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Tax Policy in EU Member States and Their Experience as a Guide for Ukraine

La política fiscal en los Estados miembros de la UE y su experiencia como guía para Ucrania

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Maryna Pravdiuk
Candidate of Economic Sciences, Associate Professor, Department of Accounting and Taxation in Economic Sectors, Vinnytsia National Agrarian University,
http://orcid.org/0000-0002-1420-8609, a.pravd4449@gmail.com

Hanna Kolomiiets
Candidate of Economic Sciences (Ph. D.), Assistant Professor, Faculty of Finance, Department of finance named after Victor Fedosov, Kyiv National Economic University named after Vadym Hetman,
http://orcid.org/0000-0003-2421-6773, hkolomiiets@gmail.com

Olena Magopets
Head of the Department of Audit, Accounting and Taxation, PhD, Associate Professor, Faculty of Economics, Department of Audit, Accounting and Taxation, Central Ukrainian National Technical University,
http://orcid.org/ 0000-0002-2124-4026 , oamahopets@ukr.net

Viktor Mushenok
DS in Law, Professor of the Departament of Administrative, Financial and Information Law, State University of Trade and Economics
http://orcid.org/ 0000-0003-0411-7567, v.mushenok@knute.edu.ua

Iryna Lutsenko
Head of Department, PhD, Docent, Faculty of Finance, Department of Physical Training and Special Training, University of Customs and Finance
http://orcid.org/ 0000-0001-9259-8203, irinaucf@gmail.com

Resumen

En el contexto de la eurointegración y la formación de la política fiscal en Ucrania según los estándares de la UE, es recomendable considerar las características clave de la fiscalidad en los estados miembros de la UE y su posible aplicabilidad. El artículo tiene como objetivo identificar las peculiaridades de la política fiscal en los países de la UE, particularmente en el contexto de los tipos de impuestos más importantes para estimular el crecimiento económico de Ucrania durante la guerra. El artículo emplea un enfoque sistémico para estudiar la estructura fiscal de Ucrania, utilizando un análisis estadístico de las estructuras de pago de impuestos en los países de la UE y Ucrania desde 2010 hasta 2020. El artículo describe las tasas básicas de los impuestos y tasas estatales generales en Ucrania. Analiza la conveniencia de su modificación, considerando las prácticas de los países de la UE y sus estructuras fiscales. Los resultados demuestran diferencias en la estructura y las políticas fiscales entre Ucrania y los países de la UE. En la estructura de pago de impuestos de Ucrania, prevalecen los impuestos sobre bienes y servicios (IVA, derechos de aduana), junto con las contribuciones sociales que muestran una tendencia a la disminución, las subvenciones y otros tipos de ingresos al presupuesto estatal. Sin embargo, de manera similar a las prácticas de la UE, existe una tendencia en Ucrania hacia un aumento en la proporción de impuestos sobre la renta, los beneficios y las ganancias de capital del 10,6 % al 16,4 %, así como un aumento en la proporción de impuestos sobre bienes y servicios del 31,4% al 40,1%. Por el contrario, considerando sus sistemas de protección social desarrollados, los países de la UE tienen una proporción significativamente menor de impuestos sobre bienes y servicios, incluido el IVA, y una proporción considerablemente mayor de contribuciones a la seguridad social. Los indicadores más altos de desarrollo económico respaldan cantidades más elevadas de contribuciones sociales. La introducción de la reforma 10-10-10 está justificada. Esta reforma implica reducir las tasas impositivas para tipos clave de impuestos, estimulando así el crecimiento económico en tiempos de guerra, de manera similar a las prácticas de los países de la UE. Los autores también proponen establecer una tasa de IVA más baja para los tipos de productos terminados más vulnerables en condiciones de guerra, siguiendo la práctica similar de los países de la UE. La importancia práctica de la investigación radica en corroborar la aplicación de una tasa de IVA reducida del 14% en Ucrania a tipos específicos de productos finales para apoyar a los segmentos menos prósperos de la población.

Palabras clave: política fiscal de la UE, tipos de tipos impositivos, impuesto sobre la renta, impuesto único, IVA en los países de la UE.

Abstract

In the context of Eurointegration and the formation of tax policy in Ukraine per EU standards, it is advisable to consider the key features of taxation in EU member states and their potential applicability. The article **aims** to identify the peculiarities of tax policy in EU countries, particularly in the context of the most important types of taxes for stimulating Ukraine's economic growth during the wartimes. The article employs a systemic approach to studying the tax structure of Ukraine, utilizing statistical analysis of tax payment structures in EU countries and Ukraine from 2010 to 2020. The article describes the basic rates of general state taxes and fees in Ukraine. It analyzes the appropriateness of their modification, considering the practices of EU countries and their tax structures. The **results** demonstrate differences in the tax structure and policies between Ukraine and EU countries. In Ukraine's tax payment structure, taxes on goods and services (VAT, customs duties) prevail, along with social contributions showing a tendency to decrease, grants, and other types of income to the state budget. However, similar to EU practices, there is a tendency in Ukraine towards an increase in the share of taxes on income, profits, and capital gains from 10,6% to 16,4%, as well as an increase in the share of taxes on goods and services from 31,4% to 40,1%. In contrast, considering their developed social protection systems, EU countries have a significantly lower share of taxes on goods and services, including VAT, and a considerably higher share of social security contributions. Higher indicators of economic development support more elevated amounts of social contributions. The introduction of the 10-10-10 reform is justified. This reform involves reducing tax rates for key types of taxes, thereby stimulating economic growth in times of war, similar to the practices of EU countries. The authors also propose

setting a lower VAT rate for the most vulnerable types of finished products in war conditions, following the similar practice of EU countries. The **practical significance** of the research lies in substantiating the application of a reduced 14% VAT rate in Ukraine to specific types of final products to support the less affluent segments of the population.

Keywords: EU tax policy, types of tax rates, income tax, single tax, VAT in the EU countries.

Introduction

Ukraine has chosen a strategic course of integration into the EU. It has shaped the priorities for transforming its social and economic components and building a system of macroeconomic regulation overall. Eliminating the features of a transitional economy has become more relevant than ever before, necessitating a transition to European practices of regulating economic relations on the one hand. Besides, it is overcoming negative trends in its functioning on the other. In the process of forming tax policy in Ukraine, it should provide conditions for GDP growth and other positive shifts in the development of the socioeconomic system, ensure a reliable financial foundation for the functioning of the state, make changes to legislation to comply with the Association Agreement, and gradually implement other EU tax policy measures as economic development progresses and the economy becomes more denationalized. One of the significant tax policy issues is the need for a developed tradition or mechanism for decision-making in this area, as seen in other countries.

Considering the above, this article aims to identify the peculiarities of tax policy in EU member states, particularly in the context of the most significant types of taxes to stimulate Ukraine's economic growth during the war.

Literature review

Researchers examine tax policy and its structure in terms of their impact on the economy (Nantob, 2014; Dackehag & Hansson, 2012; Havranek, Irsova & Schwarz, 2016). Scientific studies have identified that simultaneous reductions in taxes on labor and capital, along with increases in consumption taxes, can stimulate economic growth. It is worth noting that depending on the country and the state of the socioeconomic system, the tax structure and burden have diverse effects on economic activity (Stoilova, 2017).
The principles of economic theory posit a negative impact of taxation on economic growth due to distortions. Examining the production function allows tracing the implications for development through:

1) Physical capital;
2) Human capital;
3) Productivity of production factors.

Some researchers note that taxes on personal income and corporate profits negatively impact economic growth and the population's well-being. In contrast, taxes on consumption, property, and environmental taxes have a lesser negative effect on growth (OECD, 2008).

Different types of tax payments have varying effects on a country's economy and depend on the economic activity structure. Property taxes positively impact growth, specifically in EU-28 member countries, where "property taxes in the EU-28 are neutral to economic growth."

Taxes on personal income and social contributions have a strong positive influence on growth in EU-28 countries. The impact of corporate taxes has little effect on the economy. While some empirical studies support the assumption that direct taxation is a growth-promoting factor, as confirmed in the EU-28 in several publications, such claims are not in line with the results of some empirical studies. For example, these results are confirmed by Canavire-Bacarreza et al. (2013), Bernardi (2013), Havránek et al. (2015), and Tanchev (2016). However, contrasting conclusions are presented in the studies by Widmalm (2001) and Dackehag & Hansson (2012), which assess the negative effects of income taxes.

Production and import taxes demonstrate the most robust positive linear relationship with the dynamics of economic growth, in line with the postulates of economic theory.

Consumption taxes also typically contribute to growth "due to the presumption that a tax system more heavily relied on consumption minimizes the distorting effects of taxation on the growth factors (labor, capital, and technological progress)" (Zipfel & Heinrichs, 2012).

At the same time, the consumption tax, including value-added tax (VAT), has a negative impact on economic growth. In taxation theory, VAT is supposed to be a universal proportional consumption tax, but in practice, it is characterized by numerous exemptions due to reduced rates in EU-28 member countries. It leads to low efficiency, fairness, and flexibility of VAT, consequently affecting growth. The VAT and economic growth relationship follows a "cubic form" – a curve with optimal VAT rate values. Therefore, in certain cases, the negative impact of value-added taxes on economic growth can be observed.

Materials and Methods

The authors used a systematic approach to studying the tax structure of Ukraine using the method of a statistical analysis based on the following key structural indicators:

1. Rates of overall state taxes and fees, %.
2. Structure of tax payments in EU countries and Ukraine, 2010-2020, % of individuals and legal entities income.
3. Dynamics of Taxes on income, profits, and capital gains (% of revenue).

4. Dynamics and structure of tax revenues to the state budget of Ukraine, 2019-2023 (billion UAH and %).
5. Sectoral structure of taxation by economic activities.

A content analysis of the directions for reforming Ukraine's tax policy according to EU standards has been conducted. The article describes the basic rates of overall state taxes and fees in Ukraine. It analyzes the feasibility of their change, considering the practices of EU countries and the tax structure.

The following databases and information resources were used for statistical analysis: Verkhovna Rada of Ukraine, the Ministry of Finance of Ukraine, the State Tax Service of Ukraine, the World Development Indicators and the World Bank, the National Bank of Ukraine, and the State Treasury Service of Ukraine.

Result and discussion

The aim of developing the system of institutions implementing state tax and customs policies is to build an efficient model for implementing state tax and customs policies based on the State Tax Service and the State Customs Service. This model should incorporate the best global practices in implementing state tax and customs policies, improve existing procedures, establish institutional renewal processes, and develop the functional capacity to fulfill assigned tasks. Among the directions of reforming the system of institutions implementing state tax and customs policies, the following most important ones should be highlighted in the context of research on the reform directions regarding the implementation of state tax policy:

1. Reforms in implementing state tax policy: promotion of voluntary tax compliance, development of tax services.
2. Risk management, tax control, and auditing.
3. Improvement of efforts aimed at debt collection.

4. Counteracting the tax base's erosion and enhancing the transfer pricing analysis function (Verkhovna Rada of Ukraine, 2023).

Table 1
Directions for reforming Ukrainian state tax policy

Direction	Reform measures
Voluntary tax payment	Strategy for voluntary payment, considering the specifics of taxpayers' groups and categories. Expansion of the operation of real-time services Specialized software products for online access of taxpayers Ensuring the quality of tax consultations and services provided by the tax service contact centers, introducing a system for collecting taxpayer feedback and suggestions Information campaigns to encourage taxpayers to switch to online services Simplification of the administration of taxes, duties, and the unified social tax.
Risk management, audit, and control	Centralization of the risk management function. Introduction of a methodology for assessing tax gaps to measure the gaps between the amount of taxes actually paid and the estimate of potential revenues per tax legislation. Revising the risk criteria and amending the procedure for selecting taxpayers for the tax audit schedule to ensure that industry specifics, regional specifics, results of previous audits, court practice, and data that can be obtained from government agencies ("open sources") are considered. Ensuring using a risk analysis system for pre-audit analysis and all types of audits. Gradually introduce electronic documentary audits (e-audits) for large taxpayers first and then for everyone.
Improvement of tax debt collection processes	Developing a business model aimed at tax debt repayment, considering the operational costs and the likelihood of tax debt collection. Developing a contact strategy for each segment of taxpayers with tax debt (channels, contact frequency, etc.).
Counteracting the tax base's erosion and enhancing the transfer pricing	Consistent implementation of the action plan to counteract Base Erosion and Profit Shifting (BEPS) aimed at preventing violations of international double taxation treaties. Concluding the MCAA CRS and MCAA CbC international agreements, multilateral agreements on cooperation between competent authorities on the automatic exchange of information under the CRS and CbC standards, and fulfilling all obligations to establish and implement the automatic exchange of financial information. Increasing the number of employees performing transfer pricing control functions and providing them with training. Institutional strengthening and separation of units performing transfer pricing control functions. Providing tax authorities with access to modern software systems and information bases.

Source: compiled by the author based on the data from Verkhovna Rada of Ukraine (2023).

The Ministry of Finance of Ukraine ensures the formation and implementation of a unified state tax policy, a state policy on the administration of the unified contribution for compulsory state social insurance, a state policy in combating violations during the application of tax legislation, and legislation on the payment of the unified contribution.

– Articles 8-9 of the Tax Code of Ukraine define the types of taxes and fees: Nationwide taxes are mandatory throughout the territory (corporate income tax, personal income tax, value-added tax, excise tax, environmental tax, rent payment, and customs duty).

– Local taxes and fees, established within the list and limits of rates specified by the Code, decisions of village, town, and city councils within their powers, and are mandatory for payment within the territory of respective territorial communities.

Local taxes include the property tax (vehicle tax and land fee, excluding land tax for forest lands and real estate tax) and the single tax. Local fees include a fee for parking spaces for vehicles and a tourist fee.

Table 2 provides the rates of nationwide taxes and fees in Ukraine as of the time of writing this publication.

Table 2

National taxes and duties rates, %

Tax type	Rate, UAH/ %	Notes
Corporate income tax	18	Basic (main) tax rate
Personal income tax	18	Salary, income from civil law contracts, 5% or 9% for other types of income
Military duty	1,5	On total monthly (annual) taxable income, net taxable income
Value added tax	20 / 14 / 7 / 0	An object of taxation - transactions of taxpayers
Excise tax	5 / 3,2	Transactions on the sale of excisable goods by retailers, transactions on the sale of excisable goods by manufacturers and/or importers
Environmental tax	min - 96,99, max - 3 277 278,63	Tax rate is set at UAH per 1 ton
Rent for special use of the forest resources	min - 8,24, max - 575,33	Rate per 1 dense cubic meter of wood, UAH
	min - 13,47, max - 1401,06	Rates of rent for logging timber of non-main forest species
Rent fee for the transportation of oil and petroleum products through main oil pipelines and oil product pipelines Transit transportation of ammonia through pipelines across the territory of Ukraine	0,56 / 2,4 US dollar	For transportation of one ton of oil by main oil pipelines/oil products by main oil product pipelines; for transit transportation of one ton of ammonia for every 100 kilometers of the respective transportation routes
Rent payment for the use of subsoil for non-extractive purposes	0,56 / 1,59 / 0,9 / 0,69 / 2,23 UAH/year	Rates of rent for the use of subsoil for purposes not related to the extraction of minerals
Rent charge for specific water use	min - 29,96, max - 129,9 UAH	Rent rate, UAH per 100 cubic meters
Rent fee for the use of subsoil for the extraction of minerals	min - 0,75, max - 31	Rate, percentage of the value of the mining company's commercial products - extracted minerals (mineral raw materials)
Rent fee for using Ukrainian radio frequency resources	min - 1,11; max - 43574,69	Rent rate depending on the type of radio frequency per 1 MHz of radio frequency band per month, UAH

Source: compiled by the authors based on the data from the State Tax Service of Ukraine (2023).

During their activities, residents of Diia City are subject to special tax conditions under the Law of Ukraine "On Stimulating the Development of the Digital Economy in Ukraine." They apply tax rates of 9% and 18%. The tax rate on income (profit) of non-residents and equivalent persons derived from sources in Ukraine is 18% (on income from interest-free (discount) bonds or treasury obligations), 15% (on interest, discount income payable to a non-resident, dividends paid by a resident, royalties, income from engineering, leasing/rental fees, income from the sale of immovable property, and the profit from the sale or disposal of the following investment assets: securities, derivatives, or other corporate rights, etc.), 6% (freight paid by a resident to a non-resident under charter agreements), 4% (under insurance contracts outside Ukraine, where insurance payments (insurance compensation) are made to non-residents).

In Ukraine, there is also a rate of 18% on remuneration under GIG-contracts and the author's royalty accrued (paid) to a specialist resident of Diia City, and 5% if the amount of income does not exceed the equivalent of 240,000 euros per calendar year based on the official exchange rate of the UAH to the EUR established by the National Bank of Ukraine as of January 1 of the reporting tax year.

In Ukraine, the value-added tax (VAT) rate of 14% is levied on the operations of taxpayers for the supply of the customs territory of Ukraine and importation into the customs territory of Ukraine of agricultural products classified under the relevant codes according to the Ukrainian classification of foreign economic goods: 1001, 1003, 1005, 1201, 1205, 1206 00. The tax rate of 7% applies to the following operations of taxpayers: supply on the customs territory of Ukraine and importation into the customs territory of Ukraine of medicinal products; provision of services related to the demonstration (conducting) of theatrical, opera, ballet, music, concert, choreographic, puppet, circus, sound, light, and other shows, etc. The VAT rate of 0% applies to the operations of taxpayers related to the export of goods beyond the customs territory of Ukraine:

a) Under the customs export regime.
b) Under the customs re-export regime.
c) Under the customs duty-free trade regime.
d) Under the customs regime of a free customs zone.

It is worth noting the support for a 14% value-added tax (VAT) by representatives of the agri-food sector and politicians due to the potential reduction in the prices of the industry's products. Theoretically, a decrease in the VAT rate leads to reduced prices of goods. However, in Ukraine, the average costs of agricultural products sold by enterprises increased in 2021 as follows:

- Grain and leguminous crops: by 31%,
- Oilseed crops: by 51%,
- Sugar beets: by 34%,
- Vegetable crops: by 5%,
- Livestock: by 15%,
- Milk: by 17%,
- Eggs: by 49% (the State Statistics Service of Ukraine, 2023).

Consumer prices for food products in Ukraine, on average, increased by 34,4% in December 2022 compared to December 2021, with eggs experiencing a 76,6% increase due to the war and destruction of production facilities (the State Statistics Service of Ukraine, 2023).

In some expert circles, there is a proposal to establish a 14% VAT rate on all agricultural products without exceptions. However, considering the rising prices of farm products, repealing the introduced 14% VAT rate on agricultural raw materials is advisable rather than expanding it to the entire list of products. The practice of VAT rates varies among different countries worldwide. In most EU countries, food products are subject to a reduced VAT rate, which applies to finished products. Agricultural raw materials, on the other hand, are subject to the standard rate. Reduced VAT rates are mainly used for social purposes to mitigate the regressive nature of VAT for low-income groups.

Therefore, the reduced VAT rate is applied to final products in the EU. A reduced rate may be justified for categories of goods essential for low-income people. Particularly in the context of the war in Ukraine, it would be appropriate to apply a reduced 14% VAT rate to food products such as oilseed crops, milk, and eggs, considering the significant price increases of these products during 2021-2022.

In the tax theory, Value Added Tax (VAT) is essentially a regressive consumption tax, so its reduction significantly impacts the incomes of low-income people through the price reduction. Additionally, from a practical standpoint, empirical research confirms that reduced VAT rates are not sufficiently effective as a government support instrument for low-income households since they do not lead to price reductions. It can be explained by the influence of many other factors on prices (logistical costs, labor costs, etc.).

Practical arguments also support the idea of a single VAT rate, which is considered a standard in global practice. Primarily, this is due to the administration of different VAT rates, which increases administrative costs and corruption risks and abuses.

In Ukraine, taxes on goods and services (VAT and customs duties), social contributions, grants, and other types of revenue to the state budget prevail in the structure of tax payments (Table 3). It is worth noting the trend of reducing the share of social contributions over the past ten years from 36,1% to 21,8%, the trend of increasing the percentage of taxes on income, profits, and capital gains from 10,6% to 16,4%, and the trend of increasing the share of taxes on goods and services from 31,4% to 40,1%. The percentage of grants and other types of revenue to the state budget remains stable (average of 19,5% for 2010-2020). Compared to Ukraine, EU countries have a significantly smaller share of taxes on goods and services, including VAT. Only Croatia has a higher indicator than Ukraine, reaching 45,1% in 2020. The indicator is 40% in Finland and Hungary – 38,1%, despite significantly higher population incomes and GDP per capita. On the other hand, Germany's indicator is 18,9%, France - 23,2%, Italy - 22,6%, Lithuania - 33,4%, the Netherlands - 27,8%, Norway - 27,8%, and Switzerland - 28,8%. In neighboring Poland, the share of taxes on goods and services from total revenues is 35,7%; in Slovakia - 31,3%; and in Slovenia - 32,3%.

Table 3
The structure of tax payments in the EU and Ukraine, 2010-2020, % of personal and corporate incomes

Country	Taxes on income, profits, and capital gains		Taxes on goods and services		Taxes on international trade		Other taxes		Social contributions		Grants and other revenue	
	2010	2020	2010	2020	2010	2020	2010	2020	2010	2020	2010	2020
Belgium	34,7	32,3	25,4	26,3	0	0	0,4	0,4	35,8	37,7	3,6	3,3
Croatia	8,2	5,9	45,3	45,1	1,4	0	0	0	33,2	29,5	0	20,3
Czech Republic	14,8	16,7	28,5	27	0	0	0,1	0,1	46	48,4	10,6	7,8
Denmark	41,3	46,5	36,6	34,8	0	0	4,2	4,5	3	2	0	0
Finland	14,5	14,5	36,7	40	0	0	0,6	0,9	33,9	32,3	14,3	12,2
France	23,2	28,6	22,1	23,2	0	0	5,8	5,4	41,9	38,5	6,9	4,3
Germany	15	17,3	24,7	18,9	0	0	0	0	55,5	58,1	4,8	5,8
Hungary	19,1	16,4	37,2	38,1	0	0	1,1	3	29,9	27,9	12,7	14,6
Italy	33,2	33,1	22,8	22,6	0	0	4,8	4,6	33,9	33,5	5,4	6,1
Lithuania	13,6	25,4	33,6	33,4	0	0	0,3	0,1	35,6	30,7	17	10,4
Netherlands	26,1	30,5	26,8	27,8	0	0	2,2	2,8	34,8	34,9	10,2	4
Norway	31,2	19,2	24,9	27,8	0,2	0,2	0,6	0,4	20	24,8	0	0
Poland	12,5	13,2	38,4	35,7	0	0	0,8	0,9	36,7	40,8	0	0
Portugal	21,3	23,6	31,5	31,1	0	0	2,8	2,6	32,5	32,3	12	10,4
Romania	17,7	14,6	36,3	32,6	0	0	0	0	30,5	39,5	0	9,3
Slovak Republic	16	18,8	29,8	31,3	0	0	0	0	36,8	41,6	0	0
Slovenia	11	11,5	35,3	32,3	0	0	0,2	0,2	41,2	44,4	0	0
Spain	16,1	17,9	23,9	25,7	0	0	0	0,1	42,6	46,7	17,4	9,5
Switzerland	21,3	22	32,4	28,8	1	0,9	0	0,1	35,9	39	9,4	9,2
Ukraine	10,6	16,4	31,4	40,1	2,5	2,2	0	0	36,1	21,8	19,6	19,4

Source: compiled by the authors based on the World Development Indicators (2023) data.

Compared to Ukraine, in EU countries, there is a significantly higher share of taxes for social insurance, considering the developed social protection systems that entail higher amounts of government expenditures and corresponding tax burden. Higher indicators of economic development support higher social contributions:

- GDP per capita;
- a robust industrial sector;
- a developed service sector;
- the ICT industry, which positively affects tax revenues (Castro & Camarillo, 2014).

On the other hand, in new member countries (Eastern and Southern Europe), government expenditures and tax burden are significantly lower, mainly due to liberal economic reforms during democratic transitions.

The significant differences between Ukraine and EU countries are also observed in the share of taxes on income, profits, and capital gains as a percentage of total revenue for individuals and legal entities. In general, in the most developed countries, these types of taxes contribute the most to government budget revenue, mainly in Belgium (35,3% for 2010-2021), Denmark (41,7%), France (25,5%), Italy (33,3%), the Netherlands (26,4%), and Norway (27,9%).

Table 4

Taxes on income, profits, and capital gains (% of revenue)

Country Name	2010	2016	2017	2018	2019	2020	2021	Average for 2010-2021, %	Standard variance, %
Belgium	34,7	32,4	33,7	34,0	32,5	32,3	33,6	35,3	1,68
Switzerland	21,3	22,5	24,6	24,5	25,7	22,0	25,7	20,8	2,91
Czech Republic	14,8	15,7	16,1	16,6	16,8	16,7	14,4	16,3	1,71
Germany	15,0	17,3	17,7	18,0	17,8	17,3	17,5	16,3	1,18
Denmark	41,3	44,7	45,2	42,9	47,5	46,5	48,5	41,7	4,21
Spain	-	19,7	19,7	20,7	19,3	17,9	20,4	19,4	1,39
European Union	17,5	18,7	19,4	19,4	19,0	17,9	20,2	19,2	1,71
Finland	14,5	15,3	15,9	15,9	15,9	14,5	16,3	17,8	3,28
France	23,2	25,3	25,7	27,5	28,2	28,6	28,4	25,5	1,54
Croatia	8,2	7,4	7,3	6,1	6,2	5,9	5,5	7,4	1,20
Hungary	19,1	16,9	17,0	15,9	15,9	16,4	14,4	18,1	2,85
Italy	33,2	32,2	32,1	31,4	31,8	33,1	32,3	33,3	1,25
Lithuania	13,6	16,9	16,6	16,8	26,0	25,4	27,6	21,4	5,61
Netherlands	26,1	26,6	29,5	29,0	30,6	30,5	31,3	26,4	2,42
Norway	31,2	20,7	21,9	24,2	23,4	19,2	30,2	27,9	4,28
Poland	12,5	12,3	12,5	13,0	13,3	13,2	14,1	13,2	1,09
Portugal	21,3	24,1	24,0	24,1	23,3	23,6	22,0	22,8	1,70
Romania	17,7	20,3	19,8	15,2	15,3	14,6	15,9	18,0	1,68
Slovak Republic	16,0	18,4	19,4	19,5	19,0	18,8	20,2	17,4	1,53
Slovenia	11,0	10,8	11,1	12,1	12,2	11,5	13,5	12,3	2,45
Ukraine	10,6	15,2	14,5	16,4	17,0	16,4	17,3	13,4	2,47

Source: calculated by the authors according to the World Bank (2023).

It is advisable to consider the potential implementation of tax system reforms aimed at expanding the tax base and reducing tax evasion, which is a challenge for Ukraine. A similar reform in Bulgaria achieved the goal of expanding the tax base by limiting the size of the informal economy. The country underwent a reform that introduced a flat tax rate and a progressive taxation system to reduce the risks of tax evasion by large companies. Tax evasion is also a significant issue in Ukraine.

Research on the state of the shadow economy in Ukraine in 2020 indicates that the level of the informal economy constitutes a quarter of the GDP, or 846 billion UAH, which is 23,8% of the official GDP for 2018. The shadow economy is divided as follows:

- The cash shadow economy accounts for 19,7% of GDP (702 billion UAH).
- The 4,1% of GDP (144 billion UAH) is attributed to a non-monetary shadow economy, including the domestic production of goods for final use.

Similar studies conducted in 33 countries worldwide, including the Czech Republic, Poland, Slovenia, Slovakia, Croatia, Bulgaria, Bosnia and Herzegovina, Serbia, and others, indicate that the historical levels of the shadow economy among these countries have ranged from 10,1% to 26,9% of GDP (National Bank of Ukraine, 2023).

High personal income tax rates have partially contributed to tax evasion, particularly in the case of Eastern European countries and former Soviet Union countries. The increased personal income tax rates are also often associated with a negative impact on economic activity. The high elasticity of taxable income concerning tax rates results in irreversible losses due to distortions in labor supply decisions and capital accumulation. That is why the Ukrainian government is considering reforming the unified tax, known as the 10-10-10 initiative. It aims to introduce a flat tax rate of 10% for personal income, corporate profits, and dividends (European Business Association, 2022). The introduction of such a tax is proposed during the period of martial law and post-war economic recovery, reducing the value-added tax (currently at 20%), personal income tax (currently at 18%), and corporate profit tax (currently at 18%) to 10%. Additionally, during the war, it is planned to double the military fee rate to 3%. Furthermore, it is proposed to eliminate the Unified Social Tax (currently at 22% of the employee's wage fund) but retain it for self-employed individuals under the unified tax system (European Business Association, 2022).

Fiscal neutrality, which is an essential requirement for tax reform support from the International Monetary Fund (IMF), can be achieved if a single tax broadens the tax base by reducing the share of informal economic activity, estimated to account for 40-45% of total economic activity before the reforms. Similar reductions in the level of informal economic activity were observed in Bulgaria and Georgia after implementing their versions of the flat tax reform.

Over the past three decades, introducing a flat-rate tax has been a widespread reform in Eastern European countries and former Soviet Union states. The first wave occurred in the Baltic countries in the mid-1990s, followed by a second wave in Central European countries and several post-Soviet countries (Bulgaria, Georgia, Romania, Russia, and Slovakia) a decade later.

There is a clear distinction between the first wave of reforms in the Baltic countries, characterized by moderate tax rates of 20% and above, closer to the highest marginal tax rates before the reform, and the second wave, which started in Slovakia and featured tax rates closer to the lowest level before the reform (and even lower in Bulgaria, Georgia, and Romania), around 10%. In most post-communist countries, the flat tax reform was considered a temporary measure to reduce shadow economic activity. The Baltic countries have since reverted to progressive income tax rates. For example, in 2018, Latvia replaced the flat tax rate with a progressive scale of 20%, 23%, and 31,4%. In 2019 Lithuania replaced the flat tax rate with progressive rates of 20% and 27%. A similar trend occurred in almost all economies that underwent the second wave of reforms. In its original form, the flat tax rate remains only in Bulgaria.

According to the State Treasury Service of Ukraine, from January 01, 2019, to January 01, 2023, the tax authorities (State Tax Service) ensured an increase in actual tax and fee revenues to the State Budget by 299,585 billion UAH. This increase was primarily driven by the growth in value-added tax (VAT) from domestically produced goods in Ukraine, amounting to 134,817 billion UAH. Additionally, taxes and fees on individuals' income increased by 56,685 billion UAH, rent payments for subsoil use amounted to 41,194 billion UAH, and corporate income tax increased by 20,168 billion UAH (Table 5).

However, the excise tax on domestically produced excisable goods decreased by 10,445 billion UAH (particularly in 2022), while it increased by 18,481 billion UAH for goods imported into the customs territory of Ukraine. VAT from domestically produced goods in Ukraine continues to dominate the tax structure, with its share increasing from 20% in 2019 to 31% in 2022. On the other hand, the share of taxes and fees on individuals' income decreased by 2%, and the corporate income tax decreased by 8% (to 17% in 2022) in the tax structure. The share of rent payments for subsoil use increased by 2%. The share of excise tax on domestically produced excisable goods sharply decreased by 4% in 2022 and 9% over the past five years. The environmental tax accounts for only 1% of the tax structure, and its volume and share significantly decreased in 2022 due to the war in Ukraine.

Table 5

Dynamics and structure of tax revenues to the Ukrainian state budget, 2019-2023 (billion UAH and %)

	01.01.2019	01.01.2020	01.01.2021	01.01.2022	01.01.2023	Variance, +/-
Total of the State Tax Service contributions to the state budget (balance), including:	399,135	466,929	567,391	652,076	698,720	299,585
VAT on goods (works and services) produced in Ukraine, including budget refunds	79,131	88,930	126,487	155,775	213,948	134,817
personal income taxes and fees	91,742	109,954	117,281	137,555	148,427	56,685
corporate income tax	96,882	107,086	108,695	147,752	117,050	20,168
rent for subsoil use	39,817	41,258	47,122	75,569	81,012	41,194
excise tax on excisable goods (products) produced in Ukraine	71,144	69,897	80,449	82,858	60,699	-10,445
excise tax on excisable goods (products) imported into the customs zone of Ukraine	2,073	2,820	4,316	14,939	20,553	18,481
environmental tax	2,780	3,854	3,307	3,916	3,322	0,543
Tax revenue structure, %						
VAT on goods (works and services) produced in Ukraine, including budget refunds	20%	19%	22%	24%	31%	11%
personal income taxes and fees	23%	24%	21%	21%	21%	-2%
corporate income tax	24%	23%	19%	23%	17%	-8%
rent for subsoil use	10%	9%	8%	12%	12%	2%
excise tax on excisable goods (products) produced in Ukraine	18%	15%	14%	13%	9%	-9%
excise tax on excisable goods (products) imported into the customs zone of Ukraine	1%	1%	1%	2%	3%	2%
environmental tax	1%	1%	1%	1%	0%	0%

Source: calculated by the authors based on the data from the State Treasury Service of Ukraine (2023).

The largest share of revenues in the total amount of state budget receipts comes from the following sources:

– Value Added Tax (VAT) on goods (works, services) produced in Ukraine, considering budget reimbursement (31%);

– Personal income tax and withholding tax (21%);

- Corporate profit tax (17%);
- Rent payment for subsoil use (12%);
- Excise tax on excisable goods (products) produced in Ukraine (9%).

In the sectoral structure of taxation, the highest amount of taxes has been paid by the following economic entities as of January 1, 2023:

- Mining and quarrying industries - 18,44%;
- Wholesale and retail trade; repair of motor vehicles and motorcycles - 15,41%;
- Manufacturing industries - 13,05%;
- Supply of electricity, gas, steam, and conditioned air - 9,94%;
- Financial and insurance activities - 8,13%;
- Public administration and defense; compulsory social security - 7,10%;
- Transportation, storage, postal, and courier activities - 6,30%.

Thus, it can be presumed that the structure of Ukraine's economy significantly influences the taxation structure. Additionally, significant amounts of taxes were received from the following sectors: information and telecommunications (3,76%), professional, scientific, and technical activities (3,41%), agriculture, forestry, and fishing (3,30%), and construction (2,41%).

It is worth noting that the sectoral structure of tax revenues has changed due to the war. Specifically, there has been a significant decrease in the share of revenues from the mining industry (22,35% in 2021), manufacturing industry (14,85% in 2021), transportation, storage, postal, and courier activities (7,31% in 2021), agriculture, forestry, and fishing (4,92% in 2021), and information and telecommunications sector (4,11% in 2021). On the other hand, the share of taxes has increased from the wholesale and retail trade sector (11,3% in 2021), supply of electricity, gas, steam, and conditioned air (8,61% in 2021), financial and insurance activities (6,75% in 2021), and the sector of public administration, defense, and compulsory social security (3,86% in 2021).

Conclusion

Ukraine and the EU members have different tax structures. Ukraine's tax payments are dominated by taxes on goods and services (VAT and customs duties), social contributions, grants, and other types of state budget revenues. There is a downward trend in the share of social contributions in 2010-2020 from 36,1% to 21,8%, an upward trend in the share of taxes on income, profits, and capital gains from 10,6% to 16,4%, and an upward trend in the share of taxes on goods and services from 31,4% to 40,1%.

On the other hand, in EU countries, the share of taxes on goods and services, including VAT, is significantly lower. Only in Croatia is the indicator higher than in Ukraine, amounting to 45,1% in 2020. In Finland, the indicator is 40%, and in Hungary - 38,1%, despite higher population incomes and GDP per capita. Compared to Ukraine, EU countries have a significantly higher share of taxes on social security, considering their developed social protection systems, which entail higher government expenditures and corresponding tax burdens. Higher economic development indicators support higher amounts of social contributions.

Significant differences between Ukraine and EU countries are found in the share of taxes on income, profits, and capital gains as a percentage of total income for individuals and legal entities. In the most developed countries, these types of taxes contribute the most to the state budget. Therefore, introducing a reform known as "10-10-10" is expedient, which involves reducing the tax rates for key types of taxes, thus stimulating economic growth. The introduction of such a tax is proposed during times of war and post-war economic recovery, namely reducing the value-added tax (VAT) to 10% (currently 20%), personal income tax to 10% (currently 18%), and corporate profit tax to 10% (currently 18%). The author also suggests establishing a lower VAT rate for the most vulnerable types of finished products during times of war, considering the sharp increase in consumer prices. This practice is applied in most EU countries, where food products are subject to a reduced VAT rate for social purposes targeting low-income population segments. Specifically, in the war conditions in Ukraine, it is appropriate to apply a reduced VAT rate of 14% to the following food products: oilseed crops, milk, and eggs, given the significant price increase for these products during 2021-2022.

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