



**SCIENTIFIC, METHODOLOGICAL AND PRACTICAL ASPECTS OF  
ACCOUNTING, FINANCIAL, INFORMATION, LANGUAGE AND  
COMMUNICATIONAL SUPPORT FOR SUSTAINABLE DEVELOPMENT  
OF AGRARIAN SECTOR**

**COLLECTIVE MONOGRAPH**

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**Reviewers:**

**Valerii PLAKSIENKO** – Doctor of Economics, Professor, Professor of the Department of Accounting and Auditing, Poltava University of Economics and Trade (Poltava)

**Tetiana KOSOVA** – Doctor of Economics, Professor, Head of the Department of Finance, Accounting and Taxation, National Aviation University (Kyiv)

*Editors-in-Chief:*

**Halyna PAVLOVA**, *Doctor of Economics, Professor, Dean of the Faculty of Accounting and Finance of the Dnipro State Agrarian and Economic University*

**Lesia VASILIEVA**, *Doctor of Science in Public Administration, Professor, Deputy Dean for Research at Dnipro State Agrarian and Economic University*

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The monograph investigates the scientific problems of building accounting and financial support for the sustainable development of the agrarian sector. Modern information systems and technologies in accounting, auditing and taxation are considered. Modern learning technologies in higher education institutions are presented.

The collective monograph was published within the framework of the State Budget research topics “Innovative development of accounting, taxation and control in the system of ensuring the economic stability of enterprises” (state registration number 0121U109731) and “Financial support for structural modernization and innovative development of agroindustrial production in Ukraine” (state registration number 0124U000027), “Information technologies and mathematical methods for the development of the agricultural sector of the economy” (state registration number 0120U105338), “Linguistic and professional training of specialists: lingual, social, cognitive, communicative and cultural aspects” (state registration number 0122U001178).

The publication is aimed at professionals engaged in practical activities in the field of regional policy, academics, government officials and the general public.

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### **6.3. LAND FEE IN UKRAINE: CURRENT STATE AND PROSPECTS OF DEVELOPMENT**

*Oksana Hrabchuk*

*Doctor of Economics, professor of the Department of Finance, Banking and Insurance, Dnipro State Agrarian and Economic University, Ukraine*

**Summary.** The publication is devoted to the analysis of the mechanism of taxation of land resources in Ukraine and the identification of problems of its functioning and development prospects. During the writing, the following methods were used: historical, dialectical, comparative legal, analysis, synthesis, statistical analysis. The dual essence and legal nature of mandatory land fees in Ukraine is determined. The features of the mechanism of land taxation in Ukraine, including such during the war, are revealed. Examples of land taxation in some countries are considered. The fiscal significance of land fees for the Consolidated Budget of Ukraine has been assessed and a statistical analysis of the receipt of land fees to local budgets has been carried out. The problematic aspects of charging for land in Ukraine are considered and the prospects for overcoming them are outlined.

**Keywords:** land fee, rent, local budgets, land market, land reform.

The economy of Ukraine is currently in a state of crisis, which is mainly determined by the war with Russia and has a number of other objective factors. Business entities have lost the possibility of effective production activity and a significant part of sales markets. The purchasing power of the population also decreased sharply. As a result, budget losses also increased. The volume of centralized financial resources has decreased, and this factor limits the financial capabilities of the state and its ability to perform its functions. Payment of taxes for the use of natural resources provides an opportunity to replenish budget resources. Taxation of land resources is one of the most important and complex elements of the tax system of Ukraine. The specificity of their taxation determines the efficiency of enterprises in the agrarian sector of the economy. All of the above stated makes the topic of this scientific research important and relevant.

The purpose of this study is to conduct an analysis of the features of taxation of land resources, to identify problems and shortcomings of the mechanism of land fee,

and to develop proposals for its improvement.

The object of the study is social relations in the field of taxation of land resources. The subject of the study is the mechanism of making mandatory land fees in Ukraine.

General and special scientific studies became the theoretical and methodological basis of this research: dialectical – for studying the theoretical and normative provisions of making mandatory land fees; comparative and legal was used during the analysis of foreign experience of taxation of land resources; analysis – during the study of the fiscal value of the land fee in the formation of revenues of local budgets of Ukraine, statistical analysis – during the study of trends in the dynamics of the volume of revenues from the income of mandatory land fees.

Educational, scientific and methodological works, statistical data of the State Statistics Service of Ukraine and the National Bank of Ukraine became the information base for the monograph.

Land resources are one of the defining types of resources that determine the potential growth of the country's national wealth. They form an ecological system, they are the main means of production in agriculture, forestry and water management, land resources also contribute to meeting the social and natural needs of the population. The concepts of «land resources» and «land» do not have a clear established definition in the field of legal and economic sciences. Many publications are devoted to the definition of these concepts, but they are tangential to natural definitions and they are limited from the point of view of law or economy. For example, from the point of view of geography, «land» is the entire surface of the planet, which has a material, physical embodiment. From a political and legal point of view, «land» is a geographical object that is distributed between states and can be defined a sign of their integrity. From the point of view of economic theory, «land» can be defined taking into account its «natural origin», considering that land resources are a part of the land with its natural wealth – soils, biota and surface waters. As a resource for social production, land performs many important functions for the sustenance of humanity, and becomes the basis for the formation of basic socio–economic ties. As a result, all members of society are involved in land relations and socio–economic relations formed on their basis. K. Marx writes about it like this: «...land is a space necessary as a condition for any production and any human activity.» Thus, the concept of «land» represents a certain integrity, unity from the

natural–scientific, socio–political and economic points of view:

– from a natural and scientific point of view – the land is a material object that has certain physical properties, is capable of self-regeneration and is involved in the natural cycle of things;

– from a socio-political point of view – the land is the surface of the planet, on which socio-political formations that determine the sovereignty of states and peoples are located;

– from an economic point of view – land is an object and a tool of labor, on the basis of which products that have life-sustaining and consumer properties and value are created.

The Laws of Ukraine have separate formulations of the terms «land», «land plot». The term «land» is defined in the Law of Ukraine «About Land Protection» [24]. According to this law, it is stated that «the land is the land surface with soils, minerals and other natural elements that are organically combined and function together with it.» The concept of «land plot» is defined in the Land Code of Ukraine [18], where it is described in part 1 of Article 79 as follows: «A land plot as an object of ownership is a part of the land surface with established boundaries, a certain location and defined rights in relation to it». That is, from a legal point of view, land is a natural material object that can be owned and can be involved in legal relations. One of the directions of legal relations with the land is relations regarding the creation, distribution and redistribution of added value on it. Financial and legal relations, part of which are relations on taxation of land resources arise.

Thus, «land», «land resources» have many different functions and various purposes.

At the same time, land resources are a specific object of taxation. The specificity of land resources as an object of taxation is determined [15]:

– by the relative nature of the value of land resources as a commodity (depending on the quality of land, its location, purpose and history of use);

– by the relative nature of the value of land as a means of production (depending on the ecological environment, the efficiency of involvement in production, natural and climatic conditions, the direction of use, the need and cost of mechanization, the involvement of human labor, etc.);

– by accounting and assessment of individual plots of land in the Land Cadastre, the creation of which has not yet been completed;

– by the administration of mandatory land fees, the mechanism of their collection.

The land fee is one of the most fiscally significant mandatory payments in Ukraine and it is paid over a long period of time. However, there is still no unity in the understanding of its essence in modern economic science. All debatable points in the understanding of the essence of land payment are determined by the combination of two mandatory payments in it – land tax and land rent. The land fee is defined as a general concept that contains two components: land tax, which is defined as a monetary payment to the budget established by the legislative body and ensured by state coercion, paid by land owners on the basis of obligation, unilaterality and individual gratuitousness in order to meet general societal needs; rent for land of state, communal forms of ownership, paid by land users in accordance with the lease agreement [5, p. 13].

It is possible to assert the existence of two main aspects of the manifestation of the land fee (Fig. 1).

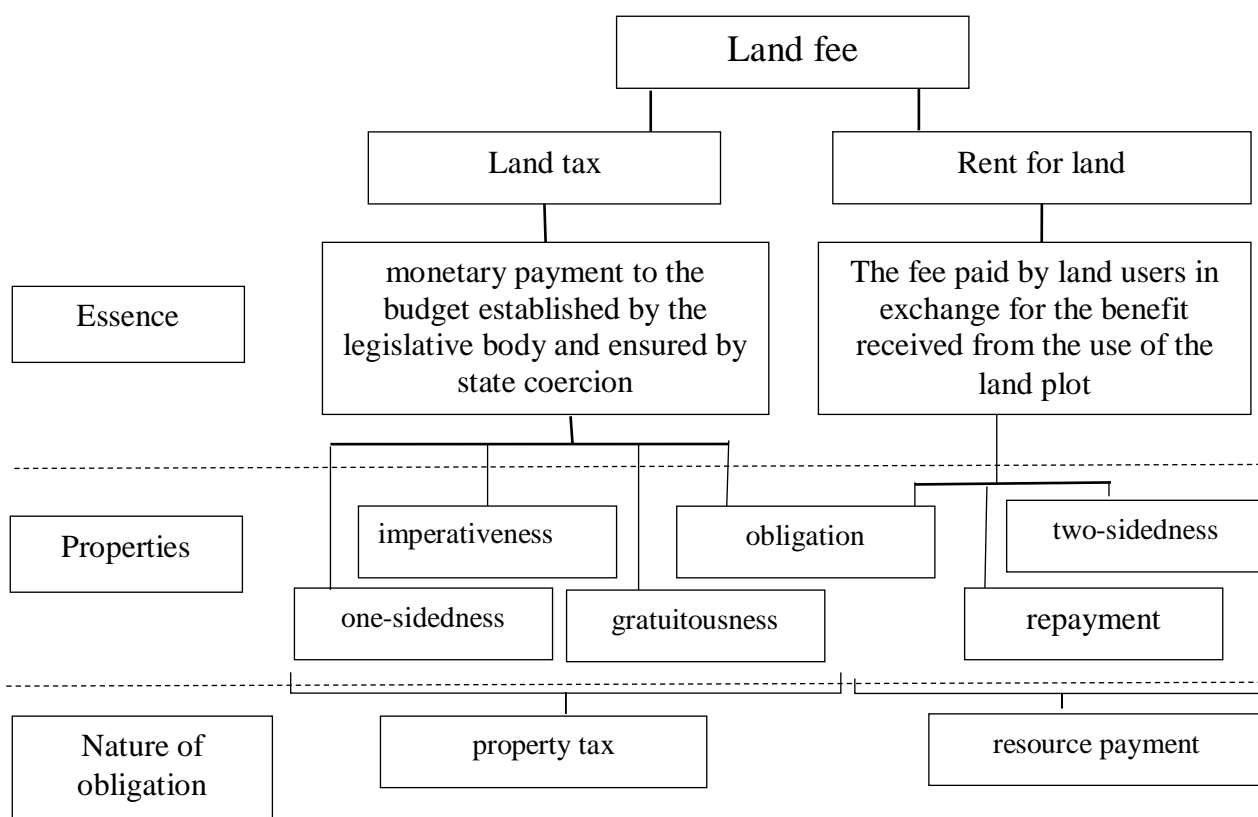


Fig. 1 – Two aspects of the manifestation of the essence of the land fee

Thus, the land tax, which is a form of property tax, has properties inherent to all taxes: imperativeness, obligation, one-sidedness and gratuitousness [21].

Imperativeness (magisterial coercion) of the land tax manifests itself in a rather significant volume, since neither the amount of obligations nor the collection mechanism is related to the amount of income received from the land plot in possession or the amount of the owner's income. The lower limit of the value (estimated value) of the land plot, which is the basis for calculating the amount of obligations, is also limited. Even more, the very fact of receiving any income or benefit from owning a land plot is not mandatory.

The property of imperativeness is inherent in the rent for the land, however, on the basis of the definition of the very essence of the concept of the fee, it is understood that the land user uses the land, therefore, in one way or another, he receives a benefit from its use.

The property of obligation is inherent in both components of the land fee, but it also manifests itself differently. For land tax, the obligation means the necessity of unconditional fulfillment of the obligations of the payer to the state, which determines the formation of public legal relations. For land rent, obligation means the need to fulfill the contractual obligations of the land user to the landowner (it can be the state, territorial community, legal entity, natural person), which determines the formation of both public and private legal relations.

One-sidedness in the payment of land tax is determined by the vector orientation of financial obligations and authority, while in the collection of rent there is an asymmetric, but bilateral orientation of obligations and powers. Likewise, differences in the essence of land tax and land rent form the properties of gratuitousness and repayment.

The legal nature of both components of the land fee is public, but the legal relationship is implemented quite differently. Differences in the mechanism of implementation of legal relations of land tax and rent for the use of land resources are determined mainly by the peculiarities of the institution of ownership. Thus, land tax payers are persons (legal entities or individuals) who own all three components of land ownership (ownership, command and rights to use). Payers of rent for land have only one component of ownership (the rights to use). At the same time, the fiscal burden on the payers of both components of the land fee is practically the same and does not correspond to their institutional differences. The improvement of the land tax collection mechanism should also take into account the fundamental theoretical differences in the essence of the land tax and rent for the use of land resources.



The functions of taxes determine their economic essence. Domestic financial science traditionally pays considerable attention to the study of taxation functions.

Consider the functions of land taxation [28]:

- stimulating function – stimulation of rational land use;
- regulatory function – allows to equalize business conditions for enterprises operating in different conditions;
- fiscal function – compulsory collection of taxes for the benefit of local or state budgets, with the aim of improving the infrastructure of the community as a whole.

Land tax has significant advantages both fiscally and regulatoryly, including:

- the possibility of evasion of taxation with land tax;
- ensuring effective use of land as the main natural wealth of society, the state seeks from landowners due to the stimulating function [14, p. 28].

Land taxation in Ukraine is represented by the land fee, which was introduced in 1992. Until 2015, this tax belonged to the national taxes, however, from January 1, 2015, the land fee became part of the property tax and was transferred to the local taxes. It is worth noting that village, settlement, and city councils make decisions on setting local taxes and fees within their powers. Thus, local self-government bodies have been given the authority to establish land fee rates within the limits of the maximum amount, land tax benefits, and normative monetary valuation of land plots located on the territory of settlements.

The concept of «land fee» should also be considered through the prism of financial law and legislation of Ukraine. «Land fee» is a generalizing concept and combines two mandatory payments – land tax and rent for land in state and communal forms of ownership. The land fee has two components, the regulatory legal support and administration of which differ significantly [2]:

- land tax as part of property tax
- rent for the use of land plots.

Article 14, Chapter 1 «General Provisions» of the Tax Code of Ukraine dated December 2, 2010 defines several concepts, such as «land fee», «land tax», «rent», and in section XII of Art. 265 «Property Tax» of the TC of Ukraine, the land fee is defined as a component of the property tax, considering Art. 10 – the land fee refers to local taxes and exists as a part of the property tax. So, according to the Tax Code of Ukraine, the land fee is a mandatory payment as part of the property tax, which is

paid in the form of land tax or rent for land plots of state and communal property of the TCU [21].

According to Article 14 of the Tax Code of Ukraine, only permanent land users and land owners must pay land tax as part of property tax. That is, for taxation purposes, a person must acquire the status of either a land owner or a permanent land user, which is also regulated by the Land Code of Ukraine [18]. In other cases, the land user pays the rent. At the same time, it should be taken into account that the payment of land tax as part of property tax does not give a person the right to own land. A permanent land user is not the owner of the land, although he is a payer of the land tax as part of the property tax. Determining the status of the land user is an important element of the land fee mechanism. In order to determine the status of the tenant of a land plot, it is necessary to determine its owner (most often a territorial community), to register the plot of land in the Land Cadastre, to determine the value (not lower than the normative assessment of land of this type in a given territorial community) and to conclude a lease agreement.

Therefore, it is legally determined that the components of land payment are rent and land tax. The definitions of these categories still do not sufficiently reveal the essence and meaning of the land fee, it is necessary to analyze the legal literature and define the objects and subjects of legal relations arising in the process of land fee payment.

Land tax payers are the owners of land plots, parts of land (shares) and land users (clause 269.1 of Article 269 of the Tax Code) [30]. However, according to Art. 14 of the Tax Code of Ukraine, land tax must be paid only by permanent land users.

The objects of taxation are:

- land plots that are owned or used;
- parts of land (shares) that are owned (clause 270.1 of article 270 of the Code);

The basic tax (accountable) period for land tax is the calendar year. At the beginning of the year, the taxpayer receives a decision-notification on the amount of the tax liability and pays the corresponding amount within 60 days. The decision-message also appears in the taxpayer's electronic account.

Other components of the land fee collection mechanism are tax rates. The entire land fund of Ukraine is divided into categories according to the purpose of their use. Land tax rates are regulated by Art. 273–277 of the Tax Code of Ukraine.

Yes, rates are set differently according to different categories of land. Depending on the purpose, the land fund is divided into categories. However, according to the TCU, the differentiation does not fully coincide with the provisions of the current Land Code of Ukraine (Article 19). According to Art. 275, 276 of the TCU, taxation of land plots within settlements is carried out at separate rates. Therefore, taking into account the provisions of Clause 1.1 of Art. 1 of the Tax Code and Art. 2 and Art. 3 of the Land Code of Ukraine, it is known that for the purposes of taxation with land tax, a person must have the status of land owner/land user acquired in the manner established by the Land Code of Ukraine. In accordance with clause 286.1 of Art. 286 of the Tax Code, the data of the state land cadastre is the basis for charging the land tax. Under such circumstances, the provisions of clause 287.8 of Art. 287 of the Tax Code of Ukraine by themselves cannot be a legal basis for a person to acquire the right to own or use a land plot located under an apartment building, where non-residential premises belonging to such a person are located, since such provisions contradict a special regulatory act – the Land Code of Ukraine, which are exclusively regulated by land relations, and, as a result, a basis for charging such a person a fee for land [28].

Therefore, tax rates differ by land category, special tax rates determined by the decision of the relevant Councils are applied within the settlements.

A special issue of the administration of land tax collection is the reconciliation of the registered area of the land plot, which is in land use or ownership. There are often disagreements regarding the size of the land plot that is at the disposal of the payer. In such cases, the payer agrees the amount of his obligations with the relevant territorial body of the tax service. Through his own electronic office or in person, in electronic form or in writing, he submits an application for reconciliation of data regarding the size of areas and the number of land plots, parts of land (shares) owned or used. At the same time, certified copies of documents certifying ownership of the land or the right to use it, as well as documents according to which the land plot is registered, are provided.

Therefore, the study of land tax administration should be used to create an effective taxation system.

Taxation of land resources in one form or another exists in every country of the world. And each country has its own peculiarities, its own model of such taxation. There are three basic models for making mandatory land payments:

- as an independent tax (Estonia, Latvia, Singapore, Taiwan);
- as part of property tax (Bulgaria, Czech Republic, Slovakia, Latvia, Hungary, Canada, Finland, Japan, Cyprus, Hong Kong, Germany, Netherlands, Ireland, Pakistan, etc.);
- as part of several taxes (China, Poland, France).

The first model of land tax is extremely rare. Most often, property, real estate, etc. taxation is involved in one form or another in this model.

Land resources are taxed according to the second model in more than 130 countries. As a rule, land resources are taxed as part of the property tax, together with them as part of this tax, buildings, structures, transmission devices, and other immovable property are taxed. Such active use in other countries of the second model of collecting mandatory land fees is due to the fact that the property tax is the least sensitive to changes in the economic situation, and the income from this tax is the most stable [16]. In addition, property tax has existed for a long historical period and has been used in a large number of European countries in one form or another. The Physiocrats generally believed that a land tax was «natural» because land was the source of all wealth. Political economists also believed that the tax burden should be shifted from income and wages to land rent (Adam Smith) [31].

In English, the term «property taxes» refers to taxes on land, real estate, and certain assets (US). In Western Europe, property taxes apply only to land and real estate. The term «property tax» also implies the permanent nature of the tax on land, real estate and other assets. So, these taxes are practically identical. In the tax system of foreign countries, as noted by I. I. Kucherov, direct taxes are imposed directly on the taxpayer's property or income, and are divided into real or personal. Real taxes are levied on property on the basis of the cadastre without taking into account the income tax payer received, in particular, land taxes [31]

It should be noted that in the conditions of the market transformation of the domestic economy, the issue of the formation of local budget revenues and the identification of reserves for their growth are gaining special relevance. Historically, land has become an important object of taxation in all countries of the world. Land taxation plays a special role in the aspect of solving local budget deficit issues. In many foreign countries, this role is performed by real estate taxes. The tax is introduced by local self-government bodies in order to receive funds to pay for the services they provide.

Ukraine, having announced its intention to join the EU, should gradually approach the European level of standards for meeting the needs of its citizens in public goods financed by taxes and fees. The use of property tax to finance local public services ensures the relationship between taxes paid and benefits received, which is an important principle of organizing an effective taxation system. As I. O. Lyuty rightly points out, expanding the base allows citizens to participate in financing the services they receive from local authorities. And this is not only evidence of their willingness to pay for the services they consume, but also helps them to a greater extent feel like full-fledged citizens of their country [11, p. 187]. It should be noted that in this meaning, the legal regulation of taxation as one of the main means of state influence on social relations is carried out with the aim of regulating them in the interests of person, society and the state. World experience shows that if the right approach is used, the real estate tax can become one of the important items of the revenue part of the budget. It provides up to 81 % of revenues to local budgets in Canada, from 10 to 70 % – in the USA. In countries with developing economy, according to the World Bank, real estate tax accounts for 40–80 % of payments to local budgets [20, p. 119]. At the same time, V. S. Dmytrovska expressed the opinion that in the countries of Eastern Europe, the situation with the introduction of real estate tax is complicated by the weak development of the real estate market, the lack of necessary information and reference systems, high rates of inflation and other factors [9]. The experience of land taxation in foreign countries testifies to the gradual rejection of the real principles of land tax administration and the construction of a mechanism based on the principles of personal taxation. In this form, the land tax agrees with the amount of income received by the owner of the land or the one who uses it. In many countries of Eastern Europe, the amount of property tax depends on the area of real estate, not on its value, which, according to L. Ethel, is a «relic» of the communist era [13, p. 114]. Agreeing with this position, we consider it expedient to reform the rules of property taxation, in particular, the introduction of the cadastre and tax on the value of property in these countries. It should be noted that real estate tax is exclusively a local tax in EU countries, although its marginal rates are determined at the central level. In Great Britain, this is the main local tax (which has the largest share in the revenue structure), which also includes the land fee [17, p. 550]. Property tax in foreign countries is credited either to the central budget (Sweden, Greece, Belgium) or to both the central budget and the

local budget (Bulgaria). However, it should be noted that in most countries this tax is local and is paid into the local budget. It acts as one of the main sources of income for the budgets of local self-government bodies. In particular, it provides up to 95 % of revenues to local budgets in the Netherlands, 81 % in Canada, 52 % in France, and from 10 to 70 % in the USA [31]. According to the existing tradition in the world, real estate tax rates are determined in the fixed form (percentage of the tax base) or variable one, taking into account the planned budget expenditures and the amount of the existing tax base. The structure of the real estate tax rate depends on the needs for tax revenues, as well as, according to I. O. Lyuty, on the political and economic culture [11, p. 188]. This position is also supported by economists who believe that in international practice, the size of real estate tax rates depends on the peculiarities of national legislation and economic practice and is largely determined by political factors, and therefore it is not for nothing that this tax is considered a test of democracy [19, p. 132]. A significant role in the regulation of land taxation in the countries of the world is played not only by central authorities, but also by municipalities. In the Netherlands, the provinces have very limited powers of tax initiative. Municipalities have wider fiscal powers.

In Canada, tax rates are calculated taking into account municipal budget expenditures, that is, local needs are determined first, and then the land tax rate is set. Land is assessed based on market value and therefore rates can vary significantly across municipalities. This leads to the adequacy of rates and at the same time there is no talk about increased tax rates. This approach to land taxation instills trust to local authorities and reduces tax evasion. In many countries, the tax rate is less than 1 % of the tax base, but the rates are relatively high in Pakistan (up to 26 %), Singapore (12 %) [31]. According to the general scheme, marginal rates for land taxation are determined at the central level and are adjusted by local authorities. The combination of two levels of government when deciding on land taxation allows you to objectively determine all the necessary indicators and take into account local features. In the Czech Republic, tax rates depend on the type and purpose of the land plot, which can be adjusted by local authorities with a correction factor depending on the population of the municipality. According to the third model, when land taxation is carried out by several taxes, the experience of China seems interesting [27]. There, land taxation is regulated by several taxes depending on the location of the land plot (urban land use tax), purpose (agricultural land ownership tax) and ownership form (urban real

estate tax). Despite the variety of taxes, their marginal rates are determined at the central level with local adjustments. Thus, the amount of tax on the use of urban land is set by the central government, and local authorities determine the amount of land used and rates within the limits established by the government. In Poland, depending on the way of its use, three taxes belong to land taxation: real estate tax (land, houses, buildings), agricultural tax and forest tax. It should be noted that the peculiarity of land tax calculation in this country is not the market value of the land plot, but its area. This approach is sufficiently transparent and simple to administer, but this position does not take into account the nuances of the development of a market economy and unevenly distributes the tax pressure, which raises certain doubts. In France, land taxation is governed by two taxes: a tax on developed (built-up) land and a tax on undeveloped (unbuilt) land. The peculiarity of these taxes is that the tax base is determined on the basis of the rental value of land according to the land cadastre, which is not rent under normal market conditions, but is a theoretical profit from real estate based on the assessment of local authorities. In the aspect of administration, the Bulgarian taxation experience is important for Ukraine, in our opinion. When purchasing real estate, the payer is required to submit an annual tax return. If the real estate object (land or building and land) has not undergone any changes in the following time, it is not necessary to additionally submit annual declarations and at the same time the tax is paid in equal parts every quarter. This declaration procedure simplifies and thus improves tax administration. In order to increase the conscientious payment of land tax, it is necessary to take the taxation procedure, in which if the payer pays the tax once a year in full by March 31, he receives a discount of 5 %. The annual property tax rate is the same for both legal entities and individuals (0,15 %) [31]. It is determined by the tax authority according to complex formulas and therefore – with written notification of all tax payers. Property tax in Bulgaria is the lowest in Europe. It is calculated from the tax assessment of immovable property and is determined for each municipality by the relevant council. Foreign experience indicates a gradual change in the ratio of the fiscal function of the land tax with other functions of taxation. As mentioned above, land tax abroad is the basis of local budgets. Moreover, in addition to the fiscal function, the regulatory function which consists in the establishment by the state of a system of regulators to force landowners to use the land efficiently is distinguished, without impairing soil fertility, since the tax is not only a fiscal tool for ensuring the financial needs of

municipalities, but also an important regulator of land relations. The presence of a land tax encourages the owner or user to use the land economically. As the experience of Bulgaria shows, in the case of uncultivated plots of land, their owners are taxed at increased land tax rates, which creates an economic interest of land owners in its continuous cultivation. In Italy, if the land plot is not used for its intended purpose, the cadastral assessment increases according to the established system of coefficients to a maximum of 300 %.

In most countries of the world, real estate tax payers are defined by legislation as both physical and legal entities – owners of real estate (land, structures, buildings). In some countries, in particular in Great Britain, the tax payer is also the property user, and in the Czech Republic, in some cases, the land tax payer can be the tenant, if the owner of the plot is not established. Note that in some countries, in the absence of special conditions, the owner of the land automatically becomes the owner of the real estate located on the land plot. Therefore, the right to own land presupposes the right to own real estate. If the real estate is located on leased land, separate registration of the building or structure is required. It should be noted that most countries use mainly the market value of land when determining the tax base, but the market value assessment is possible only if there is a full-fledged real estate market. Having studied the international practice of taxation of real estate, in particular land, it was noted that there is a different approach to granting benefits. In some countries, benefits are provided to real estate objects and not to taxpayers, in others – a combination of both methods. Benefits can be indefinite or temporary, and sometimes they are provided according to the specific features of the buildings.

Mandatory land fees are a significant source of financial resources for local budgets. They form a significant share of the general fund of local budgets, which is confirmed by the analysis of their volume for 2015–2022 (table 1). Data on the implementation of the revenue part of the local budgets of Ukraine and the receipt of land fees were obtained from the website of the Ministry of Finance [26].

As can be seen from this table, the volume of revenues to the general fund of local budgets was constantly growing: by 46,89 % in 2016, 30,90 % in 2017, 21,90 % in 2018, 17,56 % in 2019. year, 5,44 % in 2020, 21,34 % in 2021. Even Russian aggression did not change the trend, and in 2022 the volume of revenues to the general fund of local budgets increased by 13,44 % against the planned 12,08 %. Such growth is connected, first of all, with an increase of the financial independence



of local budgets. In contrast to the high rates of growth of the general fund of local budgets, the volume of income from land fees does not change so quickly. Thus, the growth rates of mandatory land fees were: 61,06 % in 2016, 13,3 % in 2017, 3,48 % in 2018, 20,19 % in 2019, – 4,13 % in 2020, 12,04 % in 2021. As we can see, the growth in the volume of revenues from the payment of land fees occurs at a much lower rate than the growth in the volume of revenues to the general fund of local budgets.

Table 1

The volume of revenues from payment of land fees to local budgets of Ukraine

On years	General fund of local budgets, million hryvnias	Land fee, million hryvnias.	The level of implementation of the planned amount of income from the land fee, %	The rate of growth of the general fund of local budgets, %	The rate of growth of the land fee, %
2015	99800,0	14466,6	112,2		
2016	146600,0	23300,0	114,7	146,89	161,06
2017	191900,0	26400,0	103,8	130,90	113,30
2018	233930,3	27319,1	99, 1	121,90	103,48
2019	275016,4	32835,0	120,2	117,56	120,19
2020	289986,0	31477,8	95,9	105,44	95,87
2021	351875,9	35268,3	101,4	121,34	112,04
2022, approved.	394400,0	34500,0	85,79	112,08	97,82
2022, act.	398100,0	29600,0		113,14	83,93

The analysis of the implementation of local budgets for 2023 shows a significant difference from 2022 in the field of growth. At the same time, it is worth noting that revenues to the state budget have also increased significantly compared to 2022. Thus, the increase in revenues of the general fund without transfers (actually own revenues: mainly this are tax revenues) from local budgets for 2023 is +11.0% (+43.8 billion UAH), compared to 2022. At the same time, the increase in revenues from the state budget is +21.1% (+212.9 billion UAH). This increase in the state budget is due to a significant increase in revenues from value added tax on goods imported into the customs territory of Ukraine (+44.7% or +113.1 billion UAH) and excise tax (+63.5% or +65.0 billion) UAH). It is also worth noting the extremely high income growth of budget institutions' own revenues, which according to the state budget in 2023 amounted to UAH 767.0 billion, whereas in 2021 such revenues amounted to only UAH 51.3 billion, in 2022 - to UAH 202.1 billion. In fact, the

increase in own revenues of budgetary institutions in 2023, compared to 2022, according to the state budget in absolute terms amounted to UAH 564.69 billion [3].

The war caused a significant decrease in the amount of income from land tax payments. The drop in revenue was – 16,07 % against the expected 2,18 %. The reason for such a discrepancy between the growth rates of the general fund of local budgets and mandatory land fees is the lack of regulation and inefficient administration of the last ones. A significant amount of land is not yet included in the Land Cadastre and does not have a value estimated. The vast majority of taxed lands are assessed only according to the normative assessment, which does not correspond to their market value at all. The war interrupted not only the peaceful life of the Ukrainian people, but also many transformations, including the land reform.

Confirmation of inefficient administration of land fee is quite frequent non-fulfilment of the planned volume of revenues. Out of the seven analyzed years (not including the military year 2022), non-fulfilment of the planned amount of revenue from land payment was observed twice – in 2018 and 2021 – by 0,9 % and by 4,1 %, respectively. However, a significant overachievement of the amount of revenue from land payment also indicates ineffective tax planning and was also observed twice – in 2016 and 2019, when the overachievement of the revenue plan amounted to 14,7 % and 20,2 %, respectively.

As a result, the fiscal significance of the land fee in the formation of the general fund of local budgets is constantly decreasing (Fig. 2)

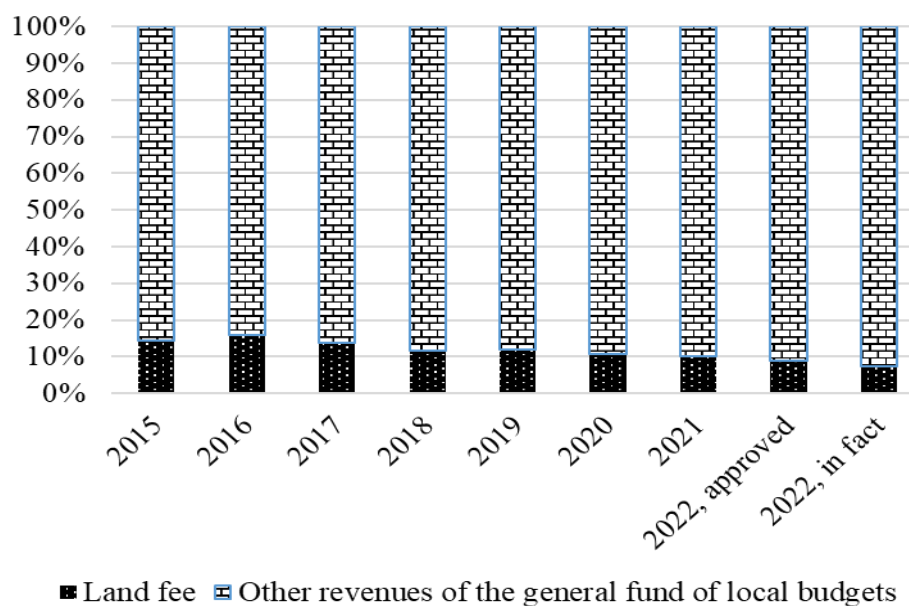


Fig. 2. Specific weight of mandatory land fees in the formation of revenues of local budgets of Ukraine, %

Thus, the share of mandatory land fees in the revenues of the general fund of local budgets constantly decreased and amounted to: 14,5 % in 2016, 15,89 % in 2017, 13,76 % in 2018, 11,68 % – in 2019, 11,94 % – in 2020, 10,02 % – in 2021. In 2022, this share actually amounted to 7,44 % against the expected 8,75 %.

Therefore, the fiscal significance of the land fee is constantly decreasing.

Thus, in our opinion, among the main factors that negatively affect the volume of income from land fees to the local budgets of Ukraine are:

- unsettled assessment of land as an object of taxation, a significant discrepancy between the normative assessment and the actual market value of the land;

- the actual absence of a land market, which determines the absence of a market assessment of its value;

- inefficient tax administration of mandatory land fees;

- the loss of a large amount of land as a result of Russian aggression and its withdrawal from active use, which led to a sharp decrease in the amount of income.

When conducting an analysis of the dynamics of the volume of revenues from the payment of land tax, it is necessary to take into account the change in the value of money over time. This is especially important in the conditions of the Ukrainian economy, since our economy is changing rapidly and the inflation rate is quite high. Inflation became especially significant in 2022 due to the war.

It will be correct to take into account the change in the value of money when assessing the dynamics of the volume of income from paying taxes, that is, to discount the volume of income. When taking into account the level of inflation, the indicator of the basic consumer price index according to the NBU [4] was used, which was 34,7 % in 2015, 5,8 % in 2016, 9,5 % in 2017, and 8,7 % in 2018, in 2019 – 3,9 %, in 2020 – 4,5 %, in 2021 – 7,9 %, in 2022 – 22,6 %. Discounting was carried out using compound interest and the volume of all revenues to the general fund of local budgets of Ukraine and from the payment of mandatory land fees was calculated according to the price level at the beginning of 2023. The results of the assessment of the dynamics of the volume of all revenues to the general fund of local budgets and from the payment of land fees with and without inflation are shown in Figures 3 and 4, respectively.

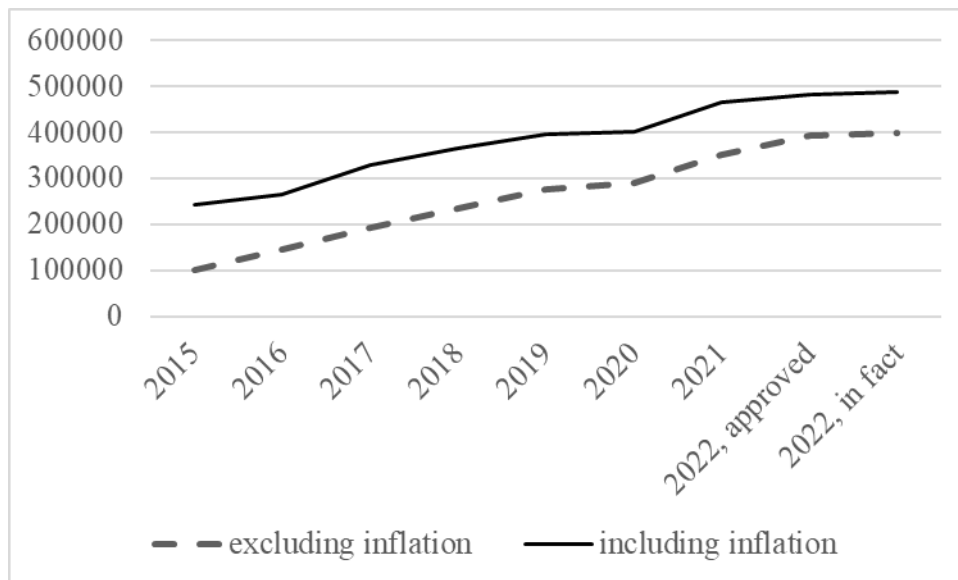


Fig. 2 – Dynamics of the general fund of local budgets of Ukraine, million hryvnias.

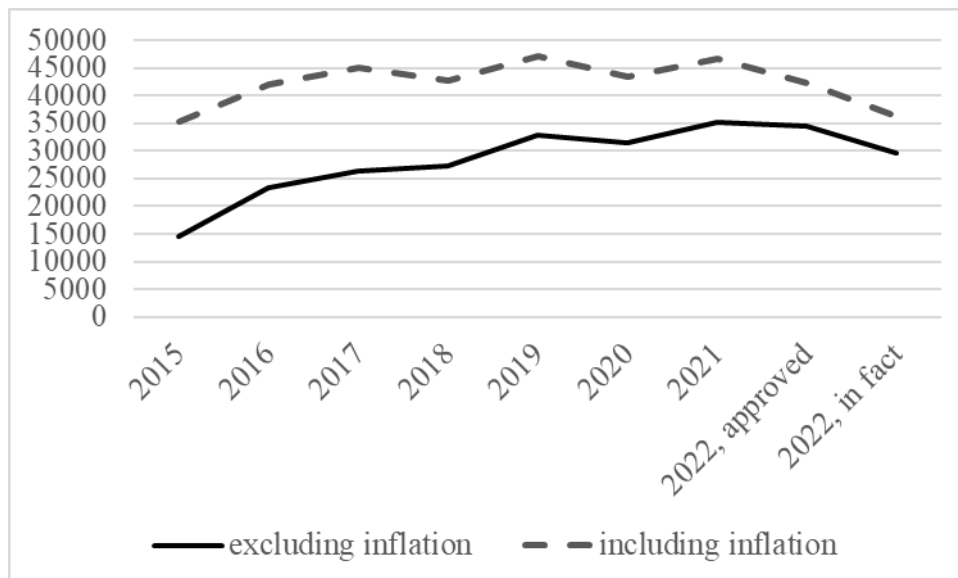


Fig. 3 – Dynamics of the volume of land fee, million hryvnias.

As can be seen from the above figures, the nominally high growth rates of all revenues to the general fund of local budgets are actually much lower, and in 2021–2022 the growth rates decrease almost to 0.

As for the dynamics of the volume of revenues from the settlement of mandatory land fees, they are not really high, the growth rates are variable – they range from positive to negative, and in 2021–2022, a significant drop is generally confirmed.

The next stage of the analysis of the dynamics of the volume of income from land fee is the construction of a linear trend.

Making time forecasts (building trends) is one of the simplest forms of

forecasting. This method formally describes the dependence of the dynamics of the indicator over time, which makes it possible to obtain approximate forecasts for the nearest periods.

The results of building linear trends are presented in Table 2. It was built two linear trends – for the amount of income from land fee with and without inflation.

If we compare the initial level of income from making mandatory land fees, it is much higher for the trend with inflation taken into account (37,643.8 million hryvnias) than for the trend for which inflation was not taken into account (15,124.44 million hryvnias).

Table 2

The results of building a linear trend for the volume of receipts of land fees to local budgets

Linear trend formula	Forecast volume of revenues in 2022, UAH million.	Planned volume of revenues in 2022, UAH million.	Actual volume of revenues in 2022, UAH million.	Deviation of the plan from the forecast, %	Deviation of the actual data from the forecast, %
If the trend is built without taking inflation into account $Y(t) = 15124,44 + 3042,7 \cdot t$	39466,07	34500	29600	12,58	25,00
If the trend is built with taking inflation into account $Y(t) = 37643,8 + 392,75 \cdot t$	48785,85	42297	36289,6	13,30	25,61

At the same time, the average growth rate of revenue for the trend determined taking into account inflation is much lower (+392.75 million hryvnias every year) than for the trend for which the level of inflation was not taken into account (+3042.7 million hryvnias every year).

Thus, the following conclusions can be drawn based on the results of the analysis of the dynamics of the volume of revenues from making mandatory land fees:

- the dynamics of the volume of income is determined mainly by inflation processes, the nominal growth of the volume of income compensates only for the depreciation of the value of the monetary unit;

- insignificant rates of growth of revenues, determined taking into account the

level of inflation, may also indicate the imperfection of the mechanism of taxation of land resources. Such imperfections, in our opinion, include a significant difference between the normative assessment of lands and their real market value. The irregularity of land relations is the basis of the fact that the land fee does not fulfill its functions.

It is worth noting that today there are significant problems in collecting fees for land in Ukraine [8, p. 5; 22, p. 112; 16; 32, p. 37]:

- the unsatisfactory state of land accounting that exists in the country, as well as shortcomings in the maintenance of land cadastral documentation, which is the basis for charging land tax;

- the incompleteness of the land accounting processes and the partial lack of documentation on the right of ownership or use of the land, which greatly complicates the mechanism of calculating and paying land fees in Ukraine, which leads to significant losses of local budgets;

- insufficient amounts of land payment to local budgets do not allow financing land protection measures from local budgets;

- introduced tax benefits are ineffective and do not contribute to stimulating land users to rational use of land and renewal of the country's natural potential; as a result, the tax benefits provided are only losses of local budgets;

- land purpose changes uncontrollably, i.e. land is transferred from agricultural to other categories. Such withdrawal of land resources from agricultural use has a negative impact on the development of the agrarian sector of the economy and contributes to a decrease of the area of agricultural lands, as well as a decrease in their quality; – lack of regulatory properties of the land fee, namely the connection between the amount of land tax per hectare of land and the actual amount of rental income from land use, which leads to the application of low land tax rates. The lack of a rent-based approach in the application of tax rates and the determination of the normative monetary value has led to mismanagement in the use of land resources, a decrease in soil fertility and, as a result, to low efficiency of agricultural production;

- insufficient level of implementation of the stimulating and deterrent property of land taxes, which does not allow to settle the issue of development of land relations, as a result of which the fertility of the land decreases and the area of agricultural land decreases, which negatively affects the agricultural sector and creates significant threats to the food security of the country.

Russia's attack on Ukraine led to the withdrawal of a large amount of land from economic use. Accordingly, the legislator adopted the Law of Ukraine «On Amendments to the Tax Code of Ukraine and other legislative acts of Ukraine regarding the application of norms for the period of martial law» No. 2120–IX dated 15.03.2022, which reduces or terminates the obligation to pay land tax and rent for land from March 1, 2022 to December 31 of the year in which martial law will be canceled or terminated [7]:

- for land plots located in the territories where hostilities are (were) taking place;
- in the territories temporarily occupied by the troops of the Russian Federation;
- on territories that are identified as littered with explosive objects or on which fortification works were carried out.

In addition, interest and fines are not charged today due to the provisions of sub-clause 69.1 of clause 69 of sub-section 10 of chapter XX «Transitional provisions» of the Criminal Procedure Code and the changes made to clause 129.9 of article 129 of the Criminal Procedure Code, namely according to the new version of sub-clause 129.9.7, penalty is not accrued, and the accrued penalty is subject to cancellation in the event of an act (action or inaction) by a person as a result of the introduction of a state of martial law or a state of emergency [10].

Certain territorial communities significantly reduced tax rates during the period of martial law. Thus, the Dnipro City Council, by decision No. 3/24 dated 13.07.2022, reduced the amount of land fees (land tax and rent) for legal entities and individuals in separate categories. The new norms came into effect on January 1, 2023. For example, for land plots for certain types of construction (residential and non-residential), the rate was reduced from 2,3 % to 0,5 %, and for industry, communication and certain land codes, transport and energy industry – from 2,3 % to 1.3 %. In the case of urgent works to eliminate the consequences of enemy's armed aggression (reconstruction, major repairs, restoration, new construction), a reduction factor of 0.3 is applied to the land fee.

The decrease in the amount of tax liabilities from land tax as part of property tax and land rent led to a significant decrease in revenues to local budgets. Such a decrease in income is of particular importance considering the fact that a significant amount of land is subject to restoration. Even before the beginning of the war, it was

noted that one of the main shortcomings of the land fee is the lack of at least a partial targeting of revenues for the restoration of the land fund [10]. Nowadays, the issue of land restoration is becoming even more urgent. In particular, it is necessary to:

- carry out restoration of lands littered with explosive objects and fortification works;

- carry out restoration of lands, such as irrigation and melioration for those lands, the quality of which has deteriorated due to the lack of similar works during the martial law;

- carry out restoration of lands for their return to economic use in accordance with the target direction and category by February 2022;

- restore the biota on lands of a separate category, which occurred as a result of actions during martial law.

Since the vast majority of land restoration costs are caused by Russia's aggressive war against Ukraine, the main source of funding for such costs should be reparations. However, it is also necessary to provide a targeted nature to mandatory land fees. At the same time, the resumption of work on the formation of the Land Cadaster, land assessment and accounting of landowners and land users is a necessary element of improving the mechanism for making mandatory land fees.

An important component of valuable land relations is the formation of a transparent land market, which ensures a fair assessment of land resources. This assessment is carried out not on the basis of a normative monetary assessment or an assessment of the cost of renting land plots, but on the basis of using market mechanisms. At the same time, the free circulation of land in Ukraine is hindered by a significant number of administrative restrictions, which are gradually being removed in the course of the land reform. Precisely the main purpose of land reform is to create legislative and institutional foundations for the functioning of the land market.

Historically, the date of the beginning of the land market in Ukraine can be considered July 1, 2021, when agricultural land became the object of market circulation. There was a moratorium on their purchase and sale for a long time. Of course, there were good reasons for this moratorium. In particular, it was necessary to create a Land Cadaster, develop a procedure for obtaining ownership of land, a mechanism for buying and selling land and the corresponding change of owner. It was assumed that the opening of a full-fledged land market would lead to the receipt



of 10 billion dollars every year both due to land sales fees and as a result of the increase in market value, which will lead to an increase in the level of tax revenues. Thus, the introduction of an open land market brought numerous benefits. With this in mind, in 2019–2021, 8 Laws of Ukraine and 49 by-laws were passed to ensure the implementation of land reform.

It was the model of land market development that was chosen to be liberal, with a minimum of restrictions, but its implementation dragged on for quite a long time.

Currently, 0.95 % of agricultural land out of 37.2 million hectares registered in the Land Cadaster is in market circulation. The average regulatory monetary value of land is UAH 27,520/ha, the rent for communal agricultural land is UAH 10,630/ha, and the average selling price is UAH 30,320/ha [1]. At the same time, the market shows a slow recovery compared to the pre-war characteristics.

Thus, the price of renting 1 ha of communal agricultural land in 2021 was UAH 23,220/ha, in 2022 it decreased to UAH 10,260/ha, and in the middle of 2023 it amounted to the already mentioned UAH 10,630/ha. Similar price dynamics are characteristic of all types of transactions on the land market. The price of commercial land is traditionally 3.5 times higher than the rent.

The land market in Ukraine has a clear geographical structure. Land transactions were most actively carried out in the south of Ukraine – in Odesa region, least actively – in the west, in Transcarpathia. Deals are quite active in the frontline regions as well, although prices there are five times lower than for similar areas in the west. Currently, in seven regions of Ukraine, the amount of land for which purchase and sale agreements have been drawn up exceeds 1 % of the total amount of agricultural land. In the Kharkiv region, despite its proximity to the front line, 1.59 % of agricultural land is in circulation. However, at the same time, a significant number of agreements on the purchase and sale of land, which were not concluded in connection with the war. The total number of land sales transactions in 2023 amounted to 244 transactions per day (a total of 145,091 per year), the average area of the sold plot was 2,2 hectares, and a total of 324,354 hectares changed hands [2].

Land plots, as one of the types of highly liquid assets, the value of which is constantly increasing, are often the subject of guaranteeing the credit obligations of agricultural enterprises and farms. Thus, loans were granted against the pledge of 2,526 hectares of agricultural land. On average, 2,7 thousand hryvnias/ha of loans

were issued to secure land plots (in the Kyiv region – 21,1 thousand hryvnias/ha). Also, together with the use of lands as collateral for loans, they are the subject of mortgage contracts. However, the average area of a land plot under mortgage contracts is much smaller, only 1,2 hectares.

In general, the implemented land reform in Ukraine brought substantial economic benefits, despite its extremely liberal nature. However, the war stopped the growth of the land market activity, and in some places partially destroyed the existing gains. According to its indicators, the land market in Ukraine in 2022 rolled back to the beginning of its existence and now recovering its dynamics. The advantages of using market laws for the formation of the value of land resources are all the more significant, as they can be used in taxation. For example, there is currently a pilot project on the mass market assessment of the value of land, provided for by the Law of Ukraine No. 3065–IX dated 02.05. 2023 «On Amendments to Certain Legislative Acts of Ukraine Regarding Improvement of Legal Regulation of Notarial and Registration Acts Upon Acquisition of Rights to Land Plots» [23] according to which the market valuation of land becomes the basis for taxation. For the full implementation of the provisions of this Law, operational accounting of all land transactions in the State Register of Property Rights is necessary.

From January 1, 2024, there have been significant changes in the functioning of the land market in Ukraine.

These changes primarily concern the improvement of the functioning of institutions that serve the functioning of the land market. In particular, the automation of the exchange of information between registers and the conduct of auctions through the Prozorro system was ensured, the quality of statistics and analytical publications improved, and the number of land sale agreements increased in contrast to market activity in 2022. It can be noted that during 2023, the market infrastructure improved and the biggest war-related shocks were removed. Land prices are gradually increasing, even in the frontline regions.

The biggest changes, however, occurred in the legislative provision of the functioning of the land market, associated with the second stage of the land reform:

- legal entities enter the land market, and the volume of one transaction is not limited to the size of a land plot of 100 hectares, but can reach 10,000 hectares;
- foreigners became possible investors in the purchase of land plots, and there are no legally recognized procedures for checking the dual or triple citizenship of

potential investors. This creates a risk of land acquisition in Ukraine by citizens of the aggressor country;

- banks are allowed to seize land plots secured by loans and sell them within two years after seizure.

The specified changes will lead to the revitalization of the land market and carry both positive changes and threats.

Among the positive changes associated with the second stage of the reform:

- opportunities for farms to acquire new plots of land, attract investments, and credit resources to finance the development of their own farms have expanded;

- the expansion of the area of land for large agricultural enterprises and holdings will have a positive effect on the volume of commodity production and will lead to an improvement in the financial efficiency of operations. Also, their opportunities for diversification of activities will increase, which will determine the stability of financial results;

- the expansion of the land market creates grounds for scaling up agricultural enterprises, creating new jobs, increasing competition in the agricultural sector;

- active actions of economic agents on the land market increase the liquidity of land as an asset;

- increasing the area of land at the disposal of economic agents, especially legal entities, will positively affect their capitalization and financial stability.

In general, the development of the land market will turn economic agents working in the agricultural sector into the most active, liquid and efficient subjects operating in the real sector of the economy.

The main risks that arise in the second stage of land reform:

- increased competition on the land market and rising prices for it lead most of the small agricultural enterprises and farmers, whose financial capabilities are limited;

- even for large players in the land market, the increase in competition will lead to an increase in marketing costs and will make it difficult for agricultural products to enter new markets;

- the transformation of land into a highly liquid asset can create the basis for the actual withdrawal of land plots from economic use;

- existing administrative restrictions can complicate the process of conducting agricultural activities, which will reduce its financial efficiency. Therefore,

agricultural holdings will not be interested in incurring additional costs to preserve the quality of land due to low efficiency of agricultural production;

– the increase in the scale of agricultural enterprises will lead to the optimization of production processes in agricultural production and will create numerous challenges and threats in the social sphere. The level of employment will decrease, migration from rural settlements to cities will increase, and the development of social infrastructure in villages will not take place. For Ukraine, a significant part of whose population is rural, such social risks can be critical.

In general, all legislative and institutional changes in the land market of Ukraine aimed at increasing the circulation of land and increasing the scale of agricultural enterprises contradict the Common Agrarian Policy of the European Union. CAP is primarily aimed at supporting small producers of agricultural products, ensuring a decent standard of living for rural citizens, and developing organic production of agricultural products. In the EU countries, the achievement of these goals is ensured with the help of additional preferential financing of agricultural enterprises. For Ukraine, which is currently in a state of war, the use of preferential state financing is practically impossible. Mechanisms of credit financing are still not sufficiently developed. In addition, threats of war increase the existing risks of implementing the second stage of land reform. So, perhaps it would be appropriate to introduce a moratorium (or a partial moratorium) on the second stage of land reform until it is possible to eliminate the main military threats.

The above-mentioned problems of land taxation require an immediate solution, which is possible by improving the mechanism for payment of land tax, organizing effective benefits for its payment, which will allow additional tax revenues to local budgets to solve fiscal and regulatory issues.

So:

– land resources have a unique, multifaceted essence, manifesting itself in natural-scientific, socio-political and economic aspects. In the economic aspect, land resources are the subject and means of work, simultaneously participating in the production processes in certain branches of the economy and creating conditions for the implementation of activities in other ones. Taxation of land resources, taking into account their multifunctionality and the difficulties of assessing the real value, is a difficult task;

– in Ukraine, mandatory land fees have two forms: as land tax as part of

property tax and as rent for land. The object of taxation is a land plot, the basis of taxation is its regulatory or market value, the payer is the plot owner or land user. Income from making mandatory land fees go to local budgets. Mandatory land fees in Ukraine are regulated not only by the Tax Code, but also by the Land Code and the Law of Ukraine «About Land Protection»;

– mandatory land fees in Ukraine have important fiscal significance, especially in terms of generating revenues from the general fund of local budgets. However, the share of the land fee as part of the revenues of the general fund of local budgets has been constantly decreasing – from 2016 to 2022, such a decrease was from 14,5 % to 7,44 % with a nominal increase in revenues;

– a more detailed analysis of the dynamics of revenues from the payment of mandatory land fees of local budgets of Ukraine revealed that their nominal growth is determined by inflation processes rather than a real increase. However, there is still a linear trend in the dynamics of the volume of receipts with insignificant growth rates. The identified patterns of dynamics may also indicate the imperfection of the mechanism of taxation of land resources;

– the main problems in the functioning of the land fee in Ukraine in the modern period of time are: unsettled assessment of land as an object of taxation, a significant discrepancy between the normative assessment and the actual market value of land; the actual absence of a land market, which determines the absence of a market assessment of its value; inefficient tax administration of mandatory land fees; the loss of a large amount of land as a result of Russian aggression and its withdrawal from active use, which led to a significant decrease in the amount of income;

– in the foreign practice of taxation of land resources, three main models of this tax are common: as an independent land tax; land tax as part of several taxes; land tax as part of the property tax. The last model is also implemented in Ukraine. However, since the land relations in Ukraine are unsettled, there is no assessment of the real market value of the land, and the payment for the land is not effective. In addition to the settlement of land relations, the completion of the work on the formation of the Land Cadaster, it is also appropriate to make mandatory land fees much more targeted. In particular, it makes sense to direct a part of the income from the payment of the land fee to land restoration and maintenance of its quality.

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This concept is aimed at maximizing the learning potential of each student by defining specific goals and adapting the learning process to their individual needs and capabilities.

6. Distance learning is a form of education in which students and teachers interact without being in a classroom or laboratory. The main characteristics of distance learning include:

- use of information and communication technologies (ICT). This is one of the most important features of distance learning. Students and teachers communicate and complete educational tasks using the Internet, e-mail, video conferencing, virtual learning platforms, etc.

- flexible schedule. Students can study according to their own schedule, which gives them the opportunity to work or engage in other activities while receiving an education.

- independence and responsibility. Distance learning requires students to be independent and take responsibility for their own learning. They must be able to independently manage their time and organize their work.

- availability. Distance learning may be available to students from different regions who cannot attend traditional educational institutions due to distance or other circumstances.

- interactivity. Thanks to ICT, students can interact with teachers and fellow students, exchange ideas, opinions and solutions to tasks, even if they are at a great distance from each other.

Distance learning is used as an alternative to the traditional form of education and can be an effective tool for education in today's digital world.

One of the exciting innovations in modern education is the use of virtual reality (VR) and augmented reality (AR) in educational processes. These technologies allow for immersive learning where students can interact with virtual objects and scenarios, helping them better understand complex concepts and acquire practical skills in a safe environment.

For example, in medical education, VR and AR can be used to simulate surgical procedures or diagnose diseases, allowing students to learn without risk to patients. In technical specialties, these technologies can be used for training in the maintenance and repair of complex equipment or systems.

Also, interactive virtual laboratories allow students to study scientific



disciplines such as chemistry, physics and biology by interacting with virtual experiments and observations. This allows you to make learning more exciting and accessible for understanding.

Therefore, the use of VR and AR in education creates many opportunities for interactive and effective learning of knowledge and skills, while developing creativity and an innovative approach to learning.

Thus, the complex and systematic use of various innovative teaching methods can give much better results than the separate application of each method. For example, a combination of modular and problem-based learning can create a more effective learning situation that meets modern educational requirements.

Modular learning allows students to focus on specific topics or skills by breaking the learning material into small blocks or modules. This contributes to better assimilation of the material and retention of students' attention.

Problem-based learning, on the other hand, presents students with real problems or tasks that require the application of knowledge and skills to solve them. It promotes the development of analytical thinking, critical thinking and practical skills.

By combining these two approaches, you can create a curriculum that promotes both deep assimilation of knowledge and its practical application. For example, students can study a specific module and then use that knowledge to solve a problem or task that arises in the context of a given topic.

Such a comprehensive approach allows creating a deeper and more stable understanding of the material, and also develops the critical thinking and creative potential of the acquirers.

The analysis of the characteristics of innovative teaching methods showed that the above methods can be effectively used in the educational process individually, but in our opinion, a more effective result can be obtained from the complex and systematic use of some methods, for example, modular training can be combined with problem-based training.

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