"Tax policy and activation of internal factors of economic growth: EU experience for Ukraine"

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BUSINESS PERSPECTIVES

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TAX POLICY AND ACTIVATION OF INTERNAL FACTORS OF ECONOMIC GROWTH: EU EXPERIENCE FOR UKRAINE

Abstract

The state policy of Ukraine aims to promote sustainable economic growth and improve its quality through economic activity, particularly through the optimization of the tax system, which is particularly relevant both during the period of martial law in Ukraine and the post-war recovery. The purpose of the study is to assess the formation and implementation of the state tax policy to activate the internal factors of economic growth in Ukraine under martial law. The study of tax policy in Ukraine and EU countries has shown that the EU countries are characterized by a consistent and transparent tax policy that stimulates investment, innovation, and entrepreneurship to activate internal factors of economic growth. The paper uses fiscal analysis based on the Cobb-Douglas production-institutional function; its main concept is the mutual location of the Laffer points of the first and second types and the actual level of the tax burden. The results show a noticeable adjustment of the real fiscal climate in Ukraine in line with changes in threshold fiscal standards. Considering martial law in Ukraine and the need for the state's ability to post-war recovery, the study suggests changing the rates of specific taxes, after which it is necessary to make a transition from private fiscal instruments with inherent rate values to the aggregate fiscal burden.

Keywords	taxes, tax burden, economic growth, tax administration
JEL Classification	H30, O10

INTRODUCTION

To ensure economic growth, high rates of social reproduction, and social justice in society, one requires effective financial policy by the state, in particular through a balanced tax policy. Tax policy, which is one of the key levers of state intervention in socio-economic processes, becomes important due to the increasing role of the state in the economy and public life, which requires significant financial resources. Russia's invasion of Ukrainian territory forced the government to reconsider previous goals and focus on the defense of the country and the social security of citizens. The martial law conditions require ensuring that the revenue part of the budget fulfills state functions. The tax revenue targets of the State Budget of Ukraine in 2022 were fulfilled only by 78.87% and in 2023 by 99%, but the targets of the local budgets of Ukraine were exceeded in 2022 by 0.89% and in 2023 by 2.3%. With all its efforts, the government cannot stabilize tax policy at the state level, from the introduction of new taxes to an increase in tax rates, but such actions require balanced decisions. Therefore, there is a need to generalize the experience of EU member states' tax policy and consider Ukraine's integration into the European economic space. There are theoretical prerequisites common to all developed European countries and scientifically substantiated principles of tax system construction. Tax practice in the EU is at a high professional level. Moreover, the EU's experience in the field of taxation has been tested, and its effectiveness has been proven.

1. LITERATURE REVIEW

Tax policy plays a decisive role in shaping the impact of taxes on society and is closely related to the fulfillment of the state's functions. The primary task is to balance the state's ability to obtain financial resources and the achievement of priority socio-economic goals in specific conditions of the country's development. By regulating the economy with the taxes, the state can, by adjusting the mass of tax revenues, changing tax rates and forms of taxation, and providing tax benefits, create conditions favorable for the development of key sectors of the economy, as well as stimulate investment, innovation, and entrepreneurial activity.

Most countries today have moderate taxation, which is the result of tax policies aimed at stable economic growth. The main focus is on creating a favorable tax climate for business development and effectively addressing social challenges in the country. At the same time, great attention is paid to the relatively large share of taxes, fees, and mandatory contributions in the gross domestic product of many European Union member states.

Activation of internal factors of Ukraine's economic growth, taking into account the EU experience, is particularly relevant, both at the level of the state as a whole and at the level of an individual region. Lysiak et al. (2020) consider tax revenues as the basis for the financial sustainability of local budgets, which can be a significant source of information for the formation of budget policy and the development of preventive measures to ensure the socio-economic development of regions. Simplification of the process of assessing the financial sustainability of local budgets is an important condition for its effective implementation. It will allow for visualizing information for the public on the state of local budgets, which will contribute to transparency in the management of the budgetary process and increase trust in local authorities and the activity of citizens in the formation of priorities of fiscal policy at the level of the local community (Lysiak et al., 2021).

Financing of delegated powers by the state, which is carried out mainly at the expense of transfer payments, is characterized by untimely receipt of revenues and under-receipt of revenues according to planned indicators, which creates problems with financing from local budgets (Glushchenko & Kozhalina, 2019). Property taxes play a significant role in the formation of the revenue part of local budgets in the European Union countries. Storonyanska et al. (2023), analyzing trends in the economy and their potential impact on the tax capacity of local budgets, emphasize the need to diversify the sources of tax revenues to provide municipalities with an appropriate level of sustainability considering constant economic changes. Systemic structural crises in the Ukrainian economy have necessitated the choice of effective forms of tax mechanisms for its regulation (Turyanskyy et al., 2020; Davydenko et al., 2022; Boiko et al., 2023). The total tax burden on business in Ukraine reaches 41.5% of corporate profits, which exceeds similar indicators of most European countries. To stabilize the Ukrainian economy, one can revise tax rates, introduce macroeconomic risk management tools, offer customs post-audit while ensuring transparency of tax legislation and its harmonization with the EU Customs Code, and digitalize service components of tax administration.

Pasichnyi (2017) investigated the role of fiscal policy in ensuring economic growth in developed and emerging market economies. He concluded that economic growth in a country could be achieved by harmonizing the tax burden and structure, improving the use of budgetary funds, conducting structural optimization of budgetary expenditures, further developing financial and budgetary institutions, and implementing fiscal constraints and rules to form key indicators of fiscal policy.

Blanchard (2023) researched fiscal consolidation after the global financial crisis, a large increase in debt in Japan, and the current combination of fiscal and monetary policy in the US. The result concludes that low interest rates reduce not only the fiscal costs of debt but also the welfare costs of debt. At the same time, he shows how low rates reduce the room for maneuvering in monetary policy – thus increasing the benefits of fiscal policy, including deficits and debt, for macroeconomic stabilization.

Countries with low to medium levels of institutional frameworks for fiscal policy design may face persistent deficits and rising public debt. Chugunov and Pasichnyi (2018), investigating the underlying causes of fiscal policy volatility and its impact on economic growth, conclude that successful fiscal consolidation measures necessarily include reductions in government primary spending.

COVID-19 caused widespread disruptions in the world's developed economies, and fiscal authorities worldwide began to design and implement stabilization measures. Faria e Castro (2021) studied the effects of the pandemic in the United States and the subsequent response of fiscal policy in a nonlinear DSGE model. The outcomes showed that fiscal policy can reduce the duration and intensity of the pandemic shock abstracted from the fact that stimulating economic activity can actually be detrimental in dealing with a pandemic.

In 2022, Ukraine's GDP decreased by 29.1%, which affected the revenue generation of the State Budget of Ukraine. The war started by Russia against Ukraine has affected not only Ukraine but also the world economy. World economic growth is projected to be well below pre-war expectations at a modest 3.1% this year before slowing to 2.2% in 2023 and moderately recovering to a still-significant 2.7% in 2024.

To recover the economy, the Ukrainian government should pursue a balanced fiscal policy, assess fiscal risks associated with changes in the macroeconomic environment, and improve the efficiency of budget expenditures (Chugunov et al., 2023). Serikova et al. (2018) are also convinced that the efficiency of tax administration determines the level of tax revenues, the functioning of the economic system, and the stable economic development of any state.

In search of sources to fill the state and local budgets, the Ministry of Finance of Ukraine has developed the "National Revenue Strategy until 2030." One of its approaches is to simplify the taxation system and restore progressive taxation scale. Differences in the ease of administration of different taxes have been and will continue to

be a critical factor in good tax policy (Slemrod, 1990). Slemrod (1990) discusses the theory of optimal taxation, which addresses the choice of taxation instruments, the optimal form of fiscal policy, and the tax treatment of a country's financial development strategy. To make the theory of optimal tax systems workable, he argues that further empirical work on the technology of tax collection, which includes the evaluation of alternative tax systems, is necessary.

It is considered ideal for any society to form a tax policy that is both efficient and fair. The possibilities and ways of achieving this ideal depend to a large extent on the interpretation of these concepts and the use of appropriate criteria for their evaluation. Forecasting the impact of domestic factors of economic growth on tax policy is possible using extrapolation, temporal dynamic models, their combinations, microsimulation models, regression, expert approaches, and others. Lysiak et al. (2022) tried to forecast the volume of revenues to Ukrainian budgets from excise taxation. They argue that ex post facto forecasting error is almost always significant compared to the expected accuracy of methods. The exceptions are often significant institutional changes in society or important disruptive influences (such as COVID-19 or military action), whose impact on tax revenues cannot be predicted. They propose to forecast the volume of tax revenues from excise tax to the budget of Ukraine, taking into account the inertia of the dynamics of influence factors, which revealed causal relationships between the influence factors and the expected indicators. Barannyk et al. (2021) are convinced that personal income tax is one of the most important taxes in Ukraine due to its economic, social and political role. It can be used to regulate the investment process, the level of real income and maintain stability in society.

Cobb and Douglas (1928) proposed the Cobb-Douglas production function. This widely used economic model describes the relationship between inputs (factors of production) and output (total output or value of goods and services). However, the Cobb-Douglas production function assumes constant returns to scale and specific functional forms; this may not al-

ways perfectly reflect real production processes, and the estimated parameters may be affected by the choice of functional form. In addition, data quality and potential econometric problems should be considered in regression analyses. According to Laffer (2004), determining the level of tax burden at the boundary between the normal and forbidden zones, i.e., at the point corresponding to the tax frontier, was feasible and guaranteed maximum tax revenues. Papava (2002), Zatonatska and Stavytskyi (2006), Merkulova (2007), and Chagovets (2013) propose an algorithm for finding fiscal Laffer points of the 1st and 2nd kind, which is based on the use of econometric dependencies. They prove that the curve reflecting the change in the tax base also has its extremum and compare this curve with the Laffer curve. Varotsis and Katerelos (2018) use linear analysis to prove that fiscal, social, and psychological factors can influence tax policy in Greece.

Thus, since Ukraine has opted for a European integration strategy, it is essential to investigate the general patterns of taxation systems in EU member states. This is necessary to determine an appropriate, modern model of tax policy, which will take into account the stage of development of the domestic economy.

2. METHODS

The information base for the comparative analysis of tax revenues was formed for a sample of 10 EU member states: France, Germany, Denmark, Greece, Belgium, Sweden, Latvia, Poland, Bulgaria, Croatia, and Ukraine. The sources of statistics are Eurostat, OECDStat, and World Bank databases (World Bank, n.d.; Eurostat Statistics Explained, n.d.; OECD.Stat, n.d.) and data from the Ministry of Finance of Ukraine and State Statistics Service of Ukraine (Ministry of Finance of Ukraine, n.d.; Open Budget, n.d.).

Correlation analysis to confirm the relationships between economic growth and the factors influencing it (tax burden, the volume of fixed assets, the volume of capital investment, and the number of employees) was carried out using the Cobb-Douglas production function (Cobb & Douglas, 1928), the general form of which is presented as:

$$Q = A \cdot L^a \cdot K^b, \tag{1}$$

where: Q – the total output or production (in our case, the country's GDP); A – a positive constant representing total factor productivity or technological progress; L – labor intensity; K – capital investment; a and b – positive constants representing the elasticities of labor and capital, respectively, and usually their sum equals 1 ($a + b = 1$).

Taking into account the influence of the tax factor, the production-institutional function takes the following form (2) (Zatonatska & Stavytskyi, 2006):

$$Q = \alpha \cdot qDK^{q \cdot (a+bq)} \cdot L^{q \cdot (n+mq)}, \tag{2}$$
$$\text{where} \quad D = e^{\beta \cdot t}.$$

Since the Cobb-Douglas function assumes constant returns to scale and specific functional forms, it may not always perfectly reflect real production processes, and the estimated parameters may be influenced by the choice of functional form. In addition, data quality and potential econometric problems should be considered in regression analyses. Therefore, the Cobb-Douglas production-institutional function is combined with the calculation of Laffer points of the 1st and 2nd kind (Laffer, 2004; Papava, 2002; Zatonatska & Stavytskyi, 2006; Merkulova, 2007; Chagovets, 2013).

Calculation of the Laffer point of the 1st kind is calculated using (3)

$$q^* = -\frac{1}{2} \frac{\tilde{n} \ln L + a \ln K}{d \ln L + b \ln K}. \tag{3}$$

The calculation of the Laffer point of the 2nd kind is calculated using (4)

$$q^{**} = \frac{1}{4} \frac{\pm \sqrt{(c \ln L + a \ln K)^2 - 8(d \ln L + b \ln K)} - c \ln L - a \ln K}{d \ln L + b \ln K}. \tag{4}$$

In turn, the phenomenon of intertwining fiscal and technological factors is calculated using (5; 6) (Odintsov et al., 2020):

$$q_L = -\frac{a}{b}, \qquad (5)$$

$$q_{\hat{E}} = -\frac{c}{d}. \qquad (6)$$

Economic data processing, charting, correlation, and regression analysis were performed using STATA 18.

3. RESULTS AND DISCUSSION

While EU' member states retain sovereignty over their tax systems, efforts are underway in the EU to harmonize certain aspects of taxation. The aim is to create a more level playing field and prevent harmful tax competition between member states. In response to concerns about tax avoidance, some EU countries have introduced measures to counter aggressive tax planning and ensure that businesses pay their fair share of taxes.

In 2022–2023, Ukraine's budget revenues from tax revenues changed significantly (Figure 1).

In general, for comparison, the planned indicators on revenues to the consolidated budget of Ukraine in 2020 and 2021 were fulfilled by 101.9% and 103.7%, respectively, while in 2022 and 2023, only by 84.26% and 99.85%, respectively. Underfulfillment of planned indicators on the consolidated budget of Ukraine was influenced by the underfulfillment of planned indicators on tax revenues of the State Budget of Ukraine. In 2022, the fulfillment was only 78.87%, and in 2023 – 99%, but the planned indicators of the local budgets of Ukraine are over fulfilled in 2022 by 0.89% and in 2023 by 2.3%. Most of the financing of the expenditures of the consolidated budget of Ukraine since the beginning of the war was carried out at the expense of assistance from the EU and other foreign countries and amounted to UAH 481.3 billion in 2022 (fulfillment of planned indicators 367.17%) and in 2023 – UAH 433.6 billion (fulfillment of planned indicators 1424.66%) (Open Budget, n.d.).

The specifics of each member state's taxation system may differ significantly, and changes to these systems may occur over time due to economic conditions, political decisions, and changes in EU rules. Therefore, this study focuses on the level of tax burden in general across the European Union countries.

Source: Open Budget (n.d.).
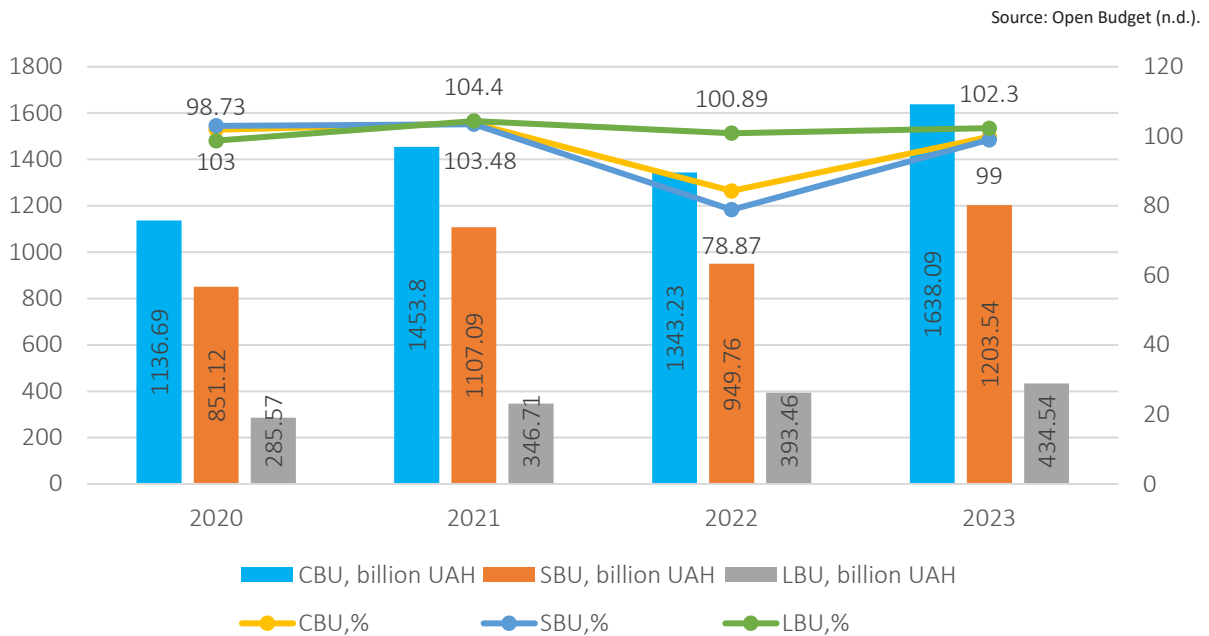
Note: Consolidated budget of Ukraine (CBU); State budget of Ukraine (SBU); local budgets of Ukraine (LBU).

Figure 1. Fulfillment of targets for tax revenues of the consolidated, state, and local budgets of Ukraine in 2020–2023
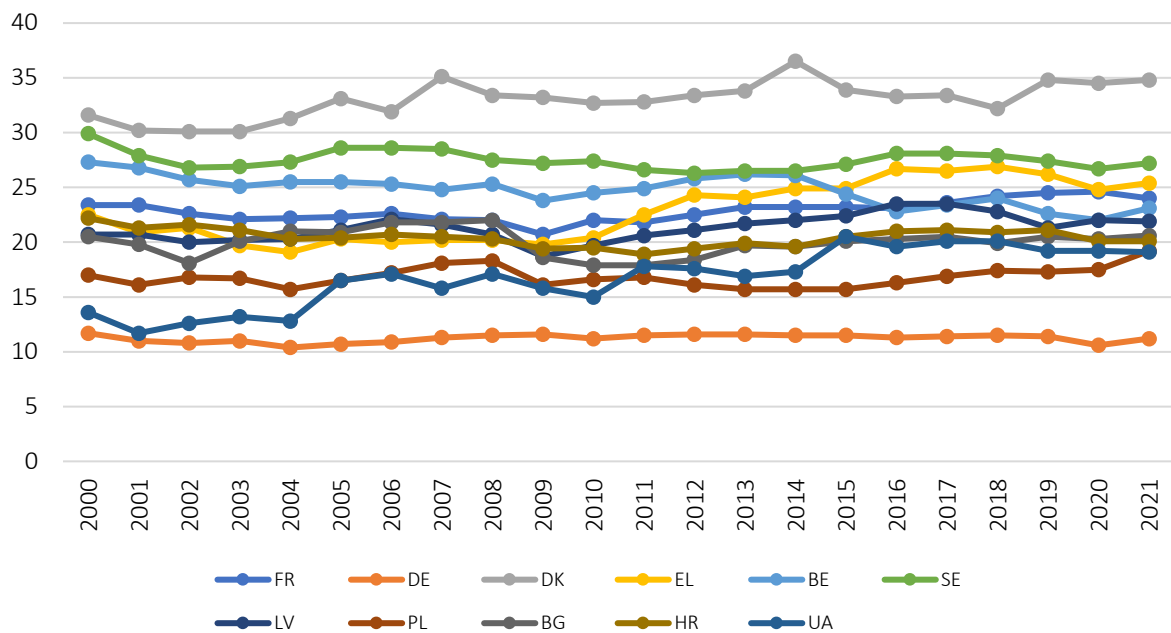
Note: FR = France, DE = Germany, DK = Denmark, EL = Greece, BE = Belgium, SE = Sweden, LV = Latvia, PL = Poland, BG = Bulgaria, HR = Croatia, UA = Ukraine.

Figure 2. Tax burden in the European Union member states (France, Germany, Denmark, Greece, Belgium, Sweden, Latvia, Poland, Bulgaria, and Croatia) and Ukraine in 2000–2021, %

The level of the tax burden on the economy, in general, reflects the share of the product produced in a country that is redistributed through the payment of taxes. It is usually calculated as the ratio between tax revenues to the budget and gross domestic product (Kushnirchuk, 2010). A sample analysis of the tax burden of the European Union member states (France, Germany, Denmark, Greece, Belgium, Sweden, Latvia, Poland, Bulgaria, and Croatia) showed that the highest tax burden is in Denmark and the lowest in Germany (Figure 2). According to the World Bank (n.d.), the tax burden indicators of the sample countries have remained unchanged for almost 10 years, and the tax burden in Ukraine is insignificant compared to them.

Based on the data of the Ministry of Finance of Ukraine and the State Statistics Service of Ukraine, slightly different values of tax burden in Ukraine were obtained, which differ from the World Bank data. In order to get a clearer picture, further analysis proceeded to the production-institutional Cobb-Douglas function (formulas 1 and 2). To estimate the parameters (A, a, b) of the Cobb-Douglas production function by regression method, data on working age population (L), capital (value of fixed assets) (K), and GDP of the country (Q) are collected. Using statistical methods, the study found the values for A, a, and b. Table 1 presents input information on forecasting the economic development of Ukraine based on the Cobb-Douglas production-institutional function.

The Cobb-Douglas production-institutional function provides for constant returns to scale and specific functional forms. It may not always perfectly reflect real production processes, and the choice of functional form may influence the estimated parameters. In addition, data quality and potential econometric problems should be considered in regression analyses. Therefore, the Cobb-Douglas production-institutional function is combined with the calculation of Laffer points of the 1st and 2nd kind (Laffer, 2004; Papava, 2002; Zatonatska & Stavytskyi, 2006; Merkulova, 2007; Chagovets, 2013) (formulas 3 and 4).

The Laffer curve is a theoretical concept, and real-world applications may have complexities and uncertainties. In addition, the Laffer point of the 1st kind assumes that the tax base remains constant, which may not always be true.

Table 1. Input information on forecasting the economic development of Ukraine based on the Cobb-Douglas production-institutional function

Source: State Statistics Service of Ukraine; Ministry of Finance of Ukraine (2024).

Period	Gross Domestic Product, UAH mln.	Tax revenues, UAH mln.	Tax burden	Value of fixed assets of Ukraine, UAH mln.	Number of employees, mln. people
	Y	T	Q	K	L
2002	225,810.00	45,397.10	0.2010411408	964,814.00	20.09
2003	267,344.00	40,490.50	0.1514546801	1,026,163.00	20.16
2004	345,113.00	47,074.70	0.1364037286	1,141,069.00	20.30
2005	441,452.00	67,389.70	0.1526546488	1,276,201.00	20.68
2006	544,153.00	84,899.20	0.1560208250	1,568,890.00	20.73
2007	720,731.00	107,912.70	0.1497267358	2,047,364.00	20.90
2008	948,056.00	165,691.60	0.1747698448	3,149,627.00	20.97
2009	913,345.00	159,229.00	0.1743360942	3,903,714.00	20.19
2010	1,082,569.00	234,542.40	0.2166535343	6,648,861.00	19.18
2011	1,302,079.00	334,572.00	0.2569521511	7,396,952.00	19.23
2012	1,411,238.00	360,409.50	0.2553853425	9,148,017.00	19.26
2013	1,454,931.00	360,497.26	0.2477761901	10,401,324.00	19.31
2014	1,566,728.00	367,511.93	0.2345728997	13,752,117.00	18.07
2015	1,979,458.00	507,635.90	0.2564519682	7,641,357.00	16.44
2016	2,383,182.00	650,781.68	0.2730725889	8,177,408.00	16.28
2017	2,982,920.00	828,158.82	0.2776336006	7,733,905.00	16.16
2018	3,558,706.00	986,348.52	0.2771649369	9,610,000.00	16.36
2019	3,974,564.00	1,070,321.84	0.2692928935	9,574,186.00	16.58
2020	4,194,102.00	1,136,687.19	0.2710203972	10,577,278.00	15.92
2021	5,459,574.00	1,453,804.08	0.2662852596	11,050,843.00	15.61
2022*	5,191,028.00	1,343,225.04	0.2587589664	11,050,843.00	13.19

Note: * according to the State Statistics Service of Ukraine, due to the martial law in Ukraine, some indicators will not be made public until its end, so information regarding 2022 data for *K* is given according to 2021 indicators, *L* – preliminary data.

Having estimated the parameters of the Cobb-Douglas production-institutional function using regression, the fiscal and technological indicators of the Ukrainian economy are obtained, calculated using formulas 3 and 4, and the method of least squares for the nonlinear model (Table 2).

Regression analysis showed that the Ukrainian economy demonstrates instability of the Laffer points of the 1st and 2nd kind. Thus, the first of them in 21 years fluctuated within the interval of 15.54%-41.74%, and the second was within the boundaries of 16.08%-24.04%. Accordingly, the variation of the Laffer point of the 1st kind was 26.2%, and the variation of the Laffer point of the 2nd kind was 7.96%. Such volatility indicates the transformation of the fiscal system during the analyzed period. Against the background of such internal fiscal characteristics as Laffer points of the 1st and 2nd kind, the actual fiscal burden also had unstable dynamics in the interval of 13.64-27.76% with a corresponding variation of 14.12%.

Moreover, the trajectories of q, q* and q** values have similar features, especially for the period 2003–2009 and 2015. In other words, a noticeable adjustment of the real fiscal climate in Ukraine occurred in unison with changes in threshold fiscal standards.

Interestingly, the "fiscal gap" between the 1st and 2nd Laffer points was 3.3%, emphasizing their proximity. On average, the Laffer point of the 1st kind was 22.65%, while the point of the 2nd kind was 19.36%. The above suggests that the fiscal response of a country differs little from that of the producer. In other words, as soon as the fiscal burden increases so much that it begins to have a discouraging effect on the producer, almost immediately, the fiscal revenues of the state begin to decline. That is, Ukrainian fiscal authorities have virtually no degree of freedom in manipulating tax rates. All their attention should be directed to the producer because its reaction will be automatically reproduced by the country's budget.

**Table 2.** Fiscal and technological indicators of the Ukrainian economy

Year	Laffer point of the 1st genus (q*), %	Laffer point of the 2nd genus (q**), %	Actual tax burden (q), %	The elasticity of substitution of capital for labor (E)	The elasticity of output to capital	The elasticity of the volume of output from labor
2002	15.54	16.08	20.10	2.41	−0.33	0.79
2003	15.62	16.12	15.15	−0.55	0.83	0.45
2004	15.76	16.18	13.64	−0.36	1.04	0.37
2005	15.81	16.16	15.27	−0.57	0.81	0.46
2006	16.18	16.37	15.60	−0.64	0.75	0.48
2007	16.64	16.59	14.97	−0.52	0.85	0.44
2008	17.56	17.06	17.48	−1.62	0.37	0.60
2009	18.57	17.68	17.43	−1.57	0.38	0.60
2010	21.03	18.96	21.67	1.09	−0.84	0.92
2011	21.36	19.09	25.70	0.52	−2.47	1.28
2012	22.13	19.39	25.54	0.53	−2.40	1.27
2013	22.60	19.55	24.78	0.58	−2.06	1.19
2014	25.68	20.86	23.46	0.71	−1.51	1.07
2015	25.40	21.23	25.65	0.52	−2.45	1.28
2016	26.11	21.50	27.31	0.44	−3.26	1.45
2017	26.03	21.52	27.76	0.43	−3.49	1.50
2018	26.92	21.71	27.73	0.43	−3.47	1.49
2019	26.43	21.50	26.93	0.46	−3.07	1.41
2020	28.63	22.29	27.10	0.45	−3.15	1.43
2021	29.84	22.64	26.63	0.47	−2.92	1.38
2022	41.74	24.04	25.88	0.51	−2.56	1.30

In general, the period of 21 years under consideration is a period of active search by the government of Ukraine for the most acceptable fiscal regime. At the same time, the tendency toward "fiscal clamping" and restraint of economic growth was clearly visible.

The monotonic fall in the estimated values of Laffer points in 2011–2014 indicates a decline in the possible potential of the Ukrainian economy, but for the last period, 2019–2021, a positive trend is observed. However, the situation in 2022 indicates a restraint of economic growth, which is associated with the beginning of Russia's military aggression against Ukraine, temporary occupation of Ukrainian lands, and large migration of the population (Figure 3).

Marginal productivity of labor is achieved at a tax burden of 0.58% and 18.96% for capital (formulas 5 and 6). Moreover, the elasticity of capital is a downwardly convex parabola (Figure 4), while the elasticity of labor is upwardly convex (Figure 5).
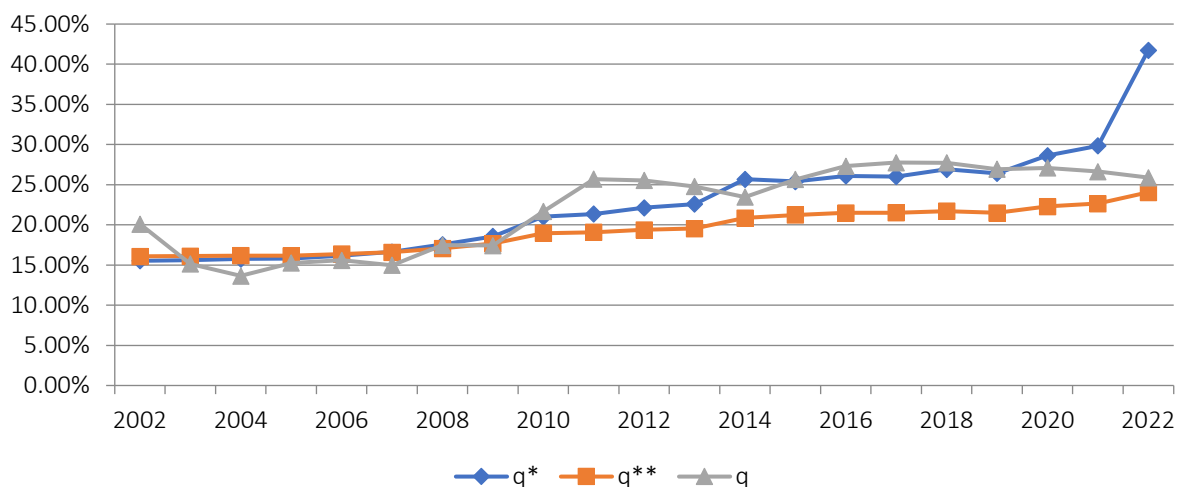
Figure 3. Laffer points of the 1st and 2nd kinds and the actual burden on the Ukrainian economy
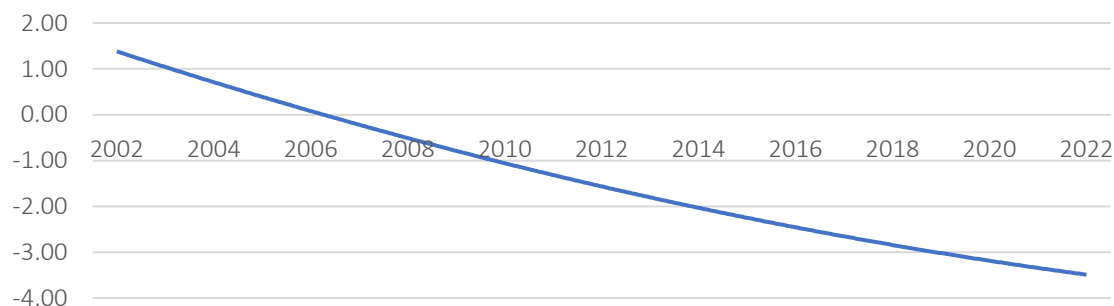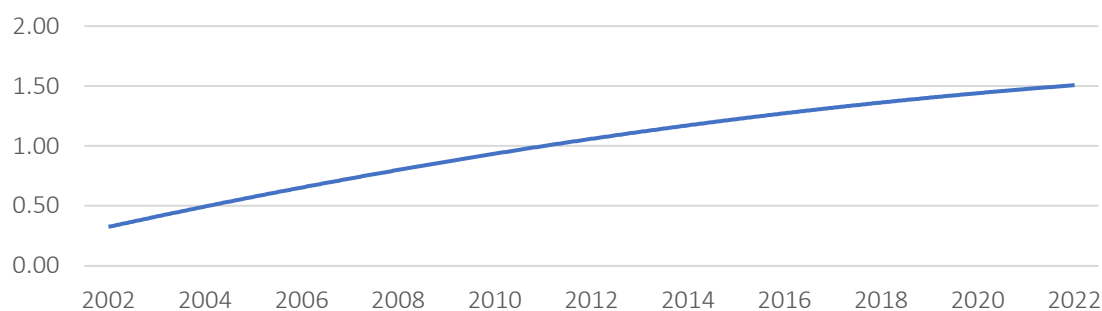
Figure 4. Capital elasticity

Figure 5. Labor elasticity

Consequently, for marginal productivity of labor and marginal productivity of capital to be both positive and positively affect GDP, the actual tax burden should be in the interval: $qL < q < q < qK$ – between 0.58% and 18.96%. Thus, the values of tax burden favorable to the efficiency of macro factors exceed the current value of the Laffer point of the 2nd kind in 2011–2022.

Table 1 shows that during 21 years, the actual value of the tax burden was only in 2003–2009. Thus, the fiscal policy of Ukraine was absolutely set to achieve the maximum technological effect only in 2003–2009.

The period from 2010 to 2022 is characterized by an extremely high tax burden, when the actual tax burden significantly exceeds the Laffer point of the 2nd kind, which leads to a slowdown in economic growth in the country.

In general, there are many varieties of tax burden calculations based on the construction of Laffer points in the world. They can be used to calculate total tax revenues for both the budget and individual tax. Trabandt and Uhlig (2011) proposed using taxes on consumption, labor, and capital in determining the tax burden, aiming to analyze how the

equilibrium shifts when tax rates shift. Higher labor taxes encourage households to work less and acquire less human capital, which in turn leads to lower labor income, and the labor tax base shrinks much faster when labor taxes increase (Trabandt & Uhlig, 2012). De Abreu et al. (2014) also suggested using factors of consumption, labor, and capital, suggesting that the outcome of the 'taxation market' also depends on competition.

Since the final result of the analysis of production-fiscal effects should be the decision to change the rates of specific taxes, it is necessary to make a transition from private fiscal instruments with their inherent rate values to the aggregate fiscal burden. If such a procedure is implemented, it will be possible to directly assess the impact of each specific tax on economic growth and budget revenues.

Business is changing in the world and in Ukraine as well, and together with this, the tax policy in the state should be transformed. This applies to the introduction of new taxes, improvement of interaction with taxpayers by increasing the efficiency of interaction, and so on. This has a direct impact on budget revenues, which is especially important in the period of increasing expenditures on defense and security of the country. Chugunov et al. (2023) identify that

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budget revenues have decreased due to the economic recession, while expenditure, primarily on defense and security, has increased. In 2022, tax revenue decreased by 7.6% compared to 2021. In contrast, the study shows an increase in budget expenditures by 65.0%, budget deficit by 4.5 times, and public and guaranteed public debt by 52.4%.

Transparency in taxation is a prerequisite for cooperation between state authorities and business entities and reduces conflict between state authorities and businesses. In Ukraine, transparency is ensured by disclosure of ultimate beneficial owner information for certain business entities. For example, Lee and Swenson (2018) found that additional mandatory disclosure resulted in companies being less aggressive with income taxes and that they were unable to shift the increased tax burden to their customers or suppliers, consumers or suppliers, and labor.

Trung and Van Tan (2020) evaluated the impact of tax incentive policies on firm performance. This study sheds light on whether tax incentive policies can help improve the performance of enterprises after privatization. The results show that privatized enterprises that received tax incentives improved profitability (ROA, ROE, ROS) and operating efficiency (NIEFF) and reduced debt burden after privatization. There is no statistical reduction in employment and increase in output (real income) after privatization.

Otekunrin et al. (2021) evaluated the effectiveness of the e-taxation system. The article shows that an effective e-taxation system will significantly reduce tax evasion. Thus, proper implementation of the e-taxation system helps to mitigate the problem of tax evasion, which causes economic and social losses in the tax administration system.

Since countries differ in their traditions, culture, and tax systems, investment allocation can be a challenging task for some investors. Andrejovska et al. (2020) find that effective tax rates are indicators of the real tax burden on businesses and consider the impact of all elements of legislation. The results showed that Ukraine in 2020 is the best choice for investors as this country has achieved lower effective tax rates on all types of assets except land than Slovakia. In the case of equity financing, the difference ranges from 10.7% to 11.6%, while in the case of debt financing, it ranges from 10.8% to 11.7%. The exception was land, whose rates were 0.70% higher than in Slovakia. This work confirmed the study's hypothesis that Ukraine is a more tax-attractive country than Slovakia.

When implementing the National Revenue Strategy until 2030, the main objective of tax regulation should be to promote sustainable economic growth of the financial condition of enterprises based on innovation and investment approach while maintaining the fiscal efficiency of tax policy for sufficient financing of the state budget. In addressing the strategic needs of society, it is important to set medium-term objectives of tax policy, such as fiscal sufficiency, economic development, and social security. A comprehensive system of meth goals in modern tax regulation should take into account the hierarchy of dominant needs in social development, necessarily taking into account the financial nature and purpose of taxes. At the same time, to avoid creating new obstacles to economic growth while fulfilling the objectives of increasing budget revenues, one should refrain from making decisions that may worsen conditions for the business sector.

CONCLUSION

One of the key tasks when military operations are taking place on Ukrainian territory is to restore economic sustainability and further ensure balance in the country's socio-economic development. The experience of EU countries confirms that socio-economic changes depend to a large extent on the efficiency of the current tax system, as its main purpose is to collect taxes to fill the state funds. These funds are necessary to fulfill the tasks assigned to the state and local government.

The paper uses the methodology of fiscal analysis based on the use of Cobb-Douglas production-institutional function, the main concept of which is the mutual location of Laffer points of the first and second type, as well as the actual level of tax burden. The study showed that the variation of the Laffer point of

the 1st kind was 26.2%, and the variation of the Laffer point of the 2nd kind was 7.96%. Such volatility indicates the transformation of the fiscal system during the analyzed period. Against the background of domestic fiscal characteristics, such as Laffer points of the 1st and 2nd kind, the actual fiscal burden also had an unstable trend in the range of 13.64-27.76% with a corresponding variation of 14.12%. In other words, a noticeable adjustment of the real fiscal climate in Ukraine occurred in unison with changes in threshold fiscal standards. According to calculations, the actual tax burden should be in the interval: $qL < q < q < qK$ – between 0.58% and 18.96%. Taking into account possible errors in calculations due to inaccurate data of 2022 and possible changes in 2022–2024 due to the martial law in Ukraine and, as a consequence, the loss of fixed assets located in the temporarily occupied Ukrainian territories and the loss of human resources due to large migration of the population, it is possible, using the experience of the European Union, to carry out forecasting not as a whole on tax revenues, but separately on the main budget-forming taxes.

Thus, a balanced and motivated tax policy together with the activation of internal factors of economic growth in the country will help Ukraine to defeat the external enemy and fulfill all the requirements for EU membership.

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