PRIORITY DIRECTIONS OF ORGANIZATIONAL AND ECONOMIC SUPPORT FOR THE AGRICULTURAL LAND

Abstract. The article presents a study on the justification of priority areas of organizational and economic support for the circulation of agricultural land. It is determined that the problem of ensuring the circulation of land in the agricultural sector of the economy in its relevance is one of the most serious issues at the state level. It is justified that the aggravation of this problem is due to the increase of interrelated environmental, social and economic risks related to the use of land resources of Ukraine.

The following methods were used: a systematic approach to the study of organizational, economic and legal principles of agricultural land circulation; method of economic and statistical analysis and synthesis (for collecting and processing information on regulatory and monetary evaluation of agricultural land and rent by region of Ukraine, determining their relationships); graphic method and method of scientific comparison (for the analysis of the specified statistical data in the movement of indicators of dynamics); method of theoretical generalization (to substantiate the results of research and the formation of conclusions and proposals).

The legal basis of land valuation is generalized and the methodological bases of normative monetary assessment (NME) of land plots are worked out. The ranking according to the normative monetary assessment of agricultural lands and the amount of rent for land shares (units) by regions of Ukraine was carried out.

The advantages of the new Methodology of normative monetary valuation of land plots have been established, the leading ones of which are: three separate methodological approaches to conducting normative monetary valuation of lands to a single unified form have been rationally systematized; the inconsistency of interpretations and disparities in the indicators of monetary valuation of land within communities has been eliminated; the procedure for drawing up technical documentation on NMEs has been simplified and the costs for its implementation have been optimized.

It is proposed to take into account the qualitative characteristics of land and, accordingly, to introduce an additional adjustment indicator to the standardized capitalized rental income per
unit area for agricultural land. It is emphasized that ensuring comprehensive openness of the results of regulatory monetary evaluation of land, strengthening control of the state and communities over the use and circulation of land in the agricultural sector of Ukraine will avoid violations and abuses in the agricultural land market.

**Key words:** agricultural sector; normative and monetary evaluation of land; plots; rent; land shares; regions of Ukraine

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**Пріоритетні напрями організаційно-економічного забезпечення обігу земель сільськогосподарського призначення**

**Анотація.** У статті представлено дослідження щодо обґрунтування пріоритетних напрямів організаційно-економічного забезпечення обігу земель сільськогосподарського призначення. Визначено, що проблема забезпечення обігу земель в аграрному секторі економіки за своєю актуальністю є одним із найсерйозніших питань державного рівня. Обґрунтовано, що загострення цієї проблеми зумовлено збільшенням взаємопов’язаних екологічних, соціальних і економічних ризиків щодо використання земельно-ресурсного потенціалу України.

Для проведення дослідження були використані такі методи: системний підхід для дослідження організаційних, економічних і правових засад обігу земель сільськогосподарського призначення; метод економіко-статистичного аналізу та синтезу (для збирання та обробки інформації щодо нормативно-грощової оцінки с/г земель і орендної плати за регіонами України, визначення їхніх взаємозв’язків); графічний метод і метод наукового порівняння (для аналізу означеніх статистичних даних у русі показників динаміки); метод теоретичного узагальнення (для обґрунтування результатів дослідження та формування висновків і пропозицій).

Узагальнено правовий базис оцінки земель і опрацьовано методологічні засади проведення нормативної грошової оцінки (НГО) земельних ділянок. Проведено ранжування за нормативно-грощовою оцінкою с/г земель і за розміром орендної плати за земельні частки (паї) за регіонами України.

Встановлено переваги нової Методики нормативної грошової оцінки земельних ділянок, провідними з яких є: раціонально систематизовано три окремих методичних підходи до проведення нормативної грошової оцінки земель до єдиної уніфікованої форми; усунена суперечливість тлумачень і диспропорції в показниках грошової оцінки земель у межах територіальних громад; спрощено процедуру оформлення технічної документації щодо НГО й оптимізовано витрати на її проведення.

Запропоновано під час формування вартісних орієнтирів НГО врахувати якісні характеристики земель і, відповідно до цього, введення додаткового коригуючого показника до нормативу капіталізованого рентного доходу за одиницю площі для земель сільськогосподарського призначення. Акцентовано, що забезпечення всебічної відкритості результатів нормативної грошової оцінки земель, посилення контролю
Introduction. A significant event in the strategy of development of the agricultural sector of Ukraine was the approval by the Cabinet of Ministers of Ukraine of the new Methodology of normative monetary evaluation of land in 2021 (Resolution No 1147, 2021). Agricultural lands are the most important strategic resource, the main national capital of Ukraine, which determines its place in the global economic space.

The problem of ensuring the circulation of land in the agricultural sector of the economy by its relevance is one of the most serious issues at the state level and requires immediate and effective measures to address it. Evidence of the exacerbation of this problem is the increase in interrelated environmental, social and economic risks related to the use of land resources of Ukraine and the regulation of land relations in the agricultural sector.

Analysis of recent researches and publications. Theoretical, methodological and practical aspects of land relations, the state and features of agricultural land circulation are quite meaningfully covered in the studies of leading Ukrainian and foreign scholars. Stupen’s scientific paper (2018) is devoted to the study of the main elements of the market circulation of agricultural lands, taking into account the peculiarities of land resources as a commodity. Stepanenko (2017) substantiated the expediency of certain political decisions on the possible choice of a liberal model of market circulation of land, assessed their consequences for society and the state. Research by Kucher et al. (2021) is devoted to the determination of economic losses from crop loss caused by soil erosion in Ukraine. The author’s team (Onehina & Vitkovskyi, 2020) identified trends and factors of investment in agriculture in Ukraine and determined the impact of land reform measures on investment in the agricultural sector.

Fan et al. (2020) conducted a thorough study of the functioning of land assets, as well as the process of capitalization of land resources. Factors influencing the formation of pricing policy and the mechanism of pricing in the land market in agriculture identified in the Reydon et al. study (2014). Using the methods of mathematical modeling, Adamopoulos & Restuccia (2020) assessed the impact of land policy tools on agricultural productivity. The impact of public policy on sustainable soil management, highlighting the potential and limitations of economic evaluation of ecosystem services conducted in the scientific work of Bartkowski et al. (2020). Dela Rosa & Van Diepen (2002) emphasized the possibility of using the empirical and parametric system for qualitative and quantitative assessment of land resources.

Thus, it can be argued that the efforts of both the world scientific community and leading Ukrainian scientists and researchers are aimed at developing a more effective agricultural policy, including the search for optimal organizational and economic solutions in the field of land use. Despite the sufficient amount of thorough research, some aspects of land turnover in the agricultural sector of the economy remain insufficiently studied, and, accordingly, debatable.

Purpose. The purpose is to determine the priority areas of organizational and economic support for the circulation of agricultural land on the basis of generalization of ways and methods of forming a new methodology for regulatory monetary evaluation of land.

Materials and methods of research. The following methods were used in the article: a systematic approach to the study of organizational, economic and legal principles of agricultural land circulation; method of economic and statistical analysis and synthesis (for collecting and
processing information on regulatory and monetary valuation of agricultural land and rent by region of Ukraine, determining their relationships; graphic method and method of scientific comparison (for the analysis of the specified statistical data in the movement of indicators of dynamics); method of theoretical generalization (to substantiate the results of research and the formation of conclusions and proposals).

Results of the research and their discussion. Agricultural lands make up 71% of the total area of our state, that is, the rate of agricultural development is high. As of January 1, 2020, the land fund of Ukraine is 60.3 million hectares, of which agricultural land – 41.4 million hectares, forests and other forested areas – 9.5 million hectares, built-up land – 3.7 million hectares, others – 3.3 million hectares, water (areas covered by surface waters) – 2.4 million hectares (Land Directory of Ukraine, 2020). According to average data, the basis of agricultural land is arable land (78.29%); the share of other types of land is much smaller: pastures – 12.29%, hayfields – 6.59%, perennials – 2.15%, fallow land – 0.70% (Statistical Yearbook of Ukraine, 2020).


According to Art. 206 of the Land Code of Ukraine (Land Code of Ukraine, 2001), land use in Ukraine is paid; the object of land payment is a land plot that is owned or used, including on lease terms, and the payers are owners of land plots, land shares (units) and land users, including tenants, ie directly those entities management to which land plots have been transferred to ownership or provided for use, including on lease terms.

Regarding the definition of sources of funding, it should be noted that the revenues of the general fund of the local (settlement) budget includes payment for land (in the form of land tax and rent for land), which is regulated by legislation of Ukraine (according to Art. 26, Art. 73 of the Law of Ukraine "On Local Self–Government in Ukraine" (Law of Ukraine No 280/97–VR, 1997) and is the exclusive competence of the village council to address issues of land relations. Payment for land to local budgets comes in the form of property tax and rent of land in accordance with Art. 69 of the Budget Code of Ukraine (Budget Code of Ukraine, 2010), the approval of land tax rates is in accordance with the Tax Code of Ukraine (Tax Code of Ukraine, 2010).

Land rent is one of the important sources of income for local governments. In Art. 288 of the Tax Code of Ukraine states that the annual amount of payment for land lease may not be less than 3% of the normative monetary value and at the same time may not exceed 12% of the normative monetary value (Tax Code of Ukraine, 2010). Thorough research by leading scientists has shown that land valuation analysis is a necessary condition for achieving optimal use of available land resources (Dengiz & Usul, 2018). According to the normative–monetary assessment of agricultural lands, by regions of Ukraine (Fig. 1), by ranking, the top five included five regions: Cherkasy (UAH 33646), Chernivtsi (UAH 33246), Kharkiv (UAH 32237), Kirovohrad (UAH 31888) and Donetsk regions (UAH 31111).
Fig. 1. Ranking according to the normative–monetary assessment of agricultural lands, by regions of Ukraine, UAH (on the auxiliary axis – the line of the total value as a percentage of the total, %)*

* Data exclude the temporarily occupied territories of the Autonomous Republic of Crimea, the city of Sevastopol and a part of temporarily occupied territories in the Donetsk and Luhansk regions


Significantly different is the ranking by the amount of rent for land shares (shares), by regions of Ukraine (Fig. 2): the first place, as well as the normative and monetary assessment of agricultural land, is Cherkasy region (the amount of rent for land shares (shares) – UAH 3524.7), and the third – Kharkiv region (the amount of rent for land shares (shares) – UAH 2494.7); Poltava region has the amount of rent for land shares (shares) – UAH 2970.1, and ranks second in the ranking, while in the rating of regulatory and monetary valuation of agricultural land ranks eighth – UAH 30390); Khmelnytsky region has the amount of rent for land shares (shares) – UAH 7780.8, and ranks fourth in the ranking (in the rating of regulatory and monetary valuation of agricultural land ranks seventh – UAH 30477); Vinnysia region has the amount of rent for land shares (shares) – UAH 2165.9, and
ranks fifth in the ranking, while in the rating of regulatory and monetary valuation of agricultural land ranks twelfth – UAH 271840).

Fig. 2. Ranking by the amount of rent for land shares (units), by regions of Ukraine, UAH (on the auxiliary axis – the line of the total value as a percentage of the total, %)*

* Data exclude the temporarily occupied territories of the Autonomous Republic of Crimea, the city of Sevastopol and a part of temporarily occupied territories in the Donetsk and Luhansk regions


It is quite natural that the normative–monetary assessment of agricultural land, the amount of rent for agricultural land and rent for shares by regions of Ukraine differ significantly (Fig. 3): the basis for deducting interest on land rent and payment land tax for land within communities is a regulatory and monetary valuation of land.
Fig. 3. Regulatory and monetary valuation of agricultural land and rent by regions of Ukraine*, UAH

* Data exclude the temporarily occupied territories of the Autonomous Republic of Crimea, the city of Sevastopol and a part of temporarily occupied territories in the Donetsk and Luhansk regions


Regarding the formation of pricing policy for agricultural land the sale of land at a price lower than the normative monetary value of agricultural land is prohibited (Law of Ukraine No 1423–IX, 2021).

Volatility of land value is influenced by exogenous and endogenous factors. Inflation, cash rents, and population growth are the main causes of land price volatility; taking into account factors and timely response to negative exogenous shocks helps landowners, investors and creditors to assess the risk of rising land values in a timely manner (Sant’Anna & Katchova, 2020).

The system of lease relations in the agricultural sector of the economy in the field of land use is the basis for increasing the mobility of agricultural land as a market tool, and encourages increased efficiency of their use. Participants in land lease relations should take into account that from 2021 a new unified methodology of normative monetary valuation NME of land plots (Resolution No 1147, 2021) was approved, on the basis of which NMEs will be carried out according to the new formula. We consider it appropriate that the characteristics and description of each coefficient are presented in detail in the annexes to that document (Resolution No 1147, 2021).
In this case, the determination of the zonal factor of the location of the land plot (Km4) is differentiated by assessment districts, and therefore, is calculated for each district separately.

Also, it should be noted that the coefficient of purpose of land (Ccp) (adopted in accordance with Annex 8 to the Methodology of normative monetary valuation of land) is applied with a value of 3.0 (for land, information on which is not included in the State Land Cadastre), which, in particular, allows you to not significantly change the tax burden.

The legal basis for land valuation was formed on the basis of the following legislative acts of Ukraine: Land Code of Ukraine (Land Code of Ukraine, 2001), Law of Ukraine "On Land Valuation" (Law of Ukraine No 1378–IV, 2003), and Resolution of the Cabinet of Ministers of Ukraine "On the Methodology of normative monetary valuation of non-agricultural lands (except lands of settlements)" (Resolution No 525, 1997).

Accordingly, there were the following types of land valuation: land valuation within settlements; assessment of agricultural lands outside settlements; valuation of non-agricultural land. In our opinion, it is very important that the methodological support of the updated normative monetary valuation NME of land plots (Resolution No 1147, 2021) allows to rationally systematizing NMEs into a single unified form. It is also specified that the object of normative monetary valuation are land plots of all categories and forms of ownership within the territory of the territorial community (or its part).

That is, it is actually confirmed that the communities are the real owners of the land marked by the administrative–territorial boundaries of the community. Accordingly, the procedure for determining the boundaries of the territorial community was established on April 28, 2021 (Law of Ukraine No 1423–IX, 2021), which also prompted the adoption of amendments to the Law of Ukraine "On Land Management" (Law of Ukraine No 858–IV, 2003), on land management documentation.

Regarding the financial support of communities, it should be noted that the receipt of financial resources from communities is provided, including through land tax. The amount of land tax is determined through the procedure of normative monetary valuation of land plots (Law of Ukraine No 1378–IV, 2003). We emphasize that the generation of financial resources of communities is due to the effective collection of land fees, as well as by stimulating additional investment through the introduction of land decentralization. The entry into force of the Law of Ukraine No 1423 will increase the income of territorial communities as a whole, and each of the members of the territorial community, each rural resident; Provisions of this Law (entered into force on July 1, 2021) actually act as economic and organizational and legal levers, which ensure full disposal of citizens of their land, legal entrepreneurs – transparent management of land resources, investors – proper protection of their rights and a reliable control mechanism investment resources (Press conference, 2021).

We consider the following organizational and legal support for the implementation of NME land: the official promulgation of the NME took place on the eve of the budget period (until July 15, 2021), planned for the implementation of NMEs, and its methodology is expected from January 1, 2023. This will help local communities to make optimal use of time for successful development, design and approval of technical and organizational and legal documentation in accordance with the requirements of the new methodological field of regulatory monetary valuation of land, as well as optimal use of economic space, will take place according to existing requirements and tariffs.

In the future, the legislative regulation of the circulation of agricultural land will have positive socio-economic consequences:

- full realization of the right of private ownership of agricultural land plots by citizens of Ukraine;
- establishing the objective market value of agricultural land in the process of their economic circulation and increasing the capitalization of land;
affecting additional credit resources to the agricultural sector of Ukraine’s economy; creation of conditions for rational redistribution of agricultural lands and optimization of their use; ensuring transparency of land transactions and improving the economic well-being of the population of Ukraine (The State Geocadastre, 2021).

At one time, the legislative and economic unregulated procedure of land privatization in Ukraine led to the dispersion of land ownership, the functioning of which was complicated by the inaccessibility of ordinary private institutions of ordinary private property in developed countries:
- fixing the economic potential of land assets with a certain concept of land use;
- functioning of a unified information system of information on available land assets and their potential profitability as a basis for determining the market price of land; protection of land ownership rights;
- responsibility of owners and land users for compliance with the terms of lease agreements; increasing the liquidity of land assets (Lemishko, 2019).

The basic principles of state agrarian policy noted that the system of state organizational and legal measures aimed at ensuring a return on advanced capital in agricultural production, including the cost of land resources, not below the average level of the state economy (Law of Ukraine No 2982–IV, 2005).

According to Art. 33 of the Law of Ukraine "On the State Land Cadastre", the account of land quality reflects data that characterize lands by natural and acquired properties, affect their productivity and economic value (Law of Ukraine No 3613–VI, 2011). That is, ensuring high productivity in the agricultural sector of the economy, including, is directly dependent on the quality of land. At the same time, it should be borne in mind that "only by new investments in land already transformed into means of production, people increase land–capital without any increase in the matter of land, ie space of land ... But land–capital is no more eternal than any other capital ... Land–capital is fixed capital, but fixed capital wears out just as much as working capital" (Marx & Engels, 1955).

In order to make sound organizational and economic decisions, it is very important to "quantify the impact of individual land characteristics on the productivity of the land use system, to harmonize land use requirements with land quality and suitability" (Dela Rosa & Van Diepen, 2002). According to research by leading Ukrainian scientists, increasing the area of eroded arable land by 1 % leads to a decrease in gross crop production by 0.20 % per 100 hectares of agricultural land in total (Kucher et al., 2021).

It is worth mentioning the scientific achievements of German agricultural scientists, who emphasize that human well-being, including depends on the established ecosystem, which includes agricultural landscapes that protect biodiversity (Albert et al., 2017). However, when designing the functioning of these landscapes, as a rule, land management decisions and the costs of these measures are not fully taken into account, which leads to undesirable compromises and socially ineffective decisions. Extended reproduction of land–capital (its productive capacity) is subject to "ensuring a balance between scientific, technical and environmental resource–saving activities of people aimed at reducing or eliminating the negative anthropogenic impact on the environment that prevents land degradation, reducing its ability to self–reproduction" (Monograph, 2017).

This usually requires additional financial capital, the investment of which in improving the quality of soil (land–capital) not only recoups the cost of increasing yields (maximizing profitability), but also fully covers the nutrient deficit of natural soil fertility, reproduction of fertility lands (Lemishko, 2021).

Using mathematical modeling methods, Brazilian scientists have proven that the formation of pricing policy and pricing mechanism in the land market in agriculture is directly influenced by physical characteristics (soil, climate and terrain); factors influencing production (production
systems, location, access); infrastructure ownership and investment (regional scenario, local investment) (Reydon et al., 2014).

In our opinion, it should be borne in mind that arable land and arable land is a highly liquid agricultural asset that will encourage, inter alia, the purchase of land for speculative purposes. Given that land is a strategic resource of Ukraine, we believe that of particular importance for the functioning of the land market in our country is to promote the introduction of transparent auctions for the sale of agricultural land. At the moment, the sites of the Ukrainian Universal Exchange, Ukrainian Energy Exchange LLC, are successfully operating in Ukraine on this issue. Increasing the number of exchanges and, accordingly, the volume of exchange trade, will promote the implementation of tools for a full-fledged land market in Ukraine, fair competition, and help speed up the resolution of organizational and economic issues related to agricultural land.

According to the Resolution of the Cabinet of Ministers of Ukraine "On conducting national (all–Ukrainian) normative monetary valuation of agricultural lands and amending some resolutions of the Cabinet of Ministers of Ukraine" (Resolution No 105, 2018), as of January 1, 2019, all agricultural lands in Ukraine (except for lands within settlements) were assessed, which formed the basis for updating the indicators of regulatory monetary valuation of agricultural lands. Information on national land valuation was consolidated into a single geoportal.

However, today in the agricultural sector of Ukraine there are communities where the inventory of the community’s own lands has not been carried out in full, land plots of economic entities have not been formed on its territory, and accordingly, no NMEs have been conducted. This has a negative impact on the filling of the community budget and therefore needs to be resolved as soon as possible.

Conclusions and future perspectives of the study. Summarizing the results of the study, we can highlight the following advantages of the new Methodology of normative monetary valuation of land:

- normative monetary valuation of settlements’ lands (Resolution of the Cabinet of Ministers of Ukraine No 213);
- normative monetary valuation of non–agricultural lands outside settlements (Resolution of the Cabinet of Ministers of Ukraine No 1278);
- normative monetary valuation of agricultural land (Resolution of the Cabinet of Ministers of Ukraine No 831) – those all are invalid,
  to a single unified form – Resolution of the Cabinet of Ministers of Ukraine of 03.11.2021 No 1147 (Resolution No 1147, 2021).

This eliminates inconsistencies in interpretations and disparities in the monetary valuation of land within communities, which simplifies the procedure for drawing up technical documentation for NMEs (one documentation instead of three different types of technical documentation for NMEs).

Second, the costs of NMEs have been optimized; thirdly, the update of the Methodology of normative monetary valuation of land plots did not significantly affect changes in the tax burden, the amount of taxes paid by citizens and entrepreneurs. This, in particular, will have a positive impact on the formation of the investment climate in the agricultural sector of Ukraine.

In our opinion, the issue of sustainable land use remains relevant today. Therefore, it would be appropriate to take into account the qualitative characteristics of the land (for example, the content of humus in the soil) when forming the cost guidelines of NMEs.

This is possible as the introduction of an additional adjustment indicator to the Standard of capitalized rental income per unit area (Sri) for agricultural land. The higher the quality characteristics (including the content of humus in the soil), the higher should be the ratio of capitalized rental income.
In addition, we consider it necessary, at the state level, to ensure full openness of the results of regulatory monetary valuation of land, which will have a positive impact on strengthening control over the state and communities over land use and circulation in the agricultural sector of Ukraine. Such measures will allow, inter alia, timely avoid violations and abuses in the market of agricultural land.

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