification for continued undesired behavior. According to Weber and Herrmann,[63] the public benefit efforts of a state (the "good government") are a major motivator for tax compliance.

Consumer information and price transparency should accompany the introduction of behavioral taxes, to improve social perceptions. It also must be emphasized that sustainable alternatives must be available and accessible and that it is important to consider how different income groups are affected. The possible changes in impacts also need to be taken into account.

An interesting element of the reform of EU budget revenues is the introduction of an obligation for Member States to pay a levy on non-renewable plastic packaging waste from 2021,[64] which could encourage Member States to tax this waste.

Arguably, much more environmental taxation is needed in the form of behavioral taxes than at present, and in order to ensure the sustainability of social security, health protection behavior taxes could also be applied more widely (there are positive examples in the Czech Republic and Hungary).[65]

62 "The Role of Behavioral Taxation," EU Tax Symposium 2023, accessed April 12, 2024, https://taxation-customs.ec.europa.eu/road-2050-tax-mix-future/eu-tax-symposium-2023_en.

63 Till Olaf Weber, Jonas Fooken, and Benedikt Herrmann, "Behavioural Economics and Taxation," European Commission, Taxation papers. Working paper N 41. 2014, 31, accessed April 10, 2024, https://taxation-customs.ec.europa.eu/system/files/2016–09/taxation_paper_41.pdf.

64 Council Decision (EU, Euratom) 2020/2053 of December 2020 on the system of own resources of the European Union and repealing Decision 2014/335/EU, Euratom (O.J.E.C. L424, 15 December 2020), 1–10.

65 The Act CIII of 2011 introduced the public health product tax in Hungary to reduce the consumption of unhealthy food and to improve the financing of health services and programs (as a targeted tax it is the revenue of Health Insurance Fund).

It must be noted that green reforms can also be facilitated by restructuring public spending both under the EU budget and the Recovery and Resilience Facility from 2020/21 – but everything has its price…

4.5. Risk of Indebtedness in the Short and Long Term

Contending with both the COVID-19 epidemic[66] and the energy crisis has increased government spending in Member States to help economic recovery. The possibility of launching an excessive deficit procedure (EDP; using the general escape clause)[67] has been suspended between March 23, 2020 and December 12, 2023, but from this year (2024), there is a strong possibility of open deficit-based EDPs in spring 2024 for several Member States because of growing public debts and high budget deficit. Also in the framework of the European Semester, the conditions of launching macroeconomic imbalance procedure are examined, and although no Member State has been subject to an excessive imbalance procedure, in 2023 in 12 Member States,[68] imbalances or excessive imbalances were identified and in 2024, another MS (Slovakia) also shows emerging imbalances.[69]

Besides the economic crisis, socio-economic changes (such as an ageing society) and the migration crisis also put public finances under significant pressure.

In addition to the above, the risk of long-term indebtedness is significantly increased by the surge in EU-related loans. The Recovery and Resilience Facility (RRF)[70] provides EUR 291 billion in loans (repayable supports) and EUR 357 billion in non-repayable grants[71] to Member States

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66 Erdős and Kispál, "Development of the Main Features of Hungarian Tax Policy," 45–59.

67 See details: Gabriella Csűrös, "Excessive Deficit Procedure: Past, Present, Perfect?," *International Journal of Legal and Social Order*, no. 1 (2022): 87–105; Zsolt Halász, "The Evolution of Fiscal Conditionality in EU Law," *Hungarian Yearbook of International Law and European Law*, no. 11 (2023): 124–35.

68 Cyprus, France, Germany, Greece, Spain, Hungary, Italy, the Netherlands, Portugal, Romania and Sweden. See: COM(2023) 901 final, Annual Sustainable Growth Survey 2024, Strasbourg, 21 November 2023, 3.

69 Ibid.

70 Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility (O.J.E.C. L57, 18 February 2021), 17–75.

71 "Recovery and Resilience Facility," European Union, accessed April 13, 2024, https://next-generation-eu.europa.eu/recovery-and-resilience-facility_en.

to manage the consequences of the COVID-19 crisis, later complemented by the energy crisis. All sources of RRF are loans taken by the Commission from the capital markets (so-called back-to-back loans), to be repaid from the EU budget by 2058 at the latest. Thus, these exceptional and temporary measures will provide aid without increasing the present (!) pressure on Member States' public finances between 2021 and 2026, but the non-repayable grants will have to be repaid later (until 2058) from the EU budget (with underlying national responsibility). This has made it necessary to reform the EU budget's revenue system, for which Commission proposals have already been made, but deadlines are slipping. If the logic of the current revenue structure of the EU budget (mainly GNI-based payments from Member States) is taken as a starting point, the new revenues will decrease the national budgets' revenues or increase the national budgets' expenditures. Loans (as repayable grants) must be repaid by the beneficiary Member State, though the risk of non-repaid loans is ultimately covered by the EU budget – indirectly by the (other) Member States.

Furthermore, to cover loans (so-called macrofinancial assistance) to third countries (see Ukraine),[72] the EU also borrows back-to-back loans from the financial markets and, if the beneficiary does not repay them, the EU budget has to cover them.

To sum up, the temporary (non-repayable) grants of RRF and the EU loans (especially to Ukraine), which have reached unprecedented levels, represent a significant long-term risk for the EU budget and – indirectly – for the budgets of Member States!

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[72] The EU has already given loans to Ukraine from macrofinancial assistance several times. In 2020–2021 according to 2020/701/EU Decision, EUR 1.2 billion was disbursed in loans. In 2022, according to 2022/313/EU Decision: EUR 1.2 billion, 2022/1201/EU Decision: EUR 1 billion and 2022/1628/EU Decision: EUR 5 billion, totalling EUR 7.2 billion. Under 2022/2463/EU Regulation, a Macrofinancial Assistance+ instrument was founded to provide EUR 18 billion in loans to Ukraine in 2023. Source: "Macrofinancial Assistance to Ukraine," European Union, accessed March 19, 2024, https://eur-lex.europa.eu/EN/legal-content/summary/macrofinancial-assistance-to-ukraine.html. In parallel with loans, EU budget (non-repayable) supports are also given to Ukraine under the Global Europe Neighbourhood, Development and International Cooperation Instrument, established by Regulation (EU) 2021/947. See: "Factsheet: EU Solidarity with Ukraine," European Commission, 30 April 2024, accessed April 2, 2024, https://ec.europa.eu/commission/presscorner/detail/en/FS_22_3862.

5. How to Build the Future Tax Mix in Europe?

The EU relies heavily on labor taxation including social security contributions (accounting for more than half of all EU-27 tax revenues), though it can discourage labor market participation. Besides, ageing, digitalization, global markets, new forms of work and increasing labor mobility question the residence-based principle of personal income tax. The ageing of societies results in a decline in the working-age population at the same time increasing age-related public expenditure which could be relieved by behavioral taxes (linked to, for example, the consumption of unhealthy products or the use of risky services). The reformed social security contributions and increasingly earmarked health taxes could serve as behavioral taxes and increase social acceptance. This could, in turn, contribute to the sustainability of the social security system in Europe.

In the former socialist countries analyzed in this study (Croatia, Bulgaria, Latvia, Estonia, Hungary, Poland and Romania), the tax burden on personal income is lower than the EU average and the implicit tax rate (ITR) on labor is also below the EU average[73] – and exceptionally low in Bulgaria and Croatia. These trends are in line with the Commission's proposed tax policy of reducing the relatively high income tax burden.

Apart from labor taxes, capital income tax revenues are also typically below the EU average in the examined countries. At the same time, the share of consumption taxes in total tax revenue is above 38% in these Member States.

Harnessing the potential of digitalization contributes to efficient and effective tax administration and can also reduce administrative costs, thus facilitating compliance. VAT, harmonized by the EU, is not only one of the most important revenues for Member States and the EU budget – it is also the tax most subject to abuse. Latvia, Hungary and Poland recorded an exceptionally large improvement in VAT compliance, with VAT gaps falling between 2013 and 2021 by over 15 pp. and currently these states belong to the best performers in the EU.[74] Tax administrations in most of

[73] Because of the higher rate of social security contribution in Hungary, it is in line with the EU average.

[74] Romania still faces challenges related to tax avoidance, VAT compliance gap and inefficient tax auditing.

the analyzed countries are therefore well adapted to the challenges of digitalization.

Still, though, in the former socialist countries, the share of property taxes is lower than the EU average (for historical reasons, property taxation is less accepted by their society, and the high administrative costs of value-based property taxes are also an obstacle for effective property taxation). According to a Commission study of 2024,[75] strengthening property taxation would help to make the tax system fairer, although not in a time of high inflation and crisis.

The share of environmental taxes in tax systems is low, both on average in the EU and in the countries examined (although most of them are at or above average). The energy (supply) crisis has led us to growing energy and green taxes but they seem only temporary, as crisis taxes. While the EU allocates significant funds for environmental protection, besides reforming the Emissions Trading System (ETS) and adopting the Carbon Border Adjustment Mechanism (CBAM), what is still missing is the pressure for green tax reform.

The future tax system must implement a desirable green tax reform shifting a part of the tax burden away from labor to tax bases linked to environment taxes and converting more taxes into behavioral taxes. This would result in increasing their social acceptance – regarding the sustainability of the tax system as the European and national budgets face significant financial pressure due to the polycrisis, megatrends and EU loans.

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[75] Áron Kiss et al., "Growth-Friendly Taxation in a High-Inflation Environment," European Commission, European Economy Economic Brief 079, March 2024, 13, accessed April 30, 2024, https://economy-finance.ec.europa.eu/publications/growth-friendly-taxation-high-inflation-environment_en.

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