

**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Economics**



**Diploma thesis**

**Agricultural land market in Ukraine**

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## DIPLOMA THESIS ASSIGNMENT

Bc. Vadym Pronin

Economics and Management  
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Thesis title

**Agricultural land market in Ukraine**

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### Objectives of thesis

The main objective of this study is to assess the linkage of creation free land market system on quality agriculture development and how it leads to increasing value of the farmland in Ukraine.

Specific aims:

1. To examine the effect of land moratorium cancellation on agriculture land development;
2. To identify and compare constraints faced main agriculture market participators in accessing the land;
3. To analyze the assumption of farmland price changes through selection an appropriate variables and estimate econometric model.

### Methodology

This diploma thesis uses of qualitative and quantitative methods for the needs of the project, specified during the project. This work analyses theoretically to what extend the cancellation of moratorium could influence agricultural complex development in Ukraine. Research supported by studying relevant references, conducting in complex interviews with experts from agriculture sector. In order to achieve thesis objectives, mathematical, financial and econometrical computation were included in analytical part of work.

## The proposed extent of the thesis

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## Keywords

Agriculture, land market, moratorium, rent, price, land shares, agriculture policy, reform

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## **Declaration**

I declare that I have worked on my diploma thesis titled "Agricultural land market in Ukraine" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the diploma thesis, I declare that the thesis does not break copyrights of any third person.

In Prague on 30.03.2021

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Vadym Pronin

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## **Agricultural land market in Ukraine**

**Abstract:** The purpose of this thesis is estimate Ukrainian land historical development, modern structure, consequences of land reform through analyzing national and foreign scientific works and articles, current legal documents, Ukrainian land code. The agro-industrial complex is one of the most attractive sectors of the Ukrainian economy. According to the Ministry of Agrarian Policy and Food of Ukraine, the agro-industrial complex provides about 13% of the total GDP of Ukraine. Exports of agricultural products in 2019 amounted to USD 22.2 billion, which corresponds to a record 44.3% of Ukraine's total exports. More than a billion US dollars were invested in the agriculture last year. More than 3 million people are employed in the agriculture of Ukraine, which is more than 17% of all employed. Given the importance of this sector of the economy for the state, during 2020 there have been significant changes in the legislation governing economic activities in the field of agriculture. The primary goal of such changes was to land market moratorium cancelation and to simplify business in the agricultural sector. This thesis provides an overview of the legislative norms that apply to the regulation of agricultural activities, including the purchase, sale and lease of agricultural land, various aspects of labor relations.

**Keywords:** Agriculture, land market, moratorium, rent, price, land shares, agriculture policy, reform

## Trh zemědělské půdy na Ukrajině

**Abstrakt:** Účelem této práce je odhad ukrajinského pozemkového historického vývoje, moderní struktury, důsledky pozemkové reformy prostřednictvím analýzy národních a zahraničních vědeckých prací a článků, aktuální právní dokumenty, ukrajinský pozemkový zákon. Zemědělsko-průmyslový komplex je jedním z nejatraktivnějších odvětví ukrajinské ekonomiky. Podle ministerstva agrární politiky a potravin na Ukrajině poskytuje zemědělsko-průmyslový komplex přibližně 13% celkového HDP Ukrajiny. Vývoz zemědělských produktů v roce 2019 činil 22,2 miliardy USD, což odpovídá rekordních 44,3% z celkového vývozu Ukrajiny. V loňském roce bylo do zemědělství investováno více než miliarda amerických dolarů. V zemědělství na Ukrajině jsou zaměstnány více než 3 miliony lidí, což je více než 17% všech zaměstnaných. Vzhledem k významu tohoto sektoru hospodářství pro stát došlo v průběhu roku 2020 k významným změnám v legislativě upravující ekonomické aktivity v oblasti zemědělství. Primárním cílem těchto změn bylo zrušení moratoria na trhu s pozemky a zjednodušení podnikání v zemědělském sektoru. Tato práce poskytuje přehled legislativních norem, které se vztahují na regulaci zemědělské činnosti, včetně nákupu, prodeje a pronájmu zemědělské půdy, různých aspektů pracovněprávních vztahů.

**Klíčová slova:** Zemědělství, trh půdy, moratorium, nájem, cena, podíly na půdě, zemědělská politika, reforma

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## **List of abbreviations**

CAE – Collectivized Agricultural Enterprise

GDP – Gross Domestic Product

NOI – Net Operating Income

OLSM – Ordinary Least Squared Method

USSR – Union of Soviet Socialist Republics

NEP – New Economic Policy

AUCP - All-union Communist Party

CPSU - Communist Party of the Soviet Union

WTO – World Trade Organization

VRU – Verkhovna Rada of Ukraine

LCU – Land Code of Ukraine

NSC IAE – National Research Center “Institute of Agrarian Economics”

USAID - United States Agency for International Development

IFC - International Finance Corporation

EFF - Extended Fund Facility

ECHR - The European Court of Human Rights

FATF - Financial Action Task Force

GVA - Gross Value Added

SOC - Stocks of Humus

## **1. Introduction**

Since Independence Day, Ukraine has gone through a thorny path of formation of a modern, sustainable agriculture. In 2020, a new stage of development has begun. To provide a theoretical and practical assessment of these changes, it will be necessary to consider in more detail the historical chronology of the land reformation. Reasonably, it is necessary to analyze modern laws and innovations with regards to the land issue.

The diploma work includes a theoretical part in which the details of the change, the development of the market for agricultural land since the establishment of Ukraine's independence are comprehensively described. Ukraine went a thorny path to a real land market, this was accompanied by land reforms like March 1991, which led to de-communization and a sharp reduction in state land in favor of citizens. The second stage was a presidential decree on urgent measures to accelerate land reform in the field of agricultural production, the order of distribution of land transferred to collective ownership of agricultural enterprises and organizations. At that moment, over 40% of land easements were transferred to the members of CAE. The third stage was supposed to complete the process of transferring land to private and collective ownership, but eventually became a formality. Thus, as of January 1, 1998, 66.6% of agricultural land remained the property of the Central Administrative District and open joint stock companies created after privatization of state farms and other state enterprises. After that, measures, and amendments to the land code of Ukraine were carried out, which to some extent completed the process of de-communization, but the real land market was still far away. Due to the monopoly of the oligarchy in the field of agriculture, the lobbying to restrain the development of the market, the continuation of the land reformation started in March 2020.

In recent years, despite the continued negative trend of reducing the share of agriculture in the structure of GDP production, agricultural production for Ukraine is still of great importance. And, first, it is ensuring the food security of the country. Ukraine is one of the few European countries whose agricultural production is fully capable of satisfying domestic demand for almost all types of food products. Agricultural products and products of their processing from year to year form a significant positive balance of foreign trade balance. At the same time, agriculture is the main activity and, perhaps, the only means of earning money, and sometimes a means of survival for almost a third of the country's population living in rural areas.

The future of the agro-industrial complex of Ukraine is very promising, but now there are many problems in the industry.

## **2. Objectives and Methodology**

### **2.1. Objectives**

The main objective of this study is to assess the linkage of creation free land market system on quality agriculture development and how it leads to increasing value of the farmland in Ukraine.

Specific aims:

1. To examine the effect of land moratorium cancellation on agriculture land development;
2. To identify and compare constraints faced main agriculture market participators in accessing the land;
3. To analyze the assumption of farmland price changes through selection an appropriate variable and estimate econometric model.

### **2.2. Methodology**

Diploma thesis for solving objectives uses qualitative and quantitative methods for the needs of the project, specified during the project. This work analyses theoretically to what extend the cancellation of moratorium could influence agricultural complex development in Ukraine. Research supported by studying relevant references, conducting in complex interviews with experts from agriculture sector. To achieve thesis objectives, mathematical, financial, and econometrical computation were included in analytical part of work.

The normative evaluation of land plots is carried out by the following approaches: profitable (capitalization of net income from the use of a land plot), comparative (comparing the cost of selling such land plots), cost approach (accounting for the cost of land improvements).

The income approach is one of the best in terms of achieving the main goal of any fixed asset. The essence of this approach is determined by calculating the current value of future income that arise in the process of selling this property.

With direct capitalization of net income, the estimated value of the land plot is determined by the formula:

$$\text{Value} = \frac{\text{Net Operating Income (NOI)}}{\text{Capitalization Rate}}$$

The estimation of farmland cost provides according to several objective factors that were included in the econometric model in order to determine the significance of each variable. The testing performed by the OLSM:

$$\gamma = (X^T X)^{-1} X^T y$$

The work also includes necessary tests:

- Economic verification interpretation of the model. Logical test of model's output.
- Statistic verification: evaluation of the statistical significance of individual parameters and the whole model.
- econometric verification: validity and correctness testing of the model.

For a more accurate and based on the real situation in Ukraine, the author conducted a several interviews with representatives of large agricultural businesses, with owners of their own middle-level farms and with local private entrepreneurs.

### **3. Literature review**

#### **3.1. History of the state policy on the agrarian sector in Ukraine**

##### **3.1.1. State policy on agricultural production during the Soviet Union**

The history of state policy on agricultural production in Ukraine as part of the USSR begins with the adoption in 1918 of the decree "On the socialization of land." Socialization was largely provoked by the presence of large landowners, as well as the desire of the small peasantry to receive land without redemption. The policy of military communism, as well as the food distribution in the countryside, led to a sharp decline in production, shortages, and famine. There were heated discussions about the choice of development path. VI Lenin insisted on a new economic course. In the end, a new economic policy was proposed, which provided for a natural tax instead of an apportionment, which, firstly, was lower than the apportionment, and secondly, was set as a share of the harvest and was to some extent fixed. farms. The new economic policy (NEP) provided for the existence of commodity-money relations between state industry and small-scale farming, economic methods of management based on economic calculation and material incentives, as well as private capital. The new economic policy has greatly revived agriculture. In seven years (1922 - 1928) agricultural production in the USSR doubled. The number of peasant farms increased (from 3.8 million in 1916 to 5.2 million in 1929), and the share of wealthy peasant farms grew. However, in this process the country's leadership saw the strengthening of capitalist and the weakening of socialist principles. And the ruling party made a sharp turn in agricultural policy - there was a rejection of the NEP and the transition to a higher form of socialization of land - collective management. (Shiyan V., 2007) The party's program, adopted by the VIII Congress of the AUCP (b), contained the following provisions concerning agriculture:

- organization of Soviet economies, large socialist economies;
- support of societies for joint land cultivation;
- organization of state sowing of all unsown lands, regardless of affiliation;
- state mobilization of all forces to improve agricultural culture;
- support of agricultural communes.

As a result of the introduction of collectivization in five years (1929 - 1933) - the main period - the number of horses, cattle and pigs has halved. Collectivization was aimed at the destruction of wealthy (so-called "kulak") and middle peasant farms. In Ukraine, collectivization ended in 1937. At that time, there were 28.3 thousand collective farms, in which 96.1% of peasant farms

and 99.7% of sown areas were concentrated. In the western lands of Ukraine, the governments of Poland, Romania, and Czechoslovakia also initiated agrarian reforms that lasted for 20-30 years. Their essence was the unbundling (partitioning) of a specially allocated share of state and landlord lands. Such land was sold to peasants for a fee. As a result of the agrarian reform in the western lands of Ukraine, landownership decreased by 25%. At the same time, a significant part of land latifundia was preserved. In 1939, private latifundia with an area of more than 3 thousand hectares each accounted for 30 to 50% of landownership. However, the bulk of the landlords had estates ranging from one to several hundred hectares of land. These are the average sizes of current farms in the United States. (Shiyan V., 2007)

The consequences of the collectivization of agriculture had a negative impact on the economy of the industry. Gross grain harvest in Ukraine in 1940 was only 14% higher than in 1913. That is, for 27 years of socialization and collectivization, the average annual increase in grain production was only 0.5%, mainly due to the positive influence of the NEP. Meat production in 1940 was at the level of 1913, wool - decreased by 9%. In the postwar years, compared with 1940, the sown area decreased by 3%, grain production - by 22.5, milk - by 4.4, wool - by 11.7%, meat and egg production increased by only 6%. In the early 1950s, the situation in the country's agriculture remained difficult. To remedy the situation, the political leadership of the state was forced to look for ways to radically improve agriculture. The question "On measures for the further development of agriculture in the USSR" was raised at the September (1953) Plenum of the Central Committee of the CPSU. These measures laid the foundations for price reform. The essence of the measures was mainly to increase prices for agricultural products. The increase was significant because prices were too low. Thus, for cattle and poultry procurement prices increased 5.5 times, milk and meat - 2.0 times, potatoes - 2.5 times, vegetables - 1.2 - 1.4 times. At the same time, the norms of obligatory procurement were slightly reduced. These measures have yielded some results. Gross output in the industry in 1954-1958 increased compared to 1949 - 1953 by 35% with an average annual growth rate of 7%. Mostly the increase was achieved due to animal husbandry. Grain production in 1956 - 1960 was practically at the level of 1951 - 1955. In Soviet times, prices for agricultural products were fixed for a long time due to the constant range of products, and prices for industrial products were constantly rising due to frequent changes in its range and brand composition, tools, resources, materials, etc. (Marples, 2018)

In the first five years of the price reform (1953 - 1959), agricultural production grew at a satisfactory pace. However, in 1960 - 1962 the dynamics was disrupted, and in 1963 even

decreased. This was due to the short-term effectiveness of administrative price reform measures, which did not provide for changes in the basic principles of rural management. The state of the industry deteriorated due to the nationalization of collective farms by transforming them into state farms. In the USSR, the number of state farms formed from collective farms increased from 2.8 thousand in 1930 to 15.0 thousand in 1970. In Ukraine, the number of state farms has almost doubled. The purpose and essence of this process was to strengthen the command-administrative influence on the economy of the industry. (Marples, 2018) The negative moment of this period was the reduction of the role of personal peasant farms, the reduction of their land tenure, the deprivation of the means of production, and the restriction of the rights of peasants to individual labor activity.

Self-supporting reform. The difficult economic situation of agriculture in 1963 - 1964 prompted a new wave of reforms. They began with the March (1965) Plenum of the Central Committee of the CPSU, which addressed the issue of "Urgent measures for the further development of agriculture in the USSR." (Kulchytsky, 2008) The main essence of these measures was as follows:

- ensuring compliance with economic laws of development of production and management;
- ensuring compliance with the principles of material interest of farms and their employees;
- ensuring the right combination of public and personal interests;
- restrictions on the administration and command of agricultural production;
- reduction of the level of procurement and establishment of stable volumes of procurement for five years;
- increase of purchase prices and establishment of stable prices for five years;
- increase in investments in the industry.

Thus, the essence of the measures was to unleash economic initiative and liberalize economic life. Summarizing the content of these measures, it should be noted that in the complex their essence was reduced to the expansion of self-supporting relations. Therefore, the measures of this period can be called self-supporting reform. It should be noted that since the early 70's it was decided to transfer state farms to full self-sufficiency. Now the collective farms were no longer transformed into state farms, but on the contrary, the economic activity of the state farms approached the collective farms. A set of measures to improve the system of self-financing



relations in agriculture has had positive consequences. During 1966-1970, the growth of gross output was 21.5% with an average annual rate of 4.3%. But the dynamics of growth, as in the 50s, after the price reform, slowed down rapidly. Between 1971 and 1975, gross output increased by 13%, and the average annual growth rate was 2.6%. Between 1975 and 1980, the growth of gross output was even lower - only 8.6% with an average annual growth rate of 1.7% (Kulchytsky, 2008). In general, the self-supporting reform (1965) was more complex than the price (1953). However, it did not give the desired result and had a short-term effect. The reason was that the self-supporting reform did not affect the foundations of industrial relations but was carried out in the context of preserving the planned command-and-control system.

### **3.1.2. Agro-industrial reform.**

The slowdown in production growth, especially efficiency, has again forced the country's political leadership to take further steps to support the industry and improve economic relations. These issues were considered at the May (1982) Plenum of the CPSU Central Committee, which adopted the Food Program of the USSR until 1990. Simultaneously with the Program, a package of resolutions of the CPSU Central Committee and the USSR Council of Ministers was adopted (Shiyan V., 2007). The main content of these provisions was as follows:

- formation of an integrated agro-industrial complex (AIC) from the branches of agriculture, food industry and service sphere;
- improving the management of agriculture and other agricultural sectors;
- improvement of the economic mechanism of management and economic relations between branches of agrarian and industrial complex;
- increasing the level of material interest of enterprises and employees of agricultural sectors.

The above list shows that all these measures were previously included in various decisions on agriculture. A new direction is to strengthen the integration of agriculture with the food and processing industries and the service sector. Therefore, this reform can be called agro-industrial. The agro-industrial orientation of the Food Program was due to the significant lag in the field of storage, transportation and processing of products (especially crop production) from its production. As a result, from a quarter to a half of the grown crop production died in the field, did not reach the table of citizens. In general, the loss of its own agricultural products was twice its imports. It is noteworthy that the food program for the main food products of animal origin (meat, milk, and eggs) was implemented. However, for

crop production performance was 70 - 75%. Dissatisfaction of the population with the state of food supply, including animal products, was growing. Consumer dissatisfaction with meat, milk, fish, vegetables, fruits and sugar was especially widespread. Thus, although the Food Program was partially implemented, the achieved parameters lagged significantly behind the growing consumer demand of the population (Kornal, 2000). The following reasons can be identified in more detail:

- lack of radical structural reforms aimed at the integration of the agro-industrial complex;
- inefficient distribution, supply, procurement and marketing system;
- non-implementation of measures to improve the logistics of agricultural enterprises;
- preservation of the state-owned collective and state farm system, which restrained the initiative of the peasants, their creativity, entrepreneurship;
- the food program was essentially technical-technological, not socio-economic in nature.

In general, agro-industrial reform was burdened by measures of command-administrative distribution, did not affect the basic production relations, and therefore had the same shortcomings as self-financing. The reforms of the Soviet era, except for the NEP, did not touch the deep foundations of industrial relations, which caused systemic shortcomings. (Kornal, 2000) Therefore, the next reform measures gave short-term results. In this regard, in the context of general restructuring, initiated in 1985, there have been attempts to change certain areas of agricultural relations, namely:

- the introduction of contract-lease relations;
- development of personal subsidiary farms of the population;
- origin of farming;
- development of agro-industrial integrated formations;
- development of cooperation.

From the above list the perestroika for the first time after the NEP affected production relations and came very close to their basic foundations - property. Contract-lease relations and cooperation attached special importance to internal settlement. In the new agro-industrial formations (factories, agricultural firms), intersectoral relations were also raised to the level of self-supporting. Finally, farmers and private farms were given almost complete economic freedom in the field of logistics, production services, sales, production structure, pricing, organization of production, labor and its payment. Therefore, the restructuring of agrarian relations served as the basis for real agrarian transformations, which affected the basic

principles: land ownership, means of production and products, relations with the state, economic freedom of business and foreign economic activity of agricultural producers. (Melota, 2001)

### **3.2. Land reforms in Ukraine after Independence Day**

Agrarian reform and its main component - land reform - began in our country in 1991. Their main goal - to create the necessary economic and political conditions for the formation of a market environment in the agricultural sector and the emergence of a real owner - the owner, able in a new way, rationally to organize the conduct of agricultural production, to ensure its high efficiency and to bear full responsibility for the results of management. Agrarian transformations taking place in Ukraine are carried out in five directions:

- land reform - aimed at protecting the ownership of land by peasants;
- economic reform - its purpose was the reorganization of the collective and state farm system into market structures, the free choice of the peasants form of management;
- the formation of the agricultural market - it replaced the planned distribution system of sales;
- financial stabilization - its purpose is to improve the industry, pave the way for loans and investments, eliminate price imbalances;
- social development - its essence is the formation of normal living conditions, life, work and leisure of peasants.

On a chronological basis, most researchers unanimously identify three main stages of agrarian reform: the first was evolutionary and covered the 90's, the second - more intense - occurs at the beginning of the third millennium (2000 - 2004), and the third is associated with the formation and the functioning of the market of agricultural land and bringing in line with WTO rules and regulations the mechanism of state support for producers in recognition of Ukraine as a market economy.

#### **3.2.1. Land demonopolization and legislative framework for reform**

For an in-depth analysis of the transformations that took place due to state regulation of the agrarian reform process, it is expedient to divide the first stage into three periods, combining the market transformation of agricultural production (formation of the private sector) with its basic component - land reform.

*Table 1*

1 Stage	
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	<p>The first period (1991-1993) was a turning point, as the administrative regulation of land relations, typical of a centrally planned management system, still prevailed, but at the same time a national legal framework was created to carry out land reform. All lands that were exclusively state property were declared the object of land reform by a resolution of the Verkhovna Rada of Ukraine of March 15, 1991. Thus, the process of demonopolization of land ownership was initiated, and the procedure for transferring land plots to Ukrainian citizens for private ownership, construction and maintenance of a dwelling house, dacha, garage, as well as gardening and horticulture was determined. During this period, an inventory and redistribution of land was carried out, reserve lands were allocated. A more progressive basis for land reform was laid down by making changes and additions to the Land Code of the Ukrainian SSR, laws on forms of land ownership and payment for it. Normative acts on farming, on a collective agricultural enterprise, on agricultural cooperation, on a business association define alternative organizational and legal forms of management in the countryside to the collective and state farm system. In the same years, there have been contradictory phenomena in agricultural policy: a course is being pursued to liberalize markets, including food, while maintaining excessive government interference in the economic activities of the CAE, especially in the regions.</p>
	<p>The second period (1994-1996) became possible due to the adoption of decrees of the President of Ukraine on urgent measures to accelerate land reform in the field of agricultural production, the order of distribution of land transferred to collective ownership of agricultural enterprises and organizations. On this normative basis, privatization and distribution of agricultural lands were carried out. During this period, 2.7 million members of the CAE, or 41.5% of their total number, received certificates entitling them to a land share (share), which may be the object of sale, gift, mine, inheritance, pledge. These institutions have launched a market for land shares (units), issued with the appropriate certificates.</p> <p>With the adoption of the new Constitution of Ukraine on June 28, 1996, collective ownership lost its legitimacy. Departing from the division of property rights by form, the Basic Law recognized citizens, legal entities, the state and territorial communities of villages, towns, cities, and districts in cities as subjects of land ownership. To implement economic methods of regulating land relations, the Cabinet of Ministers of Ukraine approved the Methodology of monetary valuation of agricultural land. From the lands that were in use by the CAE, the lands of the reserve and reserve fund were allocated, which remained in the ownership of the state, but were transferred, as a rule, to them on the terms of permanent use. This caused just dissatisfaction among the leaders of peasant and farm farms and public organizations that supported the course of radical reforms in the countryside.</p> <p>At the same time, a precedent was set, which had negative consequences for the reform: collective land ownership at that time functioned as the property of individual CAE leaders. They often used it uncontrollably and mainly for their own enrichment, as the rent for its use was not mandatory for tenants. As a result, most of the workers employed in the CAE remained even more than in the collective farms, alienated from land, management results and production management. As a rule, peasants were not issued certificates of the right to a land share (share), they could not allocate it in kind (on the ground). As a result, it was not the crisis of the agricultural sector that came to the fore, but the crisis of the reform itself and even the discrimination of its basic ideas. This thesis is confirmed by the results of a</p>

	<p>survey of about 2,000 respondents conducted in March 1996 by the World Bank and the National Research Center "Institute of Agrarian Economics" (NSC IAE). Only 8% of the surveyed owners of land share (share) knew that it was allowed to sell, 22% - to lease to others and 26% realized that it could be acquired with the issuance of a state act to establish a farm. At the same time, more than 80% of the sample of farm managers indicated a violation of their legal rights to receive land shares and property shares after leaving the CAE.</p> <p>International technical assistance projects have played an important role in overcoming the crisis phase of CAE restructuring. Since 1995, two major agricultural projects have been launched under intergovernmental agreements: Agricultural Land Allocation in Ukraine and funded by the United States Agency for International Development (USAID), and Land Privatization and Reorganization collective agricultural enterprises in Ukraine "with the participation of the International Finance Corporation (IFC) and financial support from the governments of Great Britain, Canada, Japan, the Netherlands and the Scandinavian countries.</p>
	<p>The third period (1997-1999) was marked by the improvement of relations in the use of land shares, decrees of the President of Ukraine on guaranteeing the protection of economic interests and improving the social security of retired peasants entitled to land shares, and on the lease of land banned since 1937. Subsequently, a law was passed. As the analysis of citizens' appeals to central and local authorities during this period shows, it was necessary to immediately regulate the principles of lease of land plots and land shares (units), identify the subjects of lease agreements, provide an opportunity to lease land to several persons relevant land certificates. However, these measures regarding the exercise by the peasants of their powers in relation to land plots and land shares (units) were declarative. As a result, the systemic crisis in agriculture caused a depressed state. The danger was that the formal legal act of transferring land from state to collective ownership created in the public administration the illusion of the final completion of land reform in the state and the full restructuring of collectively owned enterprises. Therefore, as of January 1, 1998, 66.6% of agricultural land remained the property of CAE and open joint-stock companies created through the privatization of state farms and other state-owned enterprises.</p> <p>To deepen agrarian reform in this period, external pressure is exerted on the leadership of the state. International financial institutions stipulate the opening of Extended Fund Facility (EFF) programs for Ukraine with specific commitments to complete the restructuring of the CAE, improve agricultural governance, create conditions for a transparent market for land, food, industrial products and energy consumed by agriculture.</p>
2 stage	
	<p>The second stage (2000-2004) of CAE restructuring was much more intensive than the first. This was largely due to the adoption in December (1999) of the Decree of the President of Ukraine on urgent measures to accelerate the reform of the agricultural sector of the economy. By April 2000, the central and local executive bodies undertook to restructure collective enterprises based on private ownership of land and property using various organizational and production forms of management. That is, it was supposed to complete the transformation of the right of collective ownership of these resources into the right of private ownership of</p>

	them in three months - before the start of spring field work. In fact, the decree recognized acceptable for dissemination in Ukraine approaches to the restructuring of CAEs, tested during the years of reform, including those implemented in the framework of the above international technical assistance. Thanks to the latter, almost 1,000 CAEs were restructured between 1996 and 2000.
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Source: SHIYAN V. "Agrarna polityka"

### **3.2.2. Sharing agricultural land as part of the land privatization process**

The process of privatization of land, which arose in 1992, went through a slower pace: Over the length of the trials of less than 3.7 million hectares of land, the land was transferred to collective ownership. Complicated demonopolization and privatization of land procedures, the necessary time shifts, work and financial resources were most likely to be due to the main reasons, because the process of transferring lands was neglected. We have seen other countries in the Baltics of Latvia, as well as the great sides of Eastern and Central Europe, Ukraine has seen more ideal restorations, more land reforms, and more privately owned land: (Urkevich, 2014)

- It was believed that restitution would be difficult and neglected by the process, as follows:
- the main part of the cadastral documents with a clear view of the state's ownership of the land is possessed by the state authorities;
- visiting the frontier landowners could align the unwanted guidance in the Ukrainian suspension;
- considering the fact that land redistribution began de facto in 1989, the government tried to protect social equality and avoid possible conflicts with claimants of land rights;
- the First President, also a great deputy of the Supreme Council of Ukraine, Vlashtov's, who are the owners of land, have the right individuals, so that they can be landless.

Violation of knowledge, lower productivity of collective agricultural enterprises, as well as the results of land reform have led to an onset of offensive land reform. PRESIDENTIAL DECREE "ON IMPORTANT MEASURES FOR ACCELERATING LAND REFORM IN THE AGRICULTURAL PRODUCTION SECTOR" (No. 666/94, November 1994) The decree recommended that village councils, with the participation of the State Committee on Land Resources, take some measures to accelerate the transfer of land to collective ownership of collective or other non-state agricultural enterprises that have expressed a desire to obtain land for ownership. (Urkevich, 2014)

As a result of such measures, mainly due to a presidential decree, since 1995 about 90% of the land of collective and other non-state agricultural enterprises has been transferred. At the beginning of 1998, the transfer of land to collective ownership was almost complete. Agricultural enterprises received 26.0 million hectares or 62.3% of the land fund of Ukraine. Almost all collective land (99.8%) was in the use of private agricultural enterprises.

The land in collective ownership belonged to the members of the collective, and each member, including both working members and retirees, was authorized to receive an equal share of the land to the rest. The 1990 Land Code developed a procedure for determining the average size of a land share, which basically foreshadowed the division of land between rural residents. However, this Land Code did not establish the rights of owners of land shares after they allot a piece of land in kind if they leave the collective. (Kovalenko, *Legal Regulation of Agricultural Land Circulation in Ukraine: Problems and Prospects*, 2019)

The presidential decree of November 1994, as well as the decree "ON THE ORDER OF POWDERING OF THE LAND, WHICH WAS TRANSFERRED TO THE COLLECTIVE PROPERTY OF AGRICULTURAL ENTERPRISES AND ORGANIZATIONS" (No. 720/95, August 1995) confirmed the first code established by the collective agricultural enterprises individuals with subsequent allocation of land in kind. These decrees established that each member of a collective enterprise has the right to freely exit from it with a allocated land plot, and also that the right to private property will be certified by an official document - a Certificate of the right to private ownership of a land share. According to these decrees, owners of land shares can voluntarily combine their shares in order to establish various associations, partnerships, cooperatives, joint-stock companies or other agricultural organizations. The right to a land share may be an object of purchase, sale, inheritance or inheritance, exchange, gift, mortgage. (Kovalenko, *Legal Regulation of Agricultural Land Circulation in Ukraine: Problems and Prospects*, 2019)

The division of land into shares was carried out separately in each enterprise. Not all land that was transferred to collective ownership was subject to division. Part of the land namely land under roads, windbreaks, reclamation structures, industrial buildings, etc., was left in indivisible collective ownership. The rest of the land was personified (divided).

Certificates were issued and registered by the relevant legislative authorities. If the owner of the land share leaves the collective agricultural enterprise, a land plot in kind is allocated and the State Act of private ownership of the land is issued. After receiving the State Act, the owner

had to return to the state authorities a Certificate of private property rights to the land share. (Kovalenko, Legal Regulation of Agricultural Land Circulation in Ukraine: Problems and Prospects, 2019)

The division of land was much slower than its transfer to private ownership. According to the operational data of the State Committee of Land Resources of Ukraine, on April 1, 1996, about 95% of all land of non-state agricultural enterprises was transferred to collective ownership. At the same time, the process of land division occurred in 18% of such enterprises. Only 3.8 million hectares, with 23 million hectares of collective land, were divided into land shares. Only 4% of non-governmental agricultural enterprises issued land certificates (200 thousand agricultural workers received certificates). (Popov, 2015)

Directors of agricultural enterprises and organizations tried to suspend the process of land plowing, since they believed that the division of land would lead to the liquidation of large farms and to the division of all land into small particles. Lack of financial support, lack of a carefully developed legislative framework and coordinated government administration were also reasons for the slowdown in land reform.

However, by the end of 1998, the process of collective land shareholding was practically completed, as a result of which 6.7 million Ukrainian citizens received certificates (State Committee on Land Resources).

In general, at this stage of land reform, the shareholding (division) of land can be defined as "separation on paper." The decrees did not regulate the issues of allocation in kind or real provision of rural residents with land plots. Landowners were not aware of the exact location of their land in the territory. The ownership of the divided land remained in the collective ownership of members of collective agricultural enterprises, and at the same time, these people could independently conduct various transactions with their shares. (Popov, 2015)

The legislative framework led to the first speculation with land shares at this stage of land reform, but only in the form of certificates. On the other hand, trade in such certificates cannot be regarded as a complete land transaction. It was a contract for a "land share on paper", which did not foresee the allocation of land in kind at the time of signing such a contract. Moreover, the procedure for the allocation of land in kind was not developed at that time.

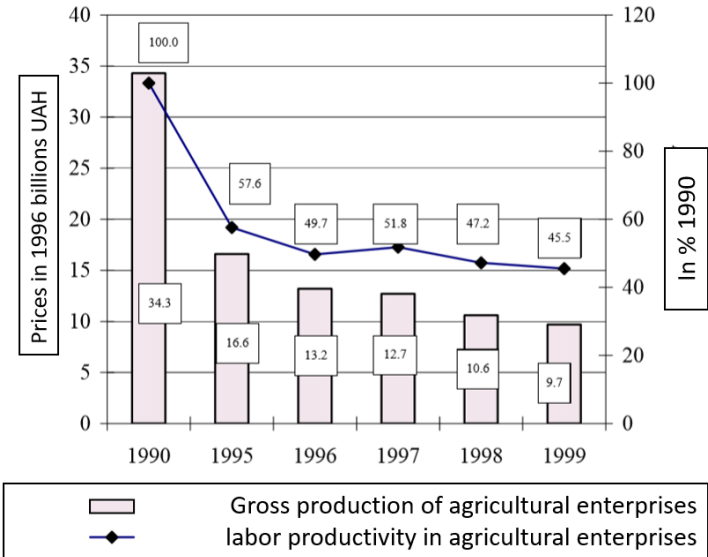
Land sharing, together with the legalized right to exit the collective agricultural enterprise, was an important mechanism for restructuring the agricultural sector. At the same time, these were



actions that, ultimately, could lead to the dispersal of land and assets of collective agricultural enterprises.

The Constitution of Ukraine, which was adopted in 1996, did not provide for the existence of "collective ownership" as such. The decline in agricultural production and labor productivity in agricultural enterprises that began in 1992 also continued at this stage of land reform. Low productivity in agriculture, as well as the lack of interest of workers in the results of their work, which was reflected in labor productivity, necessitated the reform of collective agricultural enterprises and providing their members with land and assets. All these events led to the development of the next stage of land reform. (LISSITSA, 2003)

Graph 1



Source: State Committee of Statistics Of Ukraine, 2002

**3.2.3. Restructuring of collective agricultural enterprises**

As mentioned above, the land privatization policy introduced in the mid-90s did not bring the expected results. In particular, the transformation of collective ownership and the formation of private ownership of land have not been achieved. Beneficiaries of land shares were poorly aware of the rights attached to the land certificates. Owners of land shares did not choose a clear position in the exercise of their rights and decisions were still made only by directors of collective farms. The situation in the agricultural sector and in the whole village was catastrophic. (LISSITSA, 2003)

As of January 1, 1999, one hospital served 28.5 villages, an outpatient center - 14 villages, an obstetric station, a club, a school - 2 each and a kindergarten - 3 villages.

The decree of the President "ON IMMEDIATE MEASURES FOR ACCELERATING THE REFORM OF THE AGRICULTURAL SECTOR OF THE ECONOMY" (No. 1529/99, December 1999) was supposed to correct the unsatisfactory situation. The beginning of the third stage of land reform is the day of signing of this decree by the President of Ukraine. (LISSITSA, 2003)

The decree introduced fundamental changes in the process of land reform. Collective property has been abolished. It was decided to reorganize the old collective farms, which were transformed into KSP, into new market forms — joint-stock companies, limited liability partnerships, agricultural cooperatives, private firms, etc.

Table 2

The number of unprofitable agricultural enterprises						
	1994	1995	1996	1997	1998	1999
The number of unprofitable agricultural enterprises units	715	3,734	8,505	10,906	11,41	10,642
The proportion of unprofitable agricultural enterprises,%	5.7	30.2	68.5	87.2	91.8	84.2
The amount of loss, thousand UAH	24.2	77.3	222	333	371	361

Source: State Committee of Statistics Of Ukraine, 2002

According to the decree, each member of the collective agricultural enterprise was given the opportunity to exit the CAE with their own land and property shares. In this case, the boundaries of the land share should have been measured on the territory, and the landowner received the right of private ownership of the land. Landowners could establish new agricultural enterprises and conduct their activities based on private ownership of land. (BABICHEVA, 2003)

The official goal of the reform of the CAE was to change the ownership of assets and land, as well as the establishment of new, market-oriented agricultural enterprises in which labor and property relations would be separated from membership relations (that is, the ownership, use and disposal of property is clearly divided).

In addition, to create the most favorable environment for the reorganization of the CAE, the decree also proclaimed:

- support from the government in the reorganization of collective agricultural enterprises and the establishment of new private formations;
- the introduction by local government bodies of a simplified procedure for registering land and property lease contracts;
- decrease in state taxes that arise during registration of land ownership;
- introduction of new land registration rules by local authorities, etc.

At this stage of land reform, the government called on owners of land certificates to exchange these certificates for state acts during 2000-2002 to help institutionalize private ownership of land. But at the same time, there was no developed procedure for the allocation of land for owners of land shares. (BABICHEVA, 2003)

However, the mentioned speculations with land certificates were still present in Ukraine. Peasants - owners of certificates, were poorly informed about the rights to land shares and the real market value of the certificates.

According to these circumstances, the lack of a mechanism for buying and selling land certificates, as well as with the aim of protecting the rights of peasants to land, the Parliament of Ukraine issued the Law "On Contracts for the Alienation of Land Shares" (No. 2242-III, January 2001). The law forbade the owners of land shares to enter into agreements for the sale, purchase or transfer of land shares as a gift, as well as their alienation in any other way, except for inheritance or redemption for social needs. Thus, this law practically stopped all transactions of land shares. (BABICHEVA, 2003)

In general, it should be noted that, despite the uncertainty and inconsistency, at this stage of land reform, the first positive results. Gross agricultural production in Ukraine increased by 21% in 2001 and by 23.3% in 2002 compared with 1999. The number of unprofitable farms has halved. In addition, in 1998 a fixed agricultural tax was introduced as a factor in reducing tax pressure. The trade balance became positive, wage arrears decreased, the size of barter operations decreased, the amount of loans in the agricultural sector increased, and soft loans were also introduced.

Such positive changes can be explained by the reorganization of the CAE, which led to a more efficient use of land by newly formed enterprises. Owners of land shares could lease their land shares to effective users and were also not limited in the choice of these users. (LISSITSA, 2003)

Despite all these results, real land trade still did not exist in Ukraine. The lack of a procedure for determining land plots in kind was the main obstacle to the development of both land trade and the agricultural land market.

Table 3

Economic results of agricultural enterprises in Ukraine					
Indicators	1999	2000	2001	2002	Percentage ratio from 2002 to 1999 %
Gross agricultural production products, billion UAH	50,736	55,689	61,397	62,536	123
Including gross crop production	27,579	33,632	37,804	37,248	135
Gross livestock production	23,157	22,058	23,593	25,288	109
Unprofitable farms,%	84,2	34,5	43,9	42,3	50,2
for a fixed agricultural tax) paid by agricultural enterprises, million UAH	3,614	4,633	5,237	5,407	150
The total amount of fixed agricultural tax, million UAH	173	224	342	420	243
External trade balance turnover agricultural and food products, million US dollars	2,524	2,576	3,295	3,835	152
Export of agricultural and food products, millions of US dollars	1,538	1,582	2,062	2,634	171
Import agricultural and food products, million US dollars	986	994	1,233	1,201	122
Foreign trade balance, millions of US dollars	552	588	830	1,432	260
Salary arrears in agricultural enterprises, million UAH	2,041	1,522	478	340	16,7
Credits issued by agricultural enterprises - total, million hryvnias	390	2,090	5,866	5,860	1,503
Including soft loans	0	818	2,803	2,155	3,112
The proportion of barter operations in the total amount of sales agricultural enterprises	27,1	18,7	7,6	4,4	16,2

Source: Mesel-Veselyak and Fedorov, 2003.

### 3.2.4. The structure of ownership of agricultural land

As a result of the administrative measures taken to restructure the CAE, there have been significant changes in the structure of the land fund by forms of ownership. If as of January 1, 2000, 44.3% of the total land area was collectively owned, during the year it decreased to 1.8%, and the share of private property during this period increased from 7.2 to 48.2%. In accordance with the change in the structure of the land fund by forms of ownership, there was a transformation of the organizational and legal structure of enterprises engaged in agricultural production. During 2000, new economic structures were created based on CAE property complexes the number of agricultural production cooperatives increased 10 times, private enterprises (private-leased) in 5 times, and business associations 3.3 times. Additionally, 8% of the total number of legal entities of farms created because of restructuring of non-state enterprises were registered. In the first half of 2000, in the process of restructuring 11.1 thousand non-state agricultural enterprises, carried out under administrative pressure, 14.7

thousand private structures were created with a fragmentation rate of 1.32. That is, on land and property complexes out of every 100 restructured enterprises, an average of 132 private formations started operating. In Dnipropetrovsk oblast this indicator was 2.28, in Luhansk oblast - 2.1, in the Autonomous Republic of Crimea - 1.63, and in Zaporizhia oblast - 1.61. (Shiyan V., 2007)

Table 4

Change in the structure of the land fund by forms of ownership (January 1)						
Years	Lands owned in accordance with state acts					
	State		Private		Collective	
	ths. Ha	%	ths. ha	%	ths. ha	%
1991	60354.8*	100	-	-	-	-
1996	36310.5	60.2	1 925.4	3.2	2 2118.9	36.6
2000	29265.5	48.5	4 327.3	7.2	2 6762.0	44.3
2001	30166.5	50	29 109.2	48.2	1 079.1	1.8
2002	30027.1	49.7	29 807.0	49.4	520.7	0.9
2003	29872.2	49.5	30 178.0	50	304.6	0.5
2004	29796.8	49.4	30 326.3	50.2	231.7	0.4

Source: Galushko V. "Formation of the land market in Ukraine"

Table 5

Transformation of the organizational and legal structure of agriculture in the process of restructuring non-state enterprises								
Types of enterprises	Time line						2004	
	01.01.2000		01.01.2001		01.01.2004		2000, %	2001, %
	Number, ths	Specific weight %	Number, ths	Specific weight %	Number, ths	Specific weight %		
CAE	7.1	64.0	0.3	2.0	0.3	1.0	4.2	100.0
Business associations	1.5	14.0	6.7	45.0	7.8	48.0	5.1	116.4
Private (private rental) enterprises	0.4	4.0	2.9	20.0	3.7	23.0	9.2	127.6
Cooperatives	0.2	2.0	3.3	23.0	2.4	15.0	12.0	72.7
Farms	-	-	1.2	8.0	1.8	11.0	-	125.0
Others (collective farms, peasant unions, agricultural firms)	1.9	16.0	0.3	2.0	0.4	2.0	21.0	133.3
Total	11.1	100.0	14.7	100.0	16.4	100.0	145.0	109.5

Source: Galushko V. "Formation of the land market in Ukraine"

According to a survey of the state of agricultural sector reform conducted by the State Statistics Committee of Ukraine, 56.9% of the single array of newly formed formations remained on the land areas of the former PSCs, and 79.5% acquired the right to use the entire property complex. The average size of agricultural land per enterprise was the largest in closed joint-stock companies (2874 ha), and the smallest - in farms (79.1 ha).

### 3.2.5. Land Code as a new stage in the process of land privatization

LAND CODE OF UKRAINE (No. 2768, October 2001) proclaimed the land the main national wealth, which is under state protection. Land use regulation and land protection are based on the presumption that land is both a natural resource and real estate. The Code defines the

concept of land relations as social relations regarding the ownership, use and disposal of land, and confirms the state guarantee of human rights to land ownership.

In addition, the Land Code stipulates two forms of land ownership in a market economy, namely, public property, which includes state and communal property, and private property.

According to the Code, citizens of Ukraine receive property rights to land in accordance with purchase, exchange, gift, or other civil contracts; free transfer from state and municipal property; privatization of land that was previously transferred to the use of citizens; allocation of land in kind. (Fedchyshyn, 2020)

At the same time, the Land Code establishes some restrictions on the acquisition of land in property. The Code does not allow foreign individuals or legal entities to acquire agricultural land plots in private ownership and limits their rights to acquire non-agricultural land in private ownership. But as a compromise, the Land Code allows foreign individuals and stateless persons to acquire Private ownership of non-agricultural land plots on which buildings are located. The agricultural land inherited by a foreign physical, legal, or stateless person must be alienated within one year.

On the other hand, under such condition's concomitant with the development of land relations and the agricultural land market, the Land Code is a deterrent to such development. The transitional provisions of the Code deserve special attention in this regard (Fedchyshyn, 2020).

They establish:

- citizens and legal entities of Ukraine can receive in private ownership no more than 100 hectares with a total area of agricultural land until January 1, 2010.
- until January 1, 2005, the inclusion of land plots (their value) in the authorized capital of an agricultural enterprise is prohibited (the ban continues).
- citizens and legal entities of Ukraine who have privately owned land plots for conducting private farms or producing agricultural products, as well as Ukrainian citizens - owners of land shares cannot sell or alienate in any other way land plots and land shares, except for exchange, transfer to inheritance or alienation for social needs until January 1, 2005 (the moratorium on the purchase and sale of agricultural land continued).
- allocation of land in kind is carried out according to the desire of citizens of owners of land shares. In this case, the State Act on Land Ownership shall be issued.

The problem of allocation of land in kind became more and more important. Considering this problem, the President of Ukraine signed the Law of Ukraine "ON THE PROCEDURE FOR ALLOCATION IN NATURE (IN TERRITORY) OF LAND PLOTS TO OWNERS OF LAND SHARES" (No. 899-IV, June 2003).

The law defines the organizational and legitimate basis for the allocation of land in the territory that belongs to collective agricultural enterprises, agricultural cooperatives, agricultural joint-stock companies based on collective ownership.

According to these measures, as of January 1, 2005, about 5.1 million (85%) of State acts of private ownership of a land plot were issued to owners of land certificates by the State Committee of Land Resources

### **3.2.6. Some results of the agricultural land reform process in Ukraine**

As a result of the introduction of land reform, several fundamental goals were achieved, namely, private ownership of land was introduced; land was demonopolized with its subsequent transfer to the ownership of collective agricultural enterprises; the lands of collective agricultural enterprises were divided between employees and pensioners of the mentioned enterprises. Instead of the collective-farm system, various forms of management were formed. Private farms created based on private ownership of land and individual or family forms of organization of production, were given the opportunity subsequent development. Collective agricultural enterprises, as well as a large number of state farms, were reformed into various new, market-oriented enterprises based on private and state ownership of land with collective forms of labor organization. (Fedchyshyn, 2020)

Such restructuring of existing agricultural enterprises and the creation of new agro-formations have led to significant changes in the structure of land use.

## **3.3. Formation of the Ukrainian agricultural land market**

### **3.3.1. Land market as a crucial point in agriculture development**

The market transformation of agricultural production and land use has led to a situation where most of the peasants have become landowners. Each worker in the agricultural sector has received (or should receive) the State Act of the right of private ownership of land according to his desire. In addition, one should consider the fact that about 50% (14 million hectares) of agricultural land is privately owned by pensioners who cannot take an active part in agricultural production and 30% of whom have no heirs. (VALENTINOV, 2003)

That is why, at this stage of land reform, it became necessary to introduce a mechanism that could ensure a rational and efficient (from a social point of view) land turnover. World practice shows that such a mechanism is the agricultural land market. In the context of the transition to market land relations, the land market can be regarded as one of the main components of these relations.

The land market contributes to the determination of the most efficient users, the concentration of land resources in their ownership and use, ensuring rational and environmentally safe land use, solving important social and economic problems. (VALENTINOV, 2003)

If land is included in the turnover through the land market, the price of agricultural products will be formed considering the price of land, namely, the cost of using capital or rent (if land is leased). Accordingly, prices for agricultural products will increase. This will be a positive result for the producer - landowner, as it gives them the opportunity to have additional profit for the renewal of means of production, as well as the use of advanced technologies, highly productive equipment, etc. (BERGSCHMIDT, 1998)

A functioning efficient land market can be positive for local governments. according to the Law "ON PAYMENT FOR LAND" (No. 2535-XII, July, 1992) and other legislative acts, local budgets will receive income from land transactions. According to the Law, 90% of taxes received from land trade must be transferred to local budgets and 10% to the state budget. These financial resources can be used to solve the most urgent problems of territorial communities.

The land market also plays a significant role in the development of agricultural enterprises during the transition of Ukraine to market relations. By acquiring land in ownership, the owner can contribute its value as an asset to the authorized capital of the enterprise, since the value of the latter is one of the most important criteria for obtaining bank loans. (BERGSCHMIDT, 1998)

As international experience shows, the cost of land always remains the same or continues to grow, despite inflationary processes. Land is a unique capital due to its ability to maintain its value and, compared to many other assets such as currency, bonds, stocks, etc., from time to time to raise it. This means that land can become one of the most important material assets for those who own an enterprise. Thus, even for those landowners who do not personally conduct transactions in the land market, it is land markets that can determine and validate the value of assets, which, in turn, can be passed on to the next generation and thus used as a basis for planning business activities. (LISSITSA, 2003)



### **3.3.2. The forms of transactions in the Ukrainian land market from the year 2001**

All land transactions that can be carried out on the Ukrainian agricultural land market are usually divided into two main categories:

- Purchase and sale transactions, which involve the transfer of ownership of land.
- Lease transactions that involve the transfer of land use rights from landlord to tenant.

Gift, inheritance, inheritance of agricultural land or so-called civil transactions; exchange of agricultural land or market transactions are also widespread in Ukraine and can be classified as the first category of land transactions, which involve the transfer of ownership of land. Lease transactions include lease of agricultural land, sublease, lease by third parties.

Gift, inheritance, inheritance of agricultural land or so-called civil transactions; exchange of agricultural land or market transactions are also widespread in Ukraine and can be classified as the first category of land transactions, which involve the transfer of ownership of land. Lease transactions include lease of agricultural land, sublease, lease by third parties. Today, the Land Code (2001), as well as the October 2004 law, are the main legislative framework that regulates the agricultural land market in Ukraine. According to the definition of the land market and the established restrictions by the Transitional Provisions of the Land Code (2001), it should be noted that a full-fledged market for agricultural land does not function today in Ukraine.

The Transitional Provisions, which were finalized and continued by the Law of Ukraine "ON MAKING CHANGES TO THE LAND CODE OF UKRAINE" (No. 2059-IV, October 2004), determine:

- Individuals and legal entities who have privately owned land plots for family farming, production
- agricultural products, as well as citizens of Ukraine - owners of land shares have no right to sell or alienate their land plots and land shares in any other way, except for inheritance or redemption for social needs before January 1, 2007.
- Individuals and legal entities may acquire ownership of agricultural land plots no more than 100 hectares with a total area until January 1, 2015. However, the size of this area can be enlarged in the case of legal inheritance of land plots by citizens and legal entities.
- Owners of land shares do not have the right to contribute the value of their shares to the authorized capital of enterprises before January 1, 2007. (VRU, 2002)

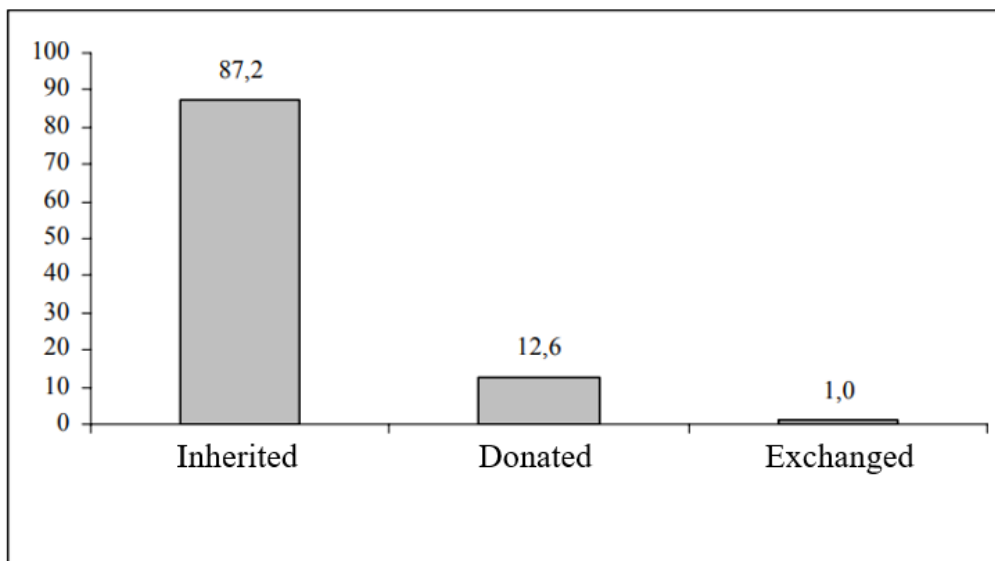
### 3.3.2.1. Land exchange, inheritance, and donation

In Ukraine, until the end of 2004, according to the Land Code (2001), there were three possible types of transfer of ownership of agricultural land: Exchange, donation, and inheritance. In this regard, the exchange of agricultural land plots deserves special attention. According to the Land Code (2001), the exchange of agricultural land was a legally permitted operation on the Ukrainian agricultural land market until January 2005. The Law "ON MAKING CHANGES TO THE LAND CODE OF UKRAINE" banned all market transactions for the exchange of agricultural land until 1 January 2007. (Shiyan V., 2007)

Graph 2 shows, inheritance is the dominant type of land transactions and accounts for 86% of all transactions. This can be explained by one simple reason: Half of all land plots are owned by elderly pensioners, who transfer the rights to land to their heirs.

Graph 2

The structure of land transactions (exchange, inheritance, donation) in the form of land certificates as of 1.07.2003, thousand transactions



Source: State Committee Of Land Resources

### 3.3.2.2. Agricultural lands rent

One of the most common forms of land transactions in the Ukrainian agricultural land market is land lease. Land lease was re-established in Ukraine by the Law "ON LAND LEASE" (No. 161-XIV, October 1998) after a seventy-year break. The land share of non-state agricultural enterprises provided a powerful incentive for the development of agricultural land lease relations. About 6.7 million certificate holders, 41.6 thousand farmers, as well as newly established farms were interested in developing land lease relations. Over the past years, several

legislative acts have been adopted that established the main provisions regarding land lease relations. They provided the following:

- The right to lease land is based on a contract that is limited in time and is based on paid tenure and land use for agriculture and other activities.
- Land plots can be leased by citizens and legal entities of Ukraine, foreign citizens and stateless persons, foreign legal associations, international associations and organizations, as well as foreign states.
- The land plot can be leased for a short term - up to 5 years, and for a long term - no more than 50 years.
- With the consent of the lessor, the leased land plot or part of it can be transferred by lease to the possession and use of other persons (sublease).
- Land plots can be leased by their owners or persons who act as their representatives (agents). (Melnichuk, 2005)

According to the current situation in Ukraine, there are two types of land lease:

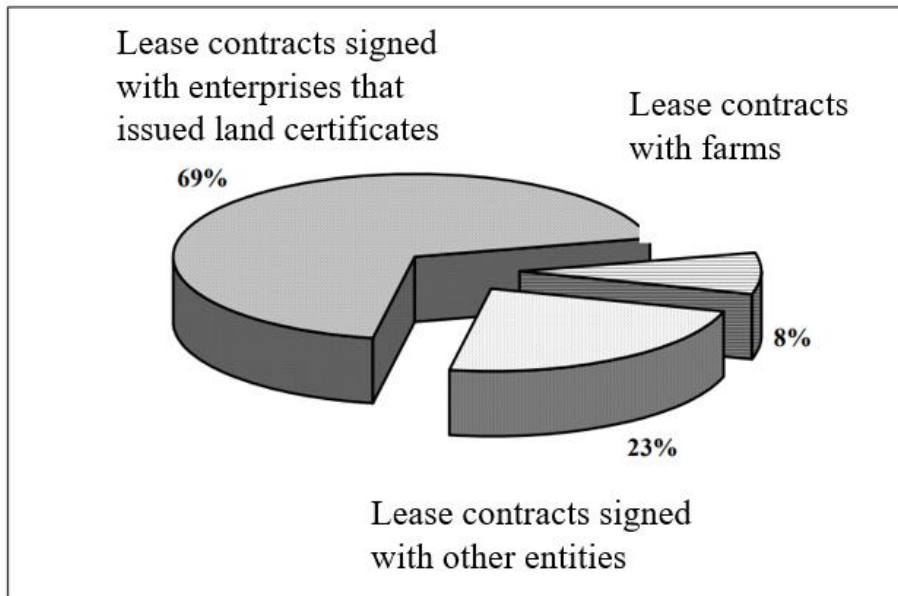
- a) according to the Certificate of ownership of land shares;
- b) in accordance with the State Act of private ownership of land.

Most of the certificate holders entered into lease agreements with agricultural enterprises and individuals. As of January 1, 2004, owners of land shares signed 5,235,600 lease contracts with a total area of 20,927,400 hectares. Accordingly, as of January 1, 2005, these sums amounted to 5,031,200 contracts for 19,982,500 hectares of land. (Urkevich, 2014)

As can be seen on the Graph 3, lease agreements with businesses that issued land certificates still prevail (69%). Such data can be explained mainly by the lack of desire among pensioners to change tenants. The share of lease agreements concluded by retirees is 2,691,700 or 53.5%.

Figure 1

Structure of lease contracts for land shares,% of the total amount of lease contracts as of January 1, 2005



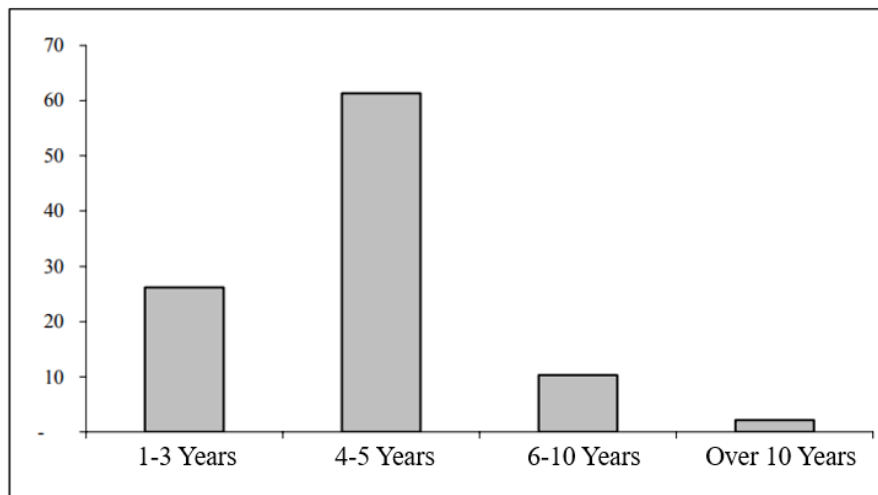
Source: State Committee Of Land Resources

On January 1, 2005, 12,716 million hectares of agricultural land were leased out based on State Acts of Private Land Property Rights. 99.9% of this amount, or 12.708 million hectares, was transferred for agricultural production, and only 8.7 thousand hectares, or 0.1% for other purposes. More than 158.0 thousand hectares of agricultural land or 1.2% were leased out in the territory of settlements. (Melnichuk, 2005)

On Graph 4 shown, short-term agricultural land leases are more popular - they account for 88% of all land leases concluded. Some lease contracts for more than 10 years are insignificant and account for only 2% of the total amount of all contracts.

Graph 3

The structure of land lease contracts by lease term, in% of the total number of contracts concluded as of 01.01.2005



Source: State Committee of Land Resources

Long-term rentals are not common in Ukraine. This is mainly due to the lack of protection of property rights. If landowners seek short-term leases, there is very little incentive for long-term investment or efficient land use. Landowners or long-term tenants are inherently interested in land as a stable resource that brings a constant income, in protecting the land and protecting soil fertility (KOBZEV, 2004).

Land lease plays an important role in the social sphere. In most cases, rent is the main source of income for rural residents. State statistics show that the total amount of rent, according to the signed contracts, in 2003 was 2.4 billion hryvnia (453 million US dollars) and in 2004 - 2.3 billion hryvnia (434 million US dollars). Approximately half of this sum was paid to retired peasants. However, only 13% of the total rent for 2004 was paid in cash. The rest was issued in the form of agricultural products (81%) and services (6%).

At the same time, some experts argue that land rent is still very low. The annual rent in 2003 was 115.2 hryvnia (21.7 USD) and in 2004 - 116.9 hryvnia (21.6 USD) per hectare of agricultural land in Ukraine. (Melnichuk, 2005)

### 3.3.2.3. Matrix of legally authorized transactions in the land market

All transactions of land, both agricultural and non-agricultural, which are legally permitted according to this legislative framework in Ukraine, can be grouped in the following table.

Table 6

Transactions in the land market in Ukraine																
Indicators	Land transactions	Ownership forms			Subjects of economic turnover of land											
		State	Communal	Private	State	Municipal authorities	Individuals	Foreign legal entities, international organization	Foreign citizens and non-citizenship	Land category						
					Agricultural	Not agricultural	Agricultural	Not agricultural	Agricultural	Not agricultural	Agricultural	Not agricultural	Agricultural	Not agricultural	Agricultural	Not agricultural
Market transactions	Active	Buying and selling of land														
		Direct purchase or sale according to the statements of all interested			+					M	+	M	+			
		Buying or selling at auctions	+	+	+	M	+	M	+	M	+	M	+	M	+	
		Land exchange	+	+	+	M	+	M	+	M	+	M	+			
Market transactions	Active	Land rent														
		First tenant	+	+	+	+	+	+	+	+	+	+	+	+		
		Sublease	+	+	+	+	+	+	+	+	+	+	+	+		
		The third parties	+	+	+	+	+	+	+	+	+	+	+	+		
	In progress	Mortgage (pledge) of land	+	+	+	M	+	M	+	M	+	M	+	+		
Citizen transactions	Active	Donation of land			+								+	+		
		Inheritance			+								+	+		
		Allocation of land	+	+		+	+	+	+	+	+	+	+			
		Lifetime rental			+								+	+		
		Division of land between family members			+								+	+		

Note: "M" - Moratorium on the purchase and sale of agricultural land.

"+" - can take part in transactions.

### 3.4. Legislative regulation of the agricultural land

#### 3.4.1. Land market moratorium

In 2001, a “land moratorium” was introduced in Ukraine, which imposed a ban on the alienation of agricultural land for conducting commodity agricultural production and lands (The Law of Ukraine “On Agreements on the Alienation of Land”, 2001) (repealed). On October 25, 2001, a new Land Code of Ukraine (2002) was adopted. The considerable duration of the moratorium on land expropriation for commercial agricultural production has caused many problems in the area of land use and protection, for example, the dominance of the lease form of land use in agricultural production, the emergence of inherited land and unclaimed land shares, the

formation of the so-called "gray" market of agricultural land due to the conclusion of illegal contracts for the acquisition of land rights, etc. (Kovalenko, 2019)

On 17 February 2017, 55 deputies appealed to the Constitutional Court of Ukraine, with the submission to declare clauses 14, 15 of section X «Transitional Provisions» of the Land Code of Ukraine unconstitutional. A year later, on February 14, 2018, the Constitutional Court of Ukraine rejected this submission, arguing that the arguments given are insufficient to permit the opening of the constitutional proceedings (Decision of the Constitutional Court of Ukraine “On refusal to open a constitutional proceeding in a case on the constitutional submission of the 55 People's Deputies, 2018).). Nevertheless, in this appeal did not stop, so in 2018, already 69 people's deputies again appealed to the Constitutional Court of Ukraine with a petition asking to recognize clauses 14, 15 of section X "Transitional Provisions" of the Land Code of Ukraine as contradicting the law. A 01.11. In 2018, the Constitutional Court of Ukraine rejected the failure to consider this submission (Decision of the Constitutional Court of Ukraine «on refusal to open a constitutional proceeding in a case on the constitutional submission of 69 People's Deputies, 2018). (Kovalenko, 2019)

The European Court of Human Rights (hereinafter – ECHR) in its judgment in *Zelenchuk and Tsitsyura v. Ukraine* (Judgment ECtHR in Case of *Zelenchuk and Tsitsyura v. Ukraine...*, 2018) unanimously concluded that there had been a violation of Article 1 of Protocol No. 1 to the Convention for the Protection of Human Rights and Fundamental Freedoms (1950) (hereinafter – the Convention). Noting the violations, the Court refers to the land moratorium as a structural problem for the state that needs urgent resolution. The Court determines that Ukraine as a defendant must apply the appropriate legal means and other means of protection to ensure a fair balance between the interests of the landowners of the agricultural land on the one hand and the general interests of the society on the other (paragraph 150 of the *Zelenchuk and Tsitsyura v. Ukraine* judgment). (Kovalenko, 2019)

The foregoing should not be construed as an obligation on Ukraine to immediately establish an unrestricted agricultural land market on the territory of the country. However, we emphasize that unreasonable delays in the introduction of necessary general measures may lead to a case where the award of compensation under Article 41 of the Convention may ultimately be justified, at least for certain categories of agricultural landowners (paragraph 157 of the Judgment ECHR in Case of *Zelenchuk and Tsitsyura v. Ukraine* (2018). Under the Convention (Article 46), the parties undertake to comply with the final judgment of the Court to which they are parties. Therefore, in addition to mandatory individual measures (payment of compensation

or other means to the benefit of the applicant to terminate the wrongful act and improve the consequences of the application), Ukraine, which is the respondent State, is obliged to apply general measures to solve the problem.

It should be emphasized that the ECHR decision does not specify what measures Ukraine should take to address the problem. According to the Law of Ukraine “On the Enforcement of Judgments and the Application of the Practice of the European Court of Human Rights” of 23 February 2002 (Law of Ukraine “On the Enforcement of Judgments and the Practice of the European Court of Human Rights”, 2006), measures of a general nature were defined, namely: amendments to existing legislation and practice of their application. Such measures will ensure that the Convention is complied with by the State, remedy the deficiencies (identified in the breach) and eliminate the grounds for bringing to the Court any allegations against Ukraine caused by a problem already under consideration in the Court. (Kovalenko, 2019)

An analysis of the factors that the ECHR considers to be a factor in the infringement of the plaintiffs' rights makes it possible to determine what legislative measures Ukraine may take as a defendant in the case. Thus, among the 110-148 paragraphs in paragraphs 110-148 of the Judgment which led to the violation of the law, the Court identifies: a) Legislative uncertainty as to the duration of the moratorium; b) A wide range of restrictions imposed by the moratorium; c) The absence of practically any exceptions to the moratorium, in the presence of which it would be possible to apply for permission to take actions in the order of exclusion (difficult financial situation, age, etc.) (Judgment ECHR in Case of Zelenchuk and Tsytshura v. Ukraine, 2018). Thus, Ukrainian legislators can eliminate any of the above factors to establish the fact that Ukraine has implemented the ECHR decision. Since the ECHR does not have the power to amend national legislation in accordance with the existing principle of subsidiarity, the obligation to protect the rights and fundamental freedoms rests with the State party to the Convention (Article 1) (1950), Ukraine, as defendant in the Zelenchuk and Tsytshura v. Ukraine case, one of the ways of its implementation may choose to amend the current land legislation of Ukraine, aimed at "lifting" the moratorium on land and the introduction of effective organizational and legal mechanisms for the circulation of agricultural land in Ukraine. (Kovalenko, 2019)

In 2019, a new President of Ukraine was elected, and a new Verkhovna Rada of Ukraine was elected, which stimulated the intensification of the process of finding ways to resolve the issue of legal regulation of agricultural land use. Thus, during September-October 2019 more than ten draft laws aimed at regulating this issue were registered in the Parliament of Ukraine. Governmental Draft Law No. 2178 of September 25, 2019, (Draft Law No. 2178 of September



25, 2019 "On Amendments to Certain Legislative Acts of Ukraine on the Circulation of Agricultural Lands", 2019) is central to the registered draft laws. However, given the degree of social and political tension in the society that currently exists around the problem of the land moratorium, it is unlikely that a point can be made in the final version of the relevant draft law. Therefore, it is relevant now to analyze the main legal models of knowledge of the land moratorium and regulate the circulation of agricultural land, which have become the subject of legislative initiatives. The analysis of legislative drafts in the Parliament of Ukraine on the land turnover of agricultural land allows us to distinguish common positions of draft laws that can be conditionally classified into two groups: the conditions for "lifting" the land moratorium and the basic rules for the circulation of agricultural land. (Kovalenko, 2019)

Thus, the terms of the "lifting" of the land moratorium and the introduction of land circulation of agricultural land include the following provisions of the draft laws:

- At first, a positive solution to the issue of introduction of agricultural land use in the All-Ukrainian referendum (Draft Law No. 1101 of August 29, 2019 "On Amendments to Section X" Transitional Provisions "of the Land Code of Ukraine on Prohibition of Alienation of Agricultural Lands for Holding and Establishing Results... (2019), Draft Law No. 2178-1 of 27 September 2019 "On Amendments to the Land Code of Ukraine on Introduction of Agricultural Land Turnover (2019), Draft Law No. 2178-3 of 01 October 2019 "On Amendments to Certain Legislative Acts of Ukraine Concerning the Circulation of Agricultural Lands"
- (2019), Draft Law No. 2178-8 of October 10, 2019 "On Amendments to Certain Legislative Acts of Ukraine on the Circulation of Agricultural Lands" (2019)). An alternative to the referendum is the proposal to introduce a broad public discussion of the issue on the basis of the profile committee of the Verkhovna Rada of Ukraine on Agrarian Policy and Land Relations ("On Certain Issues of Introducing the Land Market and Amending Certain Legislative Acts of Ukraine on the Redemption of Land Shares (Units), Prevention of Destruction of Parks and Sports Facilities", 2019);
- Secondly, compulsory preliminary land inventory (Draft Law No. of August 29, 2019 "On Amendments to Section X" Transitional Provisions "of the Land Code of Ukraine on Prohibition (2019) proposes to inventory land of all forms of ownership by entering data into the State Land Cadastre, establishing clear boundaries of land plots and their rightful owners throughout the territory of Ukraine; Draft Law No. 2109 of October 10, 2019 "On Certain Issues of Introducing the Land Market (2019) is proposed to audit the use of state and communal land of agricultural purpose, as well as to allocate to private

property or for use without auction in the period from 01 January 2014 to 01 January 2020 for the subject misdemeanor or corruption-related offenses)

- Thirdly, the preliminary determination of the regulated price for the purchase and sale of land for this purpose (Draft Law No. 1101 of August 29, 2019 "On Amendments to Section X" Transitional Provisions "of the Land Code of Ukraine on Prohibition..., 2019) proposed to develop an appropriate methodology for determining their minimum price. Criteria for their evaluation will be, in particular, fertility, location and other characteristics relevant to each region of Ukraine, and the drafts laws No. 2109 of October 10, 2019 "On Certain Issues of Introducing the Land Market (2019) and No. 2178-3 of 01 October 2019 "On Amendments to Certain Legislative Acts of Ukraine Concerning the Circulation of Agricultural Lands"... (2019) propose to determine the indicative price to be set by the Cabinet of Ministers of Ukraine. Thus, Draft Law No. 2178 of September 25, 2019 "On Amendments to Certain Legislative Acts of Ukraine on the Circulation of Agricultural Lands" (2019) proposes to set a minimum level of starting prices for the sale of state-owned or communal-owned land by auction (such price should not be below the regulatory monetary value). (Kovalenko, 2019)

However, in some cases, before the introduction of the circulation of such land, it is proposed to allow limited operations for their purchase. Such operations will be possible to carry out based on the owners' request to the relevant state body authorized by the Cabinet of Ministers of Ukraine (Draft Law No. 1101, 2019). Similar legal regulation is envisaged by other Draft Law No. 2109 (2019), which proposes the following:

- To give the power to buy land for agricultural purposes or land shares to state and local self-government bodies;
- To lease out purchased land / units on a competitive basis, while giving preferential right to natural / legal persons who are residents of our country.

The analysis of draft laws registered in the Verkhovna Rada of Ukraine aimed at "lifting" of the land moratorium and introduction of land turnover in this category, gives grounds to include the following suggestions to the basic rules of land use:

1. In determining the subject composition of the acquirers on the land of agricultural destination, which is currently the most debatable, it is possible to distinguish at least the following approaches to the settlement of this issue:
  - The Draft Law No. 2178 (2019) will provide for the acquisition of ownership of such land by natural/legal persons. At the same time, such legal entities should be formed under the legislation of our state, as well as territorial communities and the state. In turn,

persons who are foreigners and stateless persons will acquire the relevant ownership of such land plots in the manner inherited by law, but with the duty to alienate the land plots within one year of acquisition. Draft Law No. 2178-10 (2019) contains the same proposal.

– The Draft Law No. 2178-5 (2019) proposes to clarify the composition of land purchasers of agricultural land by another criterion. Citizens of Ukraine will be able to acquire such lands for farming, and legal entities - residents will be able to become their owners, provided that their founding documents provide for agricultural production.

– The Draft Law No. 2178-3 (2019) proposes to include in the list of buyers of agricultural land the purpose provided for in Article 130 of the Criminal Code of Ukraine, as well as local self-government bodies and the state (represented by a body authorized by the Cabinet of Ministers of Ukraine).

– Draft Laws No. 2178-4 (2019) and No. 2178-2 (2019) propose to alienate land of agricultural designation/shares exclusively to the state in the person of the State Land Bank.

2. Establishing the maximum size of the area of agricultural land that can be privately owned by a natural or legal person. Resolve this issue:

– Under Draft law No. 2178 (2019), the total area of land of such designation shall not exceed the appropriate percentage, namely: a) 15% in one region; b) 0.5% in Ukraine.

– Under Draft law No. 2178-10 (2019) proposes another criterion for determining the aggregate area of such land. In particular, such aggregate area shall not exceed: a) within one integrated territorial community - 35%; b) within one region - 8%; c) 0.5% in Ukraine;

– According to Draft law No. 2178-6 (2019), the following criterion exists: a) 500 hectares - for the property of citizens (for farms without the status of a legal entity – the area owned by all members of such a farm, on the basis of restrictions imposed on one citizen); b) 50,000 hectares – for the property of a legal entity, taking into account related individuals or legal entities created under the legislation of Ukraine, having a common final beneficial owner (controller) – a citizen of Ukraine. (Kovalenko, 2019)

Thus, the analysis of draft laws registered in the Verkhovna Rada of Ukraine aimed at “lifting” the land moratorium allowed to identify certain tendencies and prospects of legal regulation of land use. At the same time, the conducted research will not be complete without a detailed analysis of the government Draft Law No. 2178 (2019),

which has caused a lot of debate in the society and should be considered in the plenary session of the Verkhovna Rada of Ukraine in the near future.

First, this Draft Law No. 2178 (2019) proposes to amend Article 130 of the Land Code of Ukraine (2002) in the new version, according to which the range of entities that may acquire ownership of land for agricultural purposes will be restricted only to residents of Ukraine. In doing so, foreigners will be prohibited from owning such land. Subject to the adoption of Article 130 of the Land Code of Ukraine (2002) in the proposed version, outside the sphere of any legal restrictions are agricultural enterprises in which the ultimate beneficial owner are foreign legal or natural persons. That is, foreigners, using the mechanisms of corporate legal relations, will be able to dispose of such land plots through their agricultural enterprises established in Ukraine. (Kovalenko, 2019)

Secondly, when introducing restrictions on the sale and purchase of agricultural land provided for in the bill, the following questions remain open:

- a) The validity of certain maximum sizes of land plots that may be privately owned by individuals and legal entities;
- b) The need to bring these restrictions into line with the requirements of antitrust law;
- c) The uncertainty of the legal consequences of violating such restrictions when the right is "mistakenly registered" and the total cumulative area exceeds the maximum permissible size of land of the respective category

Thirdly, the new wording of Article 130 of the Land Code of Ukraine (2002) proposed by this bill provides for the possibility for an alien and a stateless person to acquire ownership of land for agricultural purposes following the law. However, in such a case, these entities are obliged to dispose of them within one year from the date of acquisition of ownership. An analysis of these provisions shows that the said draft law contains a gap in the legal consequences of the inheritance of such lands by will. This will mean the possibility of acquiring ownership of such land by will since the law does not contain any prohibition to certify such a will.

Fourth, in this draft law did not develop a constitutional prescription that land is a major national treasure, which is under the special protection of the state because it does not provide for the obligations of land purchasers to improve the state of agricultural land and to exercise their permanent legal protection. Similarly, the legal consequences of noncompliance with measures in the field of land protection in the form of legal liability, which should prevent the offense of entering into agreements with agricultural land. (Kovalenko, 2019)

### **3.4.2. Reform March 31, 2020**

On the night of March 30 to March 31, the Verkhovna Rada in the second reading adopted a law that should open a market for agricultural land in Ukraine. Politicians call this event historical, but experts believe that it is too early to rejoice, since the land market in Ukraine will operate with significant restrictions.

#### **3.4.2.1. The essence of the reform**

The market will launch in several stages:

- From July 1, 2021, individual Ukrainian citizens, state and communities (created in result of decentralization process) will be allowed to purchase agricultural land in Ukraine, up to a limit of 100 hectares for individuals. This limit will stay in place until January 1, 2024.
- State and community-owned land will be banned from sale until 2023. This ban will be lifted on July 2023.
- As of January 1, 2024, the next phase of land reform starts – companies will be allowed to purchase agricultural land, and just Ukrainian legal entities. Restrictions on land sizes will be moved from 100 hectares to 10,000 hectares (which bring the market in line with the first version of the bill).
- People and companies who rent agricultural land will be given the priority right to buy it from its original owner - but these pre-emption rights can be transferred.
- Banks will also be able to own land, but only for short periods of time. Banks can seize land if it was seized as collateral for a loan. However, banks are required to sell any land obtained this way within a two-year span at auction.
- Foreigners, people without citizenship, foreign companies, and companies whose ownership is impossible to determine (for example, shell companies registered in offshore zones) will not be able to purchase land. Only an all-Ukrainian referendum can allow foreigners to purchase Ukrainian agricultural land. (VRU, 2002)

#### **Top problems and risks:**

1. Lifting the moratorium on agricultural land sales by the Law of Ukraine on amendments to some legislative acts of Ukraine concerning the conditions of turnover of agricultural lands #2178-10 (the Law) was adopted in violation of the existing norms, rules, and procedures.

1.1. The Law is not a separate comprehensive one and only makes changes to other legislation. Due to the weak “rule of law” in Ukraine in general, some other legislation should be adopted soon to make the law more powerful/valuable. According to the valid Ukrainian legislation,

lifting the moratorium on agricultural land sales is only possible after a separate law on land market is adopted, not a law on amendments to other legislative acts.

1.2. The Law was adopted under COVID-19 quarantine. It means the violation of the society's right for protest.

1.3. The Law was adopted under big pressure of the International Monetary Fund on Ukrainian authorities.

1.4. The Law contributes to transforming land resources into commodity, speculative asset. It creates the preconditions and possibilities for financial and other non-agrarian institutions to control agricultural land. Points

1.1-1.4 mean it is not possible to improve the Law instead of cancelling it and adopting a separate law on land market under regular existing rules and procedures, and without external pressure. (VRU, 2002)

2. Ukraine is about to lift the land sale moratorium and launch the land market without clear strategic vision for the future of Ukrainian agriculture. It means that launching of the land market is an instrument not a goal. It is the instrument to achieve another strategic goal of the upper level that could be, for instance, development of the agrarian system based on the family farming like in the EU or countries conducted successful land reform aimed at improving quality of life in rural areas. (VRU, 2002)

3. Risks related to acquisition of property rights for land by sides that are not citizens of Ukraine, neither territorial communities nor state.

3.1. As of January 1, 2024, Ukrainian legal entities will be allowed to acquire the property rights for land at a concentration of no more than 10 thousand hectares. Such a norm creates risks for small family farming, and conditions for continuous expansion of large industrial farming in Ukraine.

3.2. Commercial banks are also allowed to acquire the property rights for agricultural land within the limits of collateral up to two years, until they dispose that land through auction. This norm also creates additional risks because the period allowed to own the land is too long and the mechanism of auction is still not developed, so it is unclear what are the conditions and restrictions for buyers. The more general problem is the fact that no a special institution was established (as State Land Bank) to conduct important regulating and inter mediating functions on the land market. Such an institution should provide the guaranties for commercial banks under their collateral credit agreements with farmers. It should also redistribute the land under such agreements if necessary.

3.3. The option to purchase agricultural land for foreign citizens is still open if the relevant decision is taken through a national referendum. (VRU, 2002)

4. Real restrictions to prevent the land concentration and land grabbing are absent.

4.1. As of January 1, 2024, the sale of land in one hand will be limited to 10 thousand hectares and, at the same time, legal entities will be allowed to acquire the property rights to land. The expectation that Ukrainian small farmers and peasants could satisfy their demand for land within the period of restrictions for legal entities is unrealistic even with state financial support to compensate a part of interest rate on new commercial credits to buy land. Small farmers have to service their current loans and have not financial resources enough to service additional ones. In addition, the most of private agricultural land remains under lease agreements with large commercial farms in coming years. It also makes impossible to buy land for small farms within the period when the limitations for legal entities are valid. When the limitations are lifted, legal entities can easily win the competition for land because the priorities for small local farmers, young farmers and new local farmers are not established. In addition, former leaseholders, which are represented usually by large agricultural holdings in Ukraine, have a priority to buy land.

4.2. No restrictions established to avoid land concentration within the territory of local communities established because of the decentralization reform in Ukraine. It means that monopolistic control over agricultural land is possible at the level of small territorial communities. The previous draft of the Law had this norm about the concentration of no more than 35 percent of agricultural land within a local community, but it was deleted before the second hearing of the Law at the Ukrainian parliament. For now, large agricultural holdings may control more than 35 percent of agricultural land area (monopoly in fact) within the territory of local communities through lease agreements. There is a big risk that one person/entity can buy all the land within a community whose total agricultural land area is less than 10 thousand hectares. (VRU, 2002)

5. For new buyers of land, there no conditions established as education, experience in agriculture, or local residence. It opens the door for land concentration, for instance for shell buyers that will lease the land out to large agrarian companies. (VRU, 2002)

6. Individuals and legal entities who rent agricultural land will be given the priority right to buy it from original owners. Leaseholders can sell or pass this right to other parties for speculative purpose or pass the right to affiliated parties to keep the control over land. At the same time, the priorities to buy land are not established for small local farmers, young farmers, new local farmers, local residents and other buyers that are important for sustainable agricultural and rural

development. There are significant risks related to the norm stating that former leaseholders, which are usually represented by large agricultural companies in Ukraine, can transfer their priority rights to buy land to third parties. Former leaseholders are only obliged to inform the actual owner about their decision, but it cannot prevent undesirable transactions, control land concentration in the interest of local economy and communities. This norm makes local small farmers less competitive as potential buyers on land market. (VRU, 2002) (VRoU, 2020)

7. Absence of the real state support to SMEs in the land reform context.

#### **3.4.2.2. Consequences for internal and external players**

According to Article 130 of Land Code of Ukraine:

Acquisition of ownership of agricultural land

1. Acquire the right of ownership of agricultural land may:

- a) citizens of Ukraine;
- b) legal entities of Ukraine established and registered under the legislation of Ukraine, the participants (shareholders, members) of which are only citizens of Ukraine and / or the state, and / or territorial communities;
- c) territorial communities;
- d) the state.

Ownership of agricultural land can also be acquired by banks only by way of foreclosure on them as collateral. Such land plots must be alienated by banks at land auctions within two years from the date of acquisition of ownership. (VRoU, 2020)

Foreigners, stateless persons and legal entities are prohibited from acquiring shares in the authorized (composed) capital, shares, units, membership in legal entities (except in the authorized (composed) capital of banks) that are owners of agricultural land. This paragraph shall cease to be valid subject to and from the date of approval by referendum of the decision specified in paragraph eight of this part.

Acquisition of ownership of agricultural land by legal entities established and registered under the legislation of Ukraine, participants (founders) or ultimate beneficial owners of which are persons who are not citizens of Ukraine, may be carried out from the date and subject to approval of such a decision by referendum. (VRoU, 2020)



Under any circumstances, including in the case of approval by referendum of the decision specified in paragraph eight of this part, the acquisition of ownership of agricultural land is prohibited:

- 1) legal entities, participants (shareholders, members) or ultimate beneficial owners of which are persons who are not citizens of Ukraine - for agricultural land of state and communal ownership, agricultural land allocated in kind (on the ground) to landowners shares (units) located closer than 50 kilometers from the state border of Ukraine (except for the state border of Ukraine, which passes by sea);
- 2) legal entities, participants (shareholders, members) or ultimate beneficial owners of which are citizens of the state recognized by Ukraine as the aggressor state or the occupying state;
- 3) persons belonging to or belonging to terrorist organizations;
- 4) legal entities, participants (shareholders, members) or ultimate beneficial owners of which are foreign states;
- 5) legal entities in which it is impossible to establish the ultimate beneficial owner;
- 6) legal entities, the ultimate beneficial owners of which are registered in offshore zones, included in the list of offshore zones approved by the Cabinet of Ministers of Ukraine;
- 7) individuals and legal entities in respect of which special economic and other restrictive measures (sanctions) have been applied in accordance with the Law of Ukraine "On Sanctions" in the form of a ban on concluding transactions for land ownership, as well as related persons;
- 8) legal entities established under the legislation of Ukraine, which are under the control of individuals and legal entities registered in states included in the International Anti-Money Laundering Group (FATF) in the list of states that do not cooperate in combating money laundering. (VRoU, 2020)

### **Deferred land supply**

Previously, the bill provided that one buyer could purchase no more than 10 thousand hectares. According to the final version of the document, in the first three years it will be possible to buy no more than 100 hectares "in one hand". And only from 2024 - up to 10 thousand hectares. From 2021 to 2024, only individuals will have the right to purchase land. Legal entities are prohibited from buying agricultural land during this period; they will be able to buy it only from 2024. There is a pre-emptive right for the tenant to purchase land that he has rented and worked on.

It is forbidden to sell state-owned land. This was precisely what the European Solidarity faction insisted on and promised to vote for the bill only on the condition that a moratorium was imposed on the sale of state land. Banks will not be able to buy land, however, they can be the owners of land plots within the limits of collection of collateral. Such plots must be alienated from the bank at auction within two years. The sale price of agricultural plots cannot be lower than their normative monetary value. This rule will be valid until January 1, 2030. (VRoU, 2020)

### **Sale of land to foreigners in question**

On the contrary, there were no changes in the issue of granting the right to foreigners to buy land: as stated in the final version of the document, foreign companies and citizens will not be able to buy land until this issue is resolved separately in a referendum. In addition, foreign citizens are prohibited from buying land plots in a 50-kilometer zone from the state border of Ukraine, regardless of the decision of the referendum.

Companies owned by citizens of the aggressor country will not be able to buy Ukrainian land. Now, Russia is recognized as the aggressor country in Ukraine. The prohibition also applies to companies whose shareholders or ultimate beneficiaries are foreign countries, as well as if it is impossible to establish the beneficial owner of the company. Companies whose beneficiaries are registered in offshore zones, as well as companies from countries that do not cooperate in the field of combating money laundering, and companies under sanctions will not be eligible to purchase Ukrainian land. (VRoU, 2020)

## 4. Practical part

### 4.1. The current situation of land resources

Ukraine offers an enormous agricultural potential, particularly due to its vast and fertile arable land, part of which is currently idle, and its comparative advantage in production owing to low production costs and a strategic location. As the global demand for food increases driven by growing populations, higher incomes, and changing diets, Ukraine's agricultural potential attracts a rising number of investors, both foreign and domestic. Indeed, private investment has increased over the last decade and Ukraine has now some of the largest farms on earth. Large multinational agri-food companies are planning to invest heavily in the sector in the coming years. However, several policy issues should be addressed to attract further domestic and 27 foreign investment, channel it to the areas where it is most needed and maximize its positive impact.

As of January 1, 2019, the land fund of Ukraine is 60.3 million hectares, or about 6% of the territory of Europe:

Table 7

Farmland makes up about 19% of all European farmland, including arable land - about 27%.
The area of agricultural land is 42.7 million hectares, or 70% of the total area of the country, and the area of arable land is 32.5 million hectares, or 78.4% of all agricultural land.
The per capita indicator of the area of agricultural land is the highest among European countries and is 0.9 hectares, including 0.7 hectares of arable land (the average indicator of European countries is 0.44 and 0.25 hectares, respectively).
The area of chernozems in Ukraine ranges from 15.6 million hectares to 17.4 million hectares, or about 8% of world reserves.
In Ukraine, there is a very high level of plowing of the territory - more than 54% (in developed countries of Europe - does not exceed 35%).
The actual forest cover of the territory of Ukraine is only 16%, which is not enough to ensure ecological balance (the average indicator of European countries is 25-30%).
In Ukraine, there are more than 1.1 million hectares of degraded, unproductive and technogenically contaminated lands subject to conservation, 143.4 thousand hectares of land requiring reclamation and 315.6 thousand hectares of unproductive lands in need of improvement.

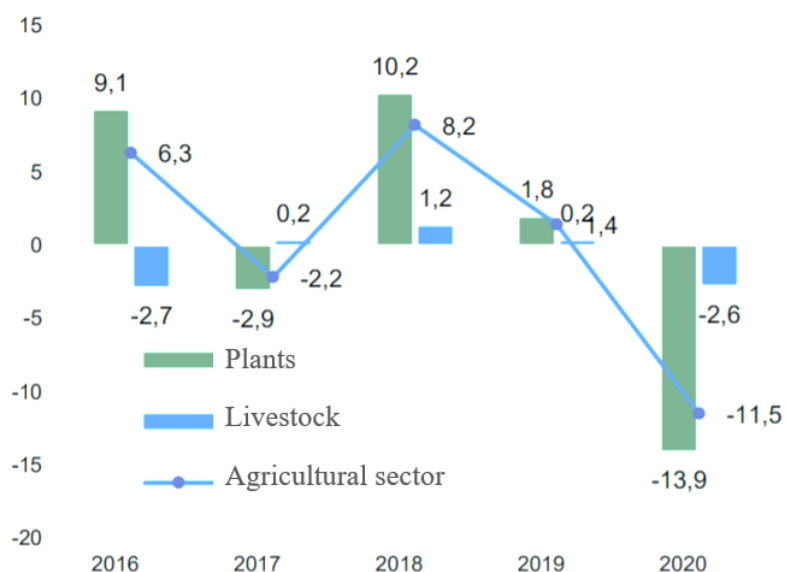
<p>The state owns 10.4 million hectares of agricultural land, of which 3.2 million hectares are in permanent use of state enterprises, institutions, and organizations, 2.5 million hectares are in reserve (not provided for ownership and use), the rest - for rent.</p>
<p>The average rent for state-owned agricultural land plots acquired on a competitive basis in 2016 amounted to 9% of the normative monetary value, and in the first half of 2017 - 13% of the normative monetary value.</p>
<p>About 50% of state-owned agricultural land lease agreements are concluded for up to 49 years.</p>
<p>In the absence of the Law of Ukraine "On the Protection of Soil Fertility", which should define effective mechanisms for monitoring the quality of the used soils, and measures to preserve their fertility, a negative tendency for the loss of humus has arisen. A violation of crop rotation also leads to a decrease in soil fertility. Sunflower in some areas occupies more than 30% of arable land. Moreover, in most cases, the culture returns to its former field after three years, and it is recommended after six to seven years.</p>

#### **4.1.1. GDP segmentation and contributions**

In 2020 agriculture operated in conditions of overcoming challenges, such as natural disasters and activities with quarantine restrictions both in the middle of the country (domestic market) and in partner countries (foreign market). In general, the impact of the pandemic factor affected agricultural activity to a relatively lesser extent than most other economic activities. Perhaps, in some way, reflected on livestock in a small part of the dependence of its activities on external demand, which in most partner countries was significantly lower than usual. Although, in general, the demand for agricultural products (including domestic) supported the activities of the industry and agribusiness could benefit from government support programs (in particular, "Credit Vacation", "Tax Preferences" and "Support for Small and Medium Business"), which to some extent allowed to remove the financial burden on entrepreneurs during the quarantine period. In addition, in contrast to 2019. agricultural producers in 2020 operated in the conditions of stable state support of the agro-industrial complex, paid almost in full, planned in the budget of 2020, which in difficult conditions provided financial stability in agriculture. (Graph 4)

Graph 4

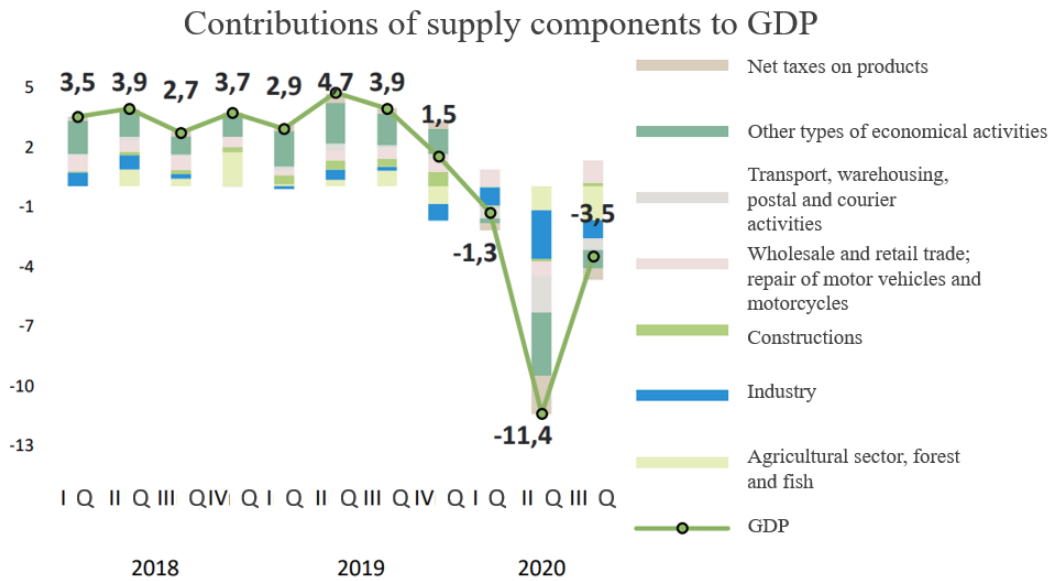
Index of agricultural production, including crop and livestock production, change,% to the previous year



Source: Calculations of the Ministry of Economy

From the supply side in the III quarter. In 2020, amid a continuing significant decline in investment demand and declining world prices for certain domestic exports, as well as a significant drop in imports (both intermediate and investment) and adverse weather conditions, there was a drop in GVA (gross value added) in certain sectors of the economy, most of which reacted services, industry, transport and agriculture, which formed a negative contribution to GDP dynamics at the level of about 4.1 percentage points. At the same time, certain types of industrial activity (in particular, production of consumer durables), construction, trade (in the context of restoring demand for services / goods in this industry), showed an improvement in their dynamics. (Graph 5)

Graph 5



Source: Calculations of the Ministry of Economy

In such conditions, a key role in agriculture was played by a significant deterioration of weather conditions, which significantly affected the results of crop production, which is almost complete and formed a negative contribution to the decline in agricultural production. Thus, in 2020, in contrast to the previous two years, agricultural production decreased significantly - by 11.5% ("plus" 1.4% in 2019).

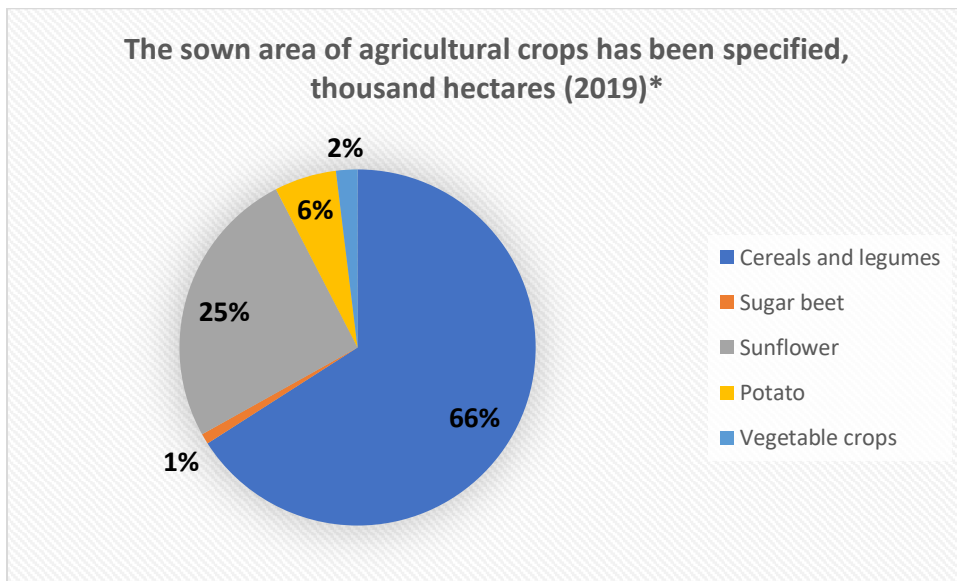
#### 4.1.2. Key agricultural commodities

Crop farming is a basis of agriculture in Ukraine, most notably – production of grains and vegetable oil. In 2019, crops farming accounted for 74% of agricultural output (in EUR terms), animal farming accounted for the remaining 26%. Besides crops, Ukraine specializes in production of sugar, poultry, and eggs. Production of these items, which exceeds home demand, is focused on export.

Ukraine is one of the leading producers of agricultural products in the world:

- 1) Sunflower
- 2) Corn
- 3) Barley
- 4) Wheat
- 5) Soybean

Figure 2



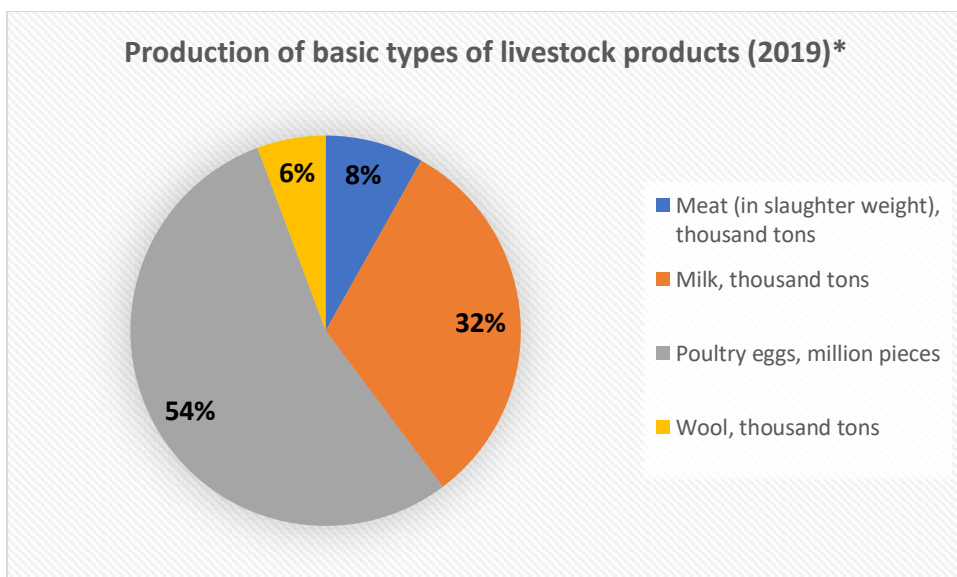
Source: Own research

\* The data are given without temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and part of the temporarily occupied territories in Donetsk and Luhansk regions.

Livestock production in Ukraine focus on:

- 1) Dairy production
- 2) Eggs
- 3) Meat
- 4) Wool

Figure 3



Source: Own research

\* The data are given without temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and part of the temporarily occupied territories in Donetsk and Luhansk regions.

### 4.1.3. Quality and classification of soil

Preliminary assessment of Ukrainian soils contribution into global carbon sequestration Soils of Ukraine are characterized, in general, by average (2-3%) and high (3-4%) humus content in arable layer (map in Appendix). Soil area with this content is 16.4 mil. ha, or about half of the arable land. Depth of Ukrainian soil profiles varies very widely and for chernozem soils depending on geographical, climatic, and other factors is between 50 and 150 cm. Stocks of humus (SOC) in the main Ukrainian soils also vary widely: humus 100-720 t/ha, SOC 60-420 t/ha, please see Picture 1 in Appendix (Baliuk, 2017)

Soils of Ukraine are characterized by significant heterogeneity in the genetic aspect.

Sod-podzolic soils of light granulometric composition are the background for the Polissya zone. They are characterized by insignificant accumulation of humus, weak saturation of bases and acid reaction of soil solution.

Turf gleyed soils occur in low low-drained areas, contain humus in the upper horizon - 2.0-5.0% depending on the particle size distribution, and have signs of gleying in the profile.

Sod-carbonate soils are characterized by a profile developed up to 50-60 cm, mainly by a neutral reaction of the soil environment = 6.7-7.5, significant humus accumulation - 2.2-3.7%

Light gray and gray forest soils occur mainly in the Forest-Steppe zone. They have a humus profile up to 45-55 cm with a humus content in the arable layer of 1.3-2.9% depending on the particle size distribution and hydrothermal conditions. The reaction of the soil solution is mainly acidic is 4.8-6.1.

Table 8

**Stocks of humus and SOC in Ukrainian soils**

Type of soil	Humus content in arable layer, %	Humus in profile, t/ha	SOC in profile, t/ha
Chernozems ordinary	3.5-5.7	200-550	116-319
Chernozems typical	2.5-6.0	300-600	174-348
Chernozems southern	3.0-3.5	200-250	116-145
Chernozems podzolized	2.6-4.5	220-350	128-203
Chernozem-meadow soils	3.0-7.2	360-720	209-418
Gray forest soils	1.3-3.5	100-230	58-133
Sod-podzolic soils	2.0-3.7	150-280	87-162

Source: National Atlas of Ukraine, 2015



Chernozems podzolic in terms of properties are similar to dark gray podzolic soils, but differ in large humus accumulation - 15-30% in the arable (0-30 cm) layer and the depth of the humus profile, which reaches 70-115 cm.

Dark chestnut and chestnut saline soils form the background of the soil cover in the dry steppe. The humus profile of dark chestnut soils is 55-70 cm for heavy loam and light clay granulometric composition, 70-80 cm for light loam, 45-65 and 60-75 cm for chestnut. The humus content for heavy loam composition is in arable (0-30 cm) layers of dark chestnut soils 2.3-2.8%, chestnut - 1.8-2.2%, light clay - respectively 2.8-3.3 and 2.3-2.6%.

Dark gray podzolic soils of the Forest-Steppe are characterized by a humus profile to a depth of 55-70 cm with a humus content in the arable (0-30 cm) layer from 2.0-2.5% in light loam varieties to 3.0-3.5% in heavy loam. The stock of humus in the profile is 150-230 t / ha.

The diversity of soils by genesis, granulometry and moisture determines the diversity of land resources in terms of properties and fertility. Under conditions of using soils without fertilizers, the parameters of their natural fertility are the lowest in sod podzolic soils on sands (7-9 c / ha for winter wheat after the occupied pair), the highest - in dark gray podzolic soils, chernozems podzolic and chernozems type 34 -38 c / ha). Calculations show that due to the natural fertility of soils it is possible to obtain 41.7 million tons of grain and legumes annually, and for the application of fertilizers in optimal amounts - 64.2 million tons.

## **4.2. Market for agricultural land in Ukraine**

Private land ownership contributes to the economic growth of any country primarily through more efficient use of land. The advantages of private land ownership become even more evident in the land market. The land market ensures the stability of land ownership rights, the possibility of their transfer from one person to another, as well as the correspondence of the land price to its real value. It is believed that the possibility of buying and selling, as well as leasing, agricultural land will positively affect the growth of agricultural production in Ukraine. For example, more efficient farmers will be able to buy or lease agricultural land from less efficient farmers; landowners will be able to receive additional income without engaging in agricultural activities, and those who need additional capital will have an asset, the value of which can be contributed to the authorized capital.

### **4.2.1. Impact of land reform**

According to Article 13 of the Constitution of Ukraine, the owner of Ukrainian lands is the people of Ukraine. From the very first day of independence until now, citizens have not been

able to exercise this right and freely dispose of this property. As a result, agriculture and farming have not developed properly all these years.

However, everyone knows that the shadow land market in Ukraine exists, and because of this both peasants and the state lose their profits. The shadow land turnover associated with the moratorium does not allow the country to develop, and it works due to long-term lease, emphyteusis, collateral, change of purpose of the land. Thus, it is possible to circumvent the moratorium on the sale of agricultural land.

What exactly is land reform in Ukraine?

Thanks to the opening of the land market, citizens of Ukraine will be able to sell or buy agricultural land. But there are certain restrictions that will apply until a certain year or until an all-Ukrainian referendum:

1) Agricultural land will be able to buy:

- citizen of Ukraine;
- territorial communities;
- the state of Ukraine;
- legal entities of Ukraine, the participants of which are only citizens of Ukraine, the state or local self-government.

2) It will be forbidden to buy agricultural land before the referendum:

- foreigners and stateless persons;
- legal entities, participants (founders) or final beneficiaries of which are foreigners.

3) But under any circumstances it will be forbidden to buy agricultural land:

- legal entities whose participants are citizens of the aggressor state or other states; in which it is impossible to establish the final beneficiary, or if the latter is registered in the offshore zone;
- members of terrorist organizations;
- natural persons to whom personal sanctions have been applied;
- natural persons (and legal entities controlled by them) are registered in states that do not cooperate in the field of combating money laundering.

#### **4.2.1.1. The determination of prices for farmland**

Agricultural land is land provided to produce agricultural products, the implementation of agricultural research and training activities, the location of the relevant production infrastructure, including the infrastructure of wholesale markets for agricultural products, or intended for these purposes.

Agricultural lands include:

- agricultural land (arable land, perennial plantations, hayfields, pastures, and fallow lands)
- non-agricultural land (economic paths and girders, forest shelter belts and other protective plantings, except for those classified as forest land, land under farm buildings and yards, land under the infrastructure of the wholesale markets for agricultural products, temporary conservation land, etc.).

The state recognizes the priority of agricultural land. Land suitable for agricultural needs should be provided primarily for agricultural use.

The value of land is affected by the rent, which depends on the value of what can be grown on this land, considering all costs. And the harvest is known to be affected by the quality of the land, the methods of its cultivation, the quality of the seeds, the number of fertilizers applied and protection against pests.

According to the Law of Ukraine "On Land Lease", the rent is set by agreement of the parties and must be specified in the land lease agreement. The cost of rent belongs to the essential conditions of the contract (as well as data on the land plot, its cadastral number, term of the contract, indexation, and conditions of receiving rent).

In Ukraine, since 2019, rental prices for agricultural land have remained stable and amount to about 150 EUR / year per hectare of cultivated land.

#### **4.2.1.2. Estimation of agricultural land price after reform**

Agribusiness is the locomotive of the Ukrainian economy. Ukraine is historically called the granary of Europe, since about 25% of the world's black earth soils, known for a high level of fertility, are concentrated here. The country is also the world's largest exporter of sunflower oil and one of the largest exporters of grain. Land, as a national resource, plays an essential role both in the calculation from an economic point of view, and in an internally social sense. Adequate representation with regards to the assessment of such an asset, I consider the action

extremely necessary at the state level of importance. But first it is necessary to find out who are the subjects, objects of valuation activity, and types of valuation.

According to Art. 3 of the law on land valuation, the objects of land valuation are: the territory of administrative-territorial units or their parts, the territory of the appraisal districts and zones, land plots or parts thereof or a set of land plots and rights to them, including land shares (paj), within the territory of Ukraine.

Land appraisal is carried out by the following subjects of appraisal activity:

- *individuals* - business entities who have received an appraiser's qualification certificate for expert monetary valuation of land plots and a license to perform land valuation work in the manner prescribed by law;
- *legal entities* - business entities, regardless of their organizational and legal form and form of ownership, that have received licenses to carry out work on land management.
- *legal entities* - business entities, regardless of their organizational and legal form and form of ownership, who have appraisers for expert monetary appraisal of land and have received licenses to perform land appraisal works in the manner prescribed by law;
- *executive authorities and local self-government bodies* in charge of management in the field of land valuation, as well as legal entities and individuals interested in assessing land valuation.

In accordance with Art. 5 of the Law on Land Valuation, depending on the purpose and methods of conducting land valuation, is divided into the following types:

- *monetary valuation of land*, used for the economic regulation of land relations when concluding civil law agreements (determining the value of a specific land plot) and when determining the rate of land tax;
- *economic assessment of land*, the data of which are the basis for the normative monetary valuation of land plots, analysis of the efficiency of land use in comparison with other natural resources and determination of the economic suitability of agricultural land for growing crops;
- *grading of soils*, the data of which are an integral part of the state land cadastre and the basis for an economic assessment of agricultural land and are taken into account when determining the ecological suitability of soils for growing crops, as well as losses of agricultural and forestry production

Monetary valuation of land in accordance with Art. 201 ZKU is carried out on a rental basis. For the monetary valuation of agricultural land, rental income is used, which can be obtained from the land as a factor of agricultural and forestry production, depending on its quality and the location of the land plot, and for the monetary valuation of residential and public buildings, rental income arising from the location settlement.

Land appraisal is not an easy task. In accordance with the Law of Ukraine "On the Appraisal of Property, Property Rights and Professional Appraisal Activity in Ukraine", the Law of Ukraine "On the Appraisal of Land" and the Methodology for the Expert Monetary Appraisal of Land Plots, the appraisal of land plots is carried out by the following approaches: profitable (capitalization of net income from the use of land plot), comparative (comparison of the sale value of similar land plots), land balance method (accounting for the cost of land improvements). Each of the listed approaches has its own characteristics and specifics of their use.

According to the goal of thesis the estimating of agricultural land price has been provided based on capitalization of net income of land plots.

For an objective assessment of the value of land in remote areas, it considers it possible to use the income approach, first, the method of capitalization of net income. The amount of land net income can be calculated as income from the lease of a land plot under the conditions prevailing in the land market. It shows that, in contrast to the established practice of determining the value of land by this method by using the formula of average net income, it is more correct to use the formula of increasing perpetual revenue, which assumes that the cash flow from period to period increases with the same percentage:

Table 9

Land valuation by capitalization of income			
Region	Average annual income EUR/ha	Capitalization rate %	Estimated value of a land plot EUR/ha
Vynnytsya	5155	2.79	1,845
Volyn	2797	2.01	1,395
Dnipropetrovsk	3135	2.56	1,226
Zhytomyr	3171	1.79	1,767
Zakarpattia	723	0.56	1,287
Zaporizhya	2795	2.64	1,060
Ivano-Frankivsk	4071	2.40	1,696
Kyiv	7407	3.74	1,980
Kirovohrad	3535	2.23	1,587
Lviv	3374	1.89	1,780
Mykolayiv	2355	1.74	1,351
Odesa	1527	1.12	1,366
Poltava	5224	2.64	1,981
Rivne	2476	1.39	1,776
Sumy	5487	3.07	1,789
Ternopil	5433	3.02	1,796
Kharkiv	4134	3.06	1,353
Kherson	2645	2.49	1,064
Khmelnyskiy	5320	3.08	1,726
Cherkasy	6309	3.58	1,760
Chernivtsi	2526	1.47	1,717
Chernihiv	5521	3.48	1,588

Source: own calculations

The income approach to land valuation is based on the expectation principle, which applies only to those land plots that generate income. The market value of the land plot is calculated by discounting the expected rental income and other benefits. Cash flows from owning a land plot, as well as from the process of its resale, are discounted to their present value. This approach uses both direct and indirect capitalization methods. The direct capitalization method is carried out by capitalizing the annual rental income from the use of the land plot in its value corresponding to the capitalization rate (mathematically, dividing the annual income by the capitalization coefficient).

### **Land value: comparison with other countries**

Land value is the value of a piece of property including both the value of the land itself as well as any improvements that have been made to it (Investopedia, 2021). The agricultural land price statistics provide the price of one hectare of free agricultural land during the reference period (a calendar year). In case of European Union, its depending on the Member State, these prices can be collected from the owner of agricultural land who is selling agricultural land for

agricultural use (selling prices) or from the physical person/legal person/legal entity who is purchasing agricultural land for agricultural use (purchase prices).

Table 10

TIME	2019	
GEO (Labels)		
Belgium	:	
Bulgaria	5,382	
Czechia	8,095	
Denmark	17,580	e
Estonia	3,461	
Ireland	28,068	
Greece	12,604	
Spain	12,926	
France	6,000	
Croatia	3,395	
Italy	34,156	
Latvia	3,922	
Lithuania	3,959	
Luxembourg	37,300	
Hungary	4,862	
Netherlands	69,632	
Poland	10,991	e
Romania	5,339	
Slovenia	18,752	
Slovakia	3,789	
Finland	8,686	
Sweden	9,019	
United Kingdom	:	
<b>Ukraine</b>	1,680	

<b>Special value</b>
: not available
<b>Available flags:</b>
<b>e</b> estimated

Source: Eurostat

### The rental price in Ukraine in comparison with other countries

The agricultural land rent represents the price of renting one hectare of agricultural land during the reference period (a calendar year). The renting price should be collected from the agricultural holdings renting the land for agricultural use (renting price paid).

Table 11

TIME	2019	
GEO (Labels)		
Italy	819	
Netherlands	819	
Denmark	544	e
Greece	448	
Ireland	307	

<b>Special value</b>
: not available
<b>Available flags:</b>
<b>e</b> estimated

Austria	295	
Luxembourg	255	
Bulgaria	248	
Poland	230	
Finland	242	
Hungary	173	
Spain	156	
France	147	
Slovenia	141	
Czechia	121	
Lithuania	105	
Malta	86	
Croatia	73	
Estonia	64	
Latvia	64	
Slovakia	52	
Norway	37	
Sweden	:	
Belgium	:	
Romania	:	
<b>Ukraine</b>	150	

Source: Eurostat

### 4.3. Econometric modeling analysis

Since July 1, 2021, a land market will be launched in Ukraine. It stated in the final provisions of the law on the land market signed by the President. In the shadow Ukrainian land market, the approximate cost of agricultural land, according to rough estimates, is € 1 - 2 thousand per hectare, depending on the indicators of economic attractiveness and the value of the asset.

"Until the actual launch of the Ukrainian market, the average price for 1 hectare of agricultural land is difficult to predict, however, the dynamics of growth in the value of agricultural land will directly depend on many factors, including: soil type, indicators of its fertility, natural properties, climatic conditions of its use, as well as economic indicators of supply and demand in the market ", (D. Savchuk, 2021)

#### 4.3.1. Economic and econometric model

##### Assumption

Estimation of the price for farmland means evaluation and searching for most significant factors which can affect it. The one-equation model monitors factors affecting the price level of agricultural land in Ukraine. For efficient econometric analysis must be accepted several explanatory variables which influences on the price of farmland the most: soil fertility, volume of yields, clean environment, cost of production as well as on the economic indicators of supply



and demand in the market, the land assessment considers the quantitative and qualitative composition of communications and the possibility of connecting to existing networks.

### **Economic model**

Economic model Economic models generally consist of a set of mathematical equations that describe a theory of economic behavior. The aim of model builders is to include enough equations to provide useful clues about how rational agents behave or how an economy works (Ouliaris, 2011)

$$y_1 = f(x_1; x_2; x_3; x_4; x_5; x_6; x_7; x_8; x_9)$$

### **Econometric model:**

Econometric models are generally algebraic models that are stochastic in including random variables (as opposed to deterministic models which do not include random variables). The random variables that are included, typically as additive stochastic disturbance terms, account in part for the omission of relevant variables, incorrect specification of the model, errors in measuring variables, etc. (Intriligator, 1983)

$$y_1 = \gamma_{10}x_{0t} + \gamma_{11}x_{1t} + \gamma_{12}x_{2t} + \gamma_{13}x_{3t} + \gamma_{14}x_{4t} + \gamma_{15}x_{5t} + \gamma_{16}x_{6t} + \gamma_{17}x_{7t} + \gamma_{18}x_{8t} + \gamma_{19}x_{9t} + u_1t$$

### **Declaration of variables (+ units):**

Y1	Agricultural land price (EUR/ha)	ALP
X0	Unit vector	UV
Economic variables		
X1	Harvesting of cereal and leguminous crops (quintals/ha)	HCL
X2	Harvesting of roots, tubers, vegetable (quintals/ha)	HV
X3	Harvesting of fruits and berries (quintals/ha)	HP
X4	Capital investment in agriculture (EUR)	CIA
X5	Cost of production (direct + indirect costs) (EUR)	CP
Physical variables		
X6	Emissions of air pollutants (t/year)	EAP
X7	Soil moisture (%)	SM
X8	Chernozem concentration (%)	CC
Social variable		
X9	Number of agricultural holdings	AH

## Interpretation of variables

### 1. Economic variables

There are three variables in the model which shows volume of yield according to plants variety. Harvesting of cereals, leguminous, vegetables and fruits, all these plants growing in each region in Ukraine, somewhere more or less. Therefore, testing assume to provide accurate output based on average number through all plant species. The most straightforward method is an analysis of sales of comparable unimproved land, adjusting the prices to account for any differences in size, location, and features. Similarly, the capitalization of rental income for comparable vacant land can serve as a basis for estimating its sale price (Teachout, 1980).

Capital investment in agriculture and cost of production are factors which directly affecting to agricultural land performance. Cost analysis is method which assumes that harvested yield can be worth no more than their cost of production and assigns all remaining value in the improved parcel to the land itself. Physical, economic, or functional depreciation greatly complicates the attempt to calculate land value, however, so this method requires new yield whose price can be confidently estimated as a measure of value (Teachout, 1980)

### 2. Physical variables

In the conditions of the formation of the land market, its opacity, insufficient information on the sale of land plots, the most important is the cadastral valuation of agricultural land, which is a method of obtaining estimates of market value indicators of a homogeneous group of agricultural land plots using market information. Such an assessment includes such parameters as: (Gureeva, 2010)

- Soil fertility
- The amount of required chemical elements of the soil
- Availability of infrastructure
- Environmental quality
- Natural characteristics and landscape

### Correlation matrix:

Correlation coefficients, using the observations 1 - 22  
5% critical value (two-tailed) = 0.4227 for n = 22

Y1	X1	X2	X3	X4	
1.0000	0.8325	0.7588	0.3348	0.2696	Y1
	1.0000	0.6474	0.0929	0.4120	X1

			1.0000	0.3792	-0.1560	X2
				1.0000	0.0189	X3
					1.0000	X4
X5	X6	X7	X8	X9		
0.2944	-0.5895	0.5534	0.7807	-0.2576		Y1
0.4877	-0.4909	0.4433	0.6181	-0.1909		X1
-0.0975	-0.5904	0.5344	0.3762	-0.5583		X2
0.0097	-0.2180	-0.0931	0.3136	0.0220		X3
0.8734	0.0485	-0.0666	0.4700	0.7304		X4
1.0000	-0.0003	-0.2038	0.4985	0.6205		X5
	1.0000	-0.3322	-0.4692	0.2531		X6
		1.0000	0.1178	-0.4564		X7
			1.0000	0.1590		X8
				1.0000		X9

In the correlation matrix of this econometric model, there are undesirable dependence was found between the explanatory variables average land price and harvesting of cereal and leguminous crops (0.83), harvesting of roots, tubers, vegetable, food melons (0.75), chernozem concentration (0.78) explained variables.

#### 4.3.2. Parameter's estimation using OLSM

Ordinary Least Squares (OLS) or linear least squares is a method for estimating the unknown parameters in a linear regression model. This method minimizes the sum of squared vertical distances between the observed responses in the dataset and the responses predicted by the linear approximation. (Amemiya, 1985)

#### Formula: OLS Method

$$\gamma = (X^T X)^{-1} X^T y$$

Model 1: OLS, using observations 1-22  
Dependent variable: Y1

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	92.6467	261.570	0.3542	0.7293	
X1	3.29698	4.17524	0.7896	0.4451	
X2	1.96505	1.36837	1.436	0.1765	
X3	0.818875	0.584795	1.400	0.1868	
X4	5.56874e-05	0.000149180	0.3733	0.7154	
X5	0.00123880	0.00188179	0.6583	0.5228	
X6	-0.0418648	0.276231	-0.1516	0.8821	
X7	3.75412	1.38842	2.704	0.0192	**
X8	196.862	41.0189	4.799	0.0004	***
X9	-0.100678	0.0912611	-1.103	0.2916	

$$\text{Equation: } y_{1t} = 92.6467 + 3.29698x_{1t} + 1.96505x_{2t} + 0.818875x_{3t} + 5.56874x_{4t} - 0.00123880x_{5t} - 0.0418648x_{6t} + 3.75412x_{7t} + 196.862x_{8t} - 0.100678x_{9t} + u_{t1}$$

### 4.3.3. Verification of the model

#### Statistical verification

For statistical verification used T-test. A t-test is a type of inferential statistic, that is, an analysis that goes beyond just describing the numbers provided by data from a sample but seeks to draw conclusions about these numbers among populations. (Borden, 2009)

R-squared equal: 0.94

Adjusted R-squared equal: 0.91

H0:  $\gamma_i=0$  Parameter is not statistically significant

H1:  $\gamma_i \neq 0$  Parameter is statistically significant

Degrees of freedom:  $(22-9) = 13$

Parameter	coefficient	p-value		Statistical significance	
Y1	92.6467	0.7293		p>0,05	insignificant
X1	3.29698	0.4451		P>0,05	insignificant
X2	1.96505	0.1765		p>0,05	insignificant
X3	0.818875	0.1868		p>0,05	insignificant
X4	5.56874	0.7154		p>0,05	insignificant
X5	0.00123880	0.5228		p>0,05	insignificant
X6	-0.0418648	0.8821		p>0,05	insignificant
X7	3.75412	0.0192	**	P<0,05	significant
X8	196.862	0.0004	***	P<0,05	significant
X9	-0.100678	0.2916		p>0,05	insignificant

#### Economic verification

Interpretation: Equation:  $y_{1t} = 92.6467 + 3.29698x_{1t} + 1.96505x_{2t} + 0.818875x_{3t} + 5.56874x_{4t} + 0.00123880x_{5t} - 0.0418648x_{6t} + 3.75412x_{7t} + 196.862x_{8t} - 0.100678x_{9t} + u_{t1}$

Parameter	Coefficient	Interpretation	Verification
Y1	92.6467	If the other effects are zero, the farmland price could increase by 92.6467 EUR/ha.	The constant should not be verified. If we consider that the price of farmland will be 0, then everyone would buy.

X1	3.29698	If the harvesting of cereal and leguminous crops will increase by 1 quintal then the price for land increase by 3.29698 EUR/ha.	The parameter can be considered verified. If the number of harvested cereal and leguminous crops increase, land become more attractive asset and business and logically the price of farmland increase
X2	1.96505	If the harvesting of roots, tubers, vegetable increases by 1 quintal, then the price for land increase by 1.96505 EUR/ha	The parameter can be considered verified. If the number of harvested roots, tubers, vegetable increase, land become more attractive asset and business and logically the price of farmland increase
X3	0.818875	If the harvesting of fruits and berries increases by 1 quintal then the farmland price will increase by 0.818875 EUR/ha	The parameter can be considered verified. If the number of harvested of fruits and berries increase, land become more attractive asset and business and logically the price of farmland increase
X4	5.56874	If the capital investment in agriculture increases by 1 EUR, then the price for land increase by 5.56874 EUR/ha	An increase in the capital investment in agriculture will positively influence on land performance within the region, thereby increasing the welfare of the region and the natural growth of prices for fixed assets. The parameter can be considered verified.
X5	0.00123880	If the cost of production increases by 1 EUR, then the price for land increase by 0.00123880 EUR/ha	The parameter can be considered verified because land is one of the factors of production and it relates to fixed asset, this means that the costs remain unchanged even when there is zero production. According to coefficient of parameter, there is insignificant change in price.
X6	-0.0418648	If the emissions of air pollutants increase by 1t then the price for land decrease by -0.0418648 EUR/ha.	The parameter can be considered verified. If the negative impact on environmental intensify in particular percentage, it can affect to volume or quality of harvested commodity.
X7	3.75412	If the soil moisture increases by 1% then the price for land increase by 3.75412 EUR/ha.	The parameter can be considered verified. If the level of moisture increase, it stimulates sustainable growing for plants and reduce the cost of production.
X8	196.862	If the chernozem concentration increases by 1% then the price for land increase by 196.862 EUR/ha.	The parameter can be considered verified. If the concentration of chernozem increase, land fertility rises which caused higher yields and the value of the land increases significantly.
X9	-0.100678	If the number of agricultural holdings increases by 1 then the price for land decrease by -0.100678 EUR/ha.	The parameter can be considered verified. If the land market will be monopolized by few subjects (for example banks), it can cause unwanted speculation.

### **Econometric model verification**

By heteroskedasticity examines the variance of residuals

#### Test of heteroskedasticity

White's test for heteroskedasticity

OLS, using observations 1-22

H0: homoscedasticity

H1: heteroscedasticity

Explained sum of squares = 13.7516

Test statistic: LM = 6.875812,

with p-value =  $P(\text{Chi-square}(9) > 6.875812) = 0.650047$   
**value > 0.05)**

**No heteroskedasticity (P-**

According to testing P-value equals to 0.650047 which is more than level of significance  $\alpha = 0.05$ . Thus, null hypothesis cannot be rejected.

Normality test is used to determine if a data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed.

Test of normality

Frequency distribution for uhat1, obs 1-22

H0: variables are normally distributed

H1: variables are not normally distributed

number of bins = 7, mean = 5.27094e-013, sd = 82.9843

Test for null hypothesis of normal distribution:

Chi-square (2) = 1.661 with p-value 0.43588

**Parameters are normally distributed (P-value > 0.05)**

According to testing P-value equals to 0.43588 which is more than level of significance  $\alpha = 0.05$ . Thus, null hypothesis cannot be rejected.

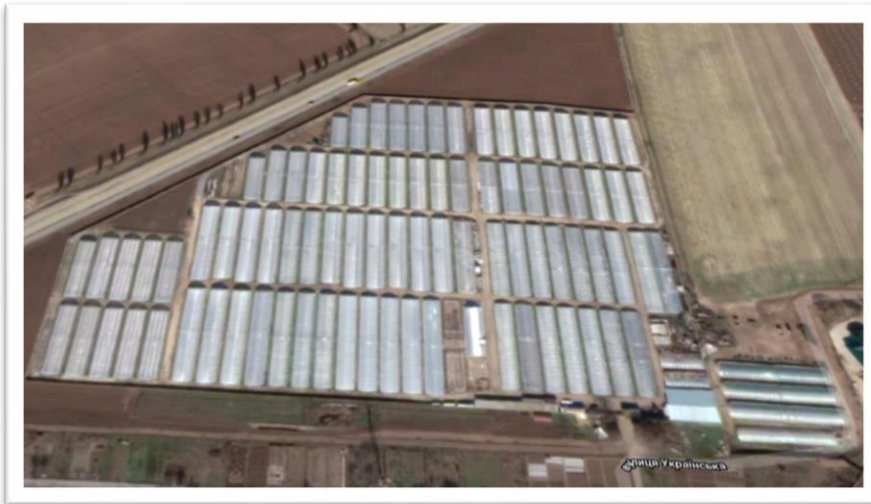
#### **4.4. The consequences for local farmers**

The law on the opening of the land market, which has been awaited in Ukraine for almost twenty years, was adopted for a long time and emotionally. It was submitted to the Verkhovna Rada for consideration in October 2019. In the first reading, the bill was voted on in November. The vote was accompanied by protests from opponents of the lifting of the moratorium on land sales. Before voting in the second reading, it took the deputies two and a half months to consider four thousand amendments.

The final text of the document has changed dramatically during this time. Experts explain this by the fact that representatives of the pro-presidential mono-majority from the Servant of the People faction and Ukrainian President Volodymyr Zelensky himself wanted to satisfy the interests of everyone: from farmers and the International Monetary Fund (IMF) to political opponents, since in the majority of votes in support of the law enough.

While researching the results and consequences of the reform, it was necessary to find out expert opinion from direct participants in the agricultural land market. The owner of a small farm Sergej Mozkovej from the Kherson region kindly agreed to help me with this task.

Evaluation performed according to interview with Sergey Mozkovoy the owner of LIMITED LIABILITY COMPANY "ESTEM".



### Activities

Main:

- Wholesale production and sale of seedlings

Other:

- Growing grape products
- Installation of greenhouse structures and their component

*Solodukhina Street, 91, Tavriysk, Kherson region, Ukraine, 74988*

Sergej Mozkovoy is the owner of company ESTEM Ltd. at the Kherson region, believes that formally Ukraine has fulfilled the IMF's requirement to open the land market, and therefore the Ukrainian government will be able to count on the resumption of cooperation and the fund's money. He considers this a "big plus" of the law. At the same time, analyzing the details, Mozkovoy does not hide his disappointment. He draws attention to the fact that the Verkhovna Rada extended the moratorium on the sale of land for more than a year and created conditions for speculation with land. "The fact that legal entities were banned from buying land until 2024 will lead to the fact that now individuals will buy it for someone. This will not bring investment to farmers," the expert predicts. Restrictions which mentioned in latest version of the law after amendments "too soft". It relates to limitation of available hectares for buying per one individual. Mozkovoy believe that, the limit on the amount of available land per person should be reduced slowly from the beginning of land reformation and decrease it afterward, based on to the received experience. As for the clause on foreign capital, the businessman is more neutral in his response. However, it was noted that the appearance of foreign companies on the land market in Ukraine may have a positive effect on the quality of life of ordinary citizens. International companies (European ones) have high standards of production and quality of their products. They also have a well-functioning business structure that will bring tax contributions to the state and local budgets. The expert believes that the presence of not only national enterprises on the market will bring an increase in the level of production, technology, wages, to a better new stage of agricultural development. The appearance of foreign companies on the

Ukrainian land market may lead to an increase in prices for land plots. Subsequently, the owners of small plots will receive a fairer price for their property.

The businessman noted, according to his opinion, the main advantage of the land reform - the privatization of agricultural land. Currently, there is a civil relationship between the tenant and the tenant. Such agreements were a forced exit, subject to the action of the moratorium for the sale of land. Farmers and agrarian companies had to proceed from renting numerous land plots from citizens and in the meantime to settle all possible side effects from the lease agreement. Like any such agreements, they are not a guarantee of the safety of your business since you are not the owner of the land. Agriculture requires significant investments and is also a poorly predictable business. Almost every stage in agriculture has certain risks, especially when it relates to open field production.

The appearance of the possibility of buying agricultural land gives farmers the opportunity to be not afraid of the risks associated with the instability of agreements with the lessor. This will significantly increase the level of investment by farmers in their own farm.

- 1) Possible construction of buildings and structures associated with the production of agricultural products
- 2) Improvement of infrastructure on the land
- 3) The use of modern, high-quality fertilizers to maintain the level of necessary elements in the soil
- 4) Purchase of agricultural machinery to increase productivity

#### **4.4.1. The consequences for agricultural corporations**

The director of the enterprise JSC "CARGILL" Ltd. helped to conduct a detailed analysis of the consequences for large agricultural business.

The reform, whatever it may be, is the first step towards the stable and prosperous development of the agricultural sector in Ukraine. Due to some political and economic forces, this development was deliberately slowed down, but progress is inexorably moving forward, and Ukraine cannot remain in this position.



Evaluation performed according to interview with Igor Litvinenko - director of LIMITED LIABILITY COMPANY JSC "CARGILL"



### Activities

#### Main:

- Wholesale of grain, unmanufactured tobacco, seeds, and animal feeds

#### Other:

- Manufacture of oils and animal fats;
- Manufacture of other inorganic basic chemicals;
- Warehousing and storage;
- Other supporting transport activities

*Address: Kakhovka, Kherson Oblast, Ukraine, 74800*

One of the most important issues is the identification of subjects potentially interested in participating in the land race. According to the expert, now there are three main players:

The first of them is ordinary traders who now intend to buy land, lease it for two years, and resell it in 2024.

The additional margin on the sale, according to the calculations of specialists (except for receiving rent for the year in the amount of 10-15% of the normative monetary value of the land), is not less than 25%. They see land as a new alternative to traditional assets in the form of deposits, real estate, and the like.

Even a new informal term has already appeared - the club of private land investors. It is quite possible that this category of buyers is now the most solvent. But not everyone dares to plunge into a specific market, and few have free funds.

The second category of potential buyers is a large horde of small and medium-sized farmers. They may be prompted to buy land by a desire to expand their agricultural production, or simply by the decision of one of the current landlords to sell their land in order to solve financial personal problems.

But farmers have very little money, although they try to accumulate a little before the market opens. Today, farmers admit that, at best, they will be able to buy out about a tenth of the areas

they are currently renting. By the way, in Ukraine, according to official data, there are most farms that cultivate only 20-50 hectares of land. Although there are some farmers whose land bank exceeds 1000 hectares of land.

And the third category of applicants for land are representatives of the interests of large agricultural holdings represented by trusted individuals from among the top managers of companies, family members of owners of enterprises, and the like. However, agricultural holdings also have little free working capital.

And the cost of their land lease banks with an area of several thousand hectares, even at the starting prices for land (probably at 1200-2000 EUR / ha), reaches billions of hryvnias. Therefore, most of the holdings are determined to behave with restraint in the land market, at least for the first two years. By the way, the holdings themselves are also guided by a small share of 5-15% of those wishing to sell their own land shares.

And there are very few ambitious large players who are already planning, for example, to double their land bank. And far from all the land is at the disposal of the holdings. For example, the 100 largest agricultural holdings process only about 15% of the agricultural land in our country.

Banking and other financial institutions could solve the problem of the shortage of funds for land acquisition. But financing programs for land market participants are not yet ready. The relevant legislative support has not yet been adopted. The circle is complete. And it is expensive for banks to attract an armada of small agricultural producers to their client base, so they are in no hurry.

The entry of agriculture on the trajectory of sustainable economic growth depends on the implementation of a set of measures that provide maximum use and accelerated development of modern technologies, the transition of the industry to an evolutionary model of development. This necessitates the creation of socio-economic, organizational, and regulatory conditions that ensure effective reproduction, development and use of scientific and technical potential, proper organization of a modern system of technology transfer, production, and sale of new types of competitive science-intensive products.

Improving the competitiveness of domestic agricultural producers needs state support. During the research, it was established that the implementation of state programs allowed to increase the production of agricultural products since 2000 by 64.9%. In the field of crop production, the increase was 93.3%, while livestock - 19.7%.

According to relevant information, now there are few groups that can invest in the land market and unfortunately these are not always those individuals whose business is associated with agriculture. Thus, many interested parties will enter the agricultural land market, who will speculate prices. Due to the actual lack of government support, separate agricultural lending, subsidies, land prices are expected to rise. According to the land reform after 2024, a referendum will be held to find out the opinion of the population on the sale of land to foreigners. This event can also affect the price level of land.

#### **4.4.2. Main players in agriculture**

There are three primary strategies used by Ukrainian oligarchs to influence both policy and public opinion. These include holding political office, building (often corrupt) networks to access key political decision-makers and institutions of power and acquiring ownership of important media outlets capable of reaching many viewers. In the following I draw on these three categories to describe and evaluate the activities of major businessmen in the agricultural sector in Ukraine. This approach helps:

- a) to situate them in the political context
- b) to assess their interests as well as their potential influence on policy
- c) to determine the degree of similarity of approach between them and the more traditional oligarchs in other sectors.

The biggest landowner in Ukraine, Oleh Bakhmatiuk, has never occupied political positions, but from 2005 to 2007 he held an important position in a state enterprise, serving as the head of the division on expert evaluation of investment and corporate financing at Naftohaz Ukrainy. During this short term Bakhmatiuk managed to launch the Prykarpatska Financial Corporation and bought controlling stakes in five local gas companies. With the financial resources from this activity, inter alia, his Avangard holding (later transformed into Ukrlandfarming) began to trade its shares on London stock exchange in 2010. While Petro Poroshenko rules the country as the President of Ukraine, his business is thriving. Poroshenko's assets include confectionary production, media, agricultural holding, starch production, automobile and shipbuilding, glass production, and fitness centers. Part of Poroshenko's assets belong to a so-called 'blind' trust, but he still possesses many of them. As of 2014 Poroshenko's agro-holding UKRPROMINVEST-AGRO included 6 companies. The holding takes the leading position in flour production and is building up its capacities in sugar production: in 2014 it was the third biggest producer of sugar in Ukraine, while nowadays it holds second place. The sugar market in Ukraine is highly regulated and each marketing year companies receive from the state

authorities a certain quota for the quantity of sugar a given company may sell on the Ukrainian market. Not surprisingly, Petro Poroshenko's sugar production plants received the highest quotas in the marketing years 2013/2014 and 2015/2016.

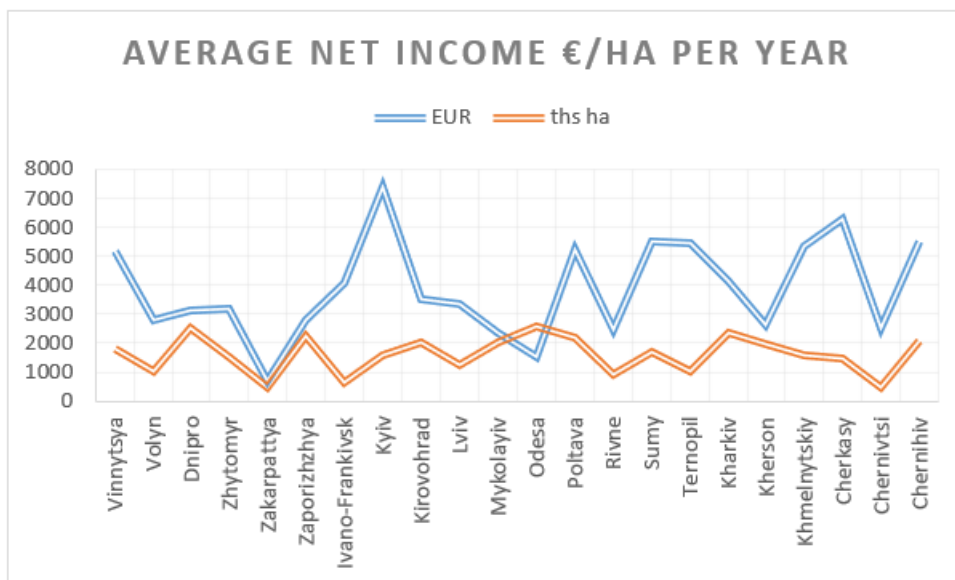
The owner of the agro-holding "Myronivskiy Hliboproduct" (MHP) Yuriy Kosiuk has good relations with the current president. In July 2014, Kosiuk was appointed First Deputy Head of the Presidential Administration and made responsible for army supplies and logistics. However, he resigned from this position only six months later, in December of the same year. The reasons for this appointment and resignation are not adequately covered in open sources, though it appears plausible that Yuriy Kosiuk used his position in the Presidential Administration to obtain significant VAT reimbursements to his businesses.

The founder and owner of Nibulon Oleksiy Vadaturskyi managed to have his son Andriy elected to the national parliament and selected as a member of the Committee on Agrarian Policy and Land Relations. Andriy Vadaturskyi entered the Verkhova Rada for the first time in 2014 and is currently a member of the President's parliamentary faction – Bloc Petro Poroshenko (BPP). Andriy Vadaturskyi was among the deputies who advocated an extension on the moratorium on land sales, although he promotes political debates on the land ownership regime in Ukraine. It appears plausible that Andriy shares his father's opinion that the rapid introduction of a land market in Ukraine would lead to severe chaos in this area. Among Andriy Vadaturskyi's projects have been a few legislative initiatives on easing bureaucratic requirements for agro-business, including tax facilitations, e.g. concerning the land rental process. He was also a co-author of the bill on lobbying, which is not surprising, considering that agrarians are currently seeking ways to legalise lobbying to ensure better representation of their interests in the institutions of political power. Ukrainian businessman Andriy Verevskyi has also used the tactic of placing loyal people in positions of power in local authorities. For instance, he financed a newly created party "Sovist Ukrainy" ("Conscience of Ukraine") and its leader Oleksandr Mamay during the election campaign in the city of Poltava, the capital of an important agrarian region in Ukraine, in 2010. As a result, the party won a significant majority in the Poltava legislature, and Mamay became the city's mayor. Oleksandr Mamay was an agrarian in his own right, but in 2012 he sold his company, Inter-Agro, to Andriy Verevskyi. The cooperation between Verevskyi and Mamay is underpinned by family ties: Mamay's daughter is married to Verevskyi's cousin.

## 5. Discussion of results

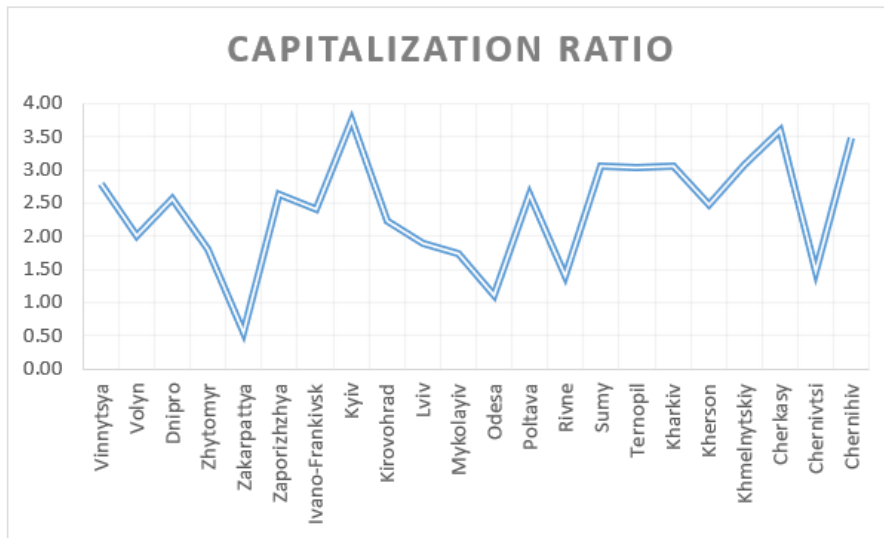
The agricultural sector of the economy occupies a significant place in the Ukrainian GDP. Also, the level of employment in the agricultural sector is quite high. Historically, it is important for Ukrainians to work on the land. In 2019 the sector accounted around 13% of the country's GDP. Consequently, the land issue is an important aspect for the whole country. In connection with the continuation of the development of the land market, it is necessary to assess the value of land plots correctly and accurately. Of course, already existing assessment methods are being applied in practice. The most popular method for assessing value is from capitalization of income.

Graph 6



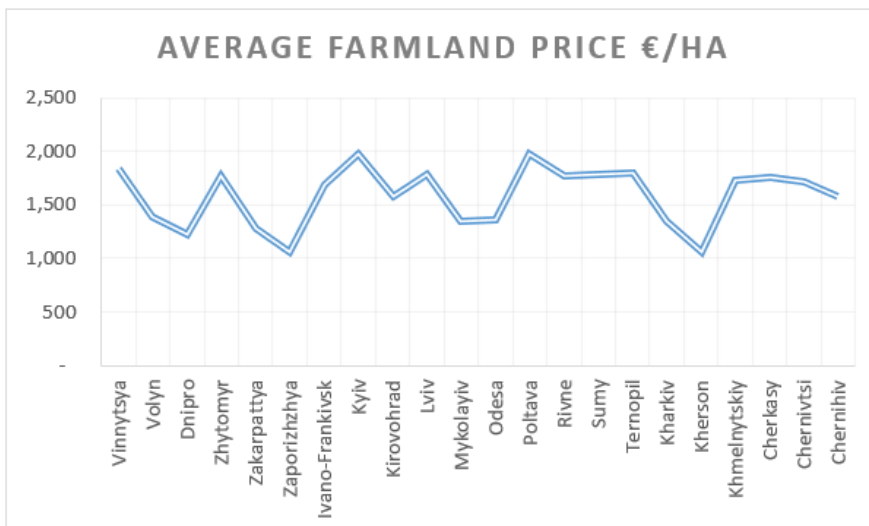
To calculate the average net profit of agricultural products per hectare, the cost of all products sold for 2019 was taken. Also, for a more accurate picture, the annual production costs of all products by region were subtracted. According to the data obtained, it is clear exactly which regions in Ukraine are more suitable for agriculture, which will directly affect the final cost of land plots.

Graph 7



The capitalization ratio is a parameter that converts net income into the value of an object. In this case, both the net profit itself received from the operation of the assessed object and the reimbursement of the fixed capital spent on the acquisition of the object are considered. The capitalization ratio that takes these two components into account is called the total capitalization ratio or the net income capitalization rate. In this case, the net income used for capitalization, in this case, is determined for a certain year. Thus, the general capitalization ratio expresses the relationship between the annual value of the net income received because of the operation of the facility and its market value.

Graph 8



The results are not surprising. The Zakarpattya region has the smallest amount of agricultural land, and, accordingly, the lowest profitability indicators. Also, this region has a low land

quality index. However, the Kiev region has the highest level of profitability. This is mainly due to the concentration of processing enterprises, infrastructure, and the good quality of land.

The econometric model helped to check and find out which of the variables chosen by the author affect the price of land.

*Table 12*

Harvesting of cereal and leguminous crops (quintals/ha)
Harvesting of roots, tubers, vegetable (quintals /ha)
Harvesting of fruits and berries (quintals /ha)
Capital investment in agriculture (EUR)
Cost of production (direct + indirect costs) (EUR)
Emissions of air pollutants (t/year)
Soil moisture (%)
Chernozem concentration (%)
Number of agricultural holdings

The model showed that the indicators of productivity and land quality have the greatest influence on the price of agricultural land. Natural indicators of the quality of land and the environment were selected based on the work of O. Gureeva “Estimation of the Cost of Agricultural Lands”.

Interpretation of results:

- Whenever harvesting of cereal and leguminous crops will increase by 1 quintal/ha then the market price for land increase by 3.29698 EUR/ha
- Whenever harvesting of roots, tubers, vegetable increases by 1 quintal/ha, then the market price for land increase by 1.96505 EUR/ha
- Whenever harvesting of fruits and berries increases by 1 quintal/ha then the farmland price will increase by 0.818875 EUR/ha
- Whenever capital investment in agriculture increases by 1 EUR, then the market price for land increase by 5.56874 EUR/ha
- Whenever cost of production increases by 1 EUR, then the market price for land increase by 0.00123880 EUR/ha

- Whenever emissions of air pollutants increase by 1t then the market price for land decrease by  $-0.0418648$  EUR/ha
- Whenever the soil moisture increases by 1% then the market price for land increase by 3.75412 EUR/ha
- Whenever the chernozem concentration increases by 1% then the market price for land increase by 196.862 EUR/ha.

As a result of interviews with representatives of agricultural market participants, the following results were obtained:

1. The owner of ESTEM Ltd. Sergey Mozkovoy:

- a) Expert believes that formally Ukraine has fulfilled the IMF's requirement to open the land market, and therefore the Ukrainian government will be able to count on the resumption of cooperation and the fund's money. He considers this a "big plus" of the law.
- b) Mozkovoy does not hide his disappointment. He draws attention to the fact that the Verkhovna Rada extended the moratorium on the sale of land for more than a year and created conditions for speculation with land. "The fact that legal entities were banned from buying land until 2024 will lead to the fact that now individuals will buy it for someone.
- c) Restrictions which mentioned in latest version of the law after amendments "too soft". It relates to limitation of available hectares for buying per one individual. Mozkovoy believes that, the limit on the amount of available land per person should be reduced slowly from the beginning of land reformation and decrease it afterward, based on to the received experience.
- d) The appearance of foreign companies on the land market in Ukraine may have a positive effect on the quality of life of ordinary citizens. International companies (in particular European ones) have high standards of production and quality of their products. They also have a well-functioning business structure that will bring tax contributions to the state and local budgets.
- e) The expert believes that the presence of not only national enterprises on the market will bring an increase in the level of production, technology, wages, to a better new stage of agricultural development.



2. CEO JSC "CARGILL" Ltd. Igor Litvinenko. It is important to consider land not as a separately existing asset, the purchase, transfer, or exchange of which depends only on laws and regulations. It is always worth remembering about the subjects of the market, which by their actions lead to significant changes in land relations. According to the expert, there are 3 main groups of stakeholders:

- a) The first of them is ordinary traders who now intend to buy land, lease it for two years, and resell it in 2024.
- b) The second category of potential buyers is a large horde of small and medium-sized farmers. They may be prompted to buy land by a desire to expand their agricultural production, or simply by the decision of one of the current landlords to sell their land to solve financial personal problems.
- c) And the third category of applicants for land are representatives of the interests of large agricultural holdings represented by trusted individuals from among the top managers of companies, family members of owners of enterprises, and the like. However, agricultural holdings also have little free working capital.

According to relevant information, now there are few groups that can invest in the land market and unfortunately these are not always those individuals whose business is associated with agriculture. Thus, many interested parties will enter the agricultural land market, who will speculate prices. Due to the actual lack of government support, separate agricultural lending, subsidies, land prices are expected to rise.

## **6. Conclusion**

Private land ownership contributes to the economic growth of any country primarily through more efficient use of land. The advantages of private ownership of land become even more evident in the land market. The land market ensures the stability of land ownership rights, the possibility of their transfer from one person to another, as well as the correspondence of the price of land to its real value. It is believed that the possibility of buying and selling, as well as leasing, agricultural land will have a positive effect on the growth of agricultural production in Ukraine. For example, more efficient farmers will be able to buy or lease agricultural land from less efficient farmers; landowners will be able to receive additional income without engaging in agricultural activities, and those who need additional capital will have an asset, the value of which can be contributed to the authorized capital.

In the context of the transition from a command-administrative to a market economy, the influence of the market mechanism on all spheres of the national economy is expanding, including on the formation of the land market. The formation of a market economy in Ukraine did not allow obtaining the expected success in solving the most important issues related to food security, fair privatization of land, ensuring the effective development of the agricultural sector of Ukraine. Thus, given that in the market economy land resources are one of the main market segments, it is necessary to create a methodological basis for land valuation, which will be based on the main economic approaches, to assess the value of land plots, to ensure economic regulation of the quality and location of soils, the current rates of land tax. A transparent agricultural land market has not yet been created in Ukraine. In connection with the ineffective redistribution of property rights to land, the material and technical base of agricultural enterprises was destroyed, the productivity of agricultural purposes decreased, and the disparity in prices for products increased. The formation of a market for agricultural land should be based on social guidelines for realizing the interests of rural residents in the process of selling land, clear state regulation of the land market, creating a system of price and tax levers of influence on the market turnover of land, as well as finalizing the main legislative projects that regulate the land market. In addition, it is necessary to improve the order and maintenance of the state land cadastre, as well as to stimulate the rational use of land.

The importance of buying and selling agricultural land in Ukraine can hardly be overestimated. Therefore, land valuation is a vital process along with the land market. With the abolition of the moratorium, more confidence and security will come to Ukraine for farmers and agricultural holdings. Subjects of agriculture will be able to invest and develop their land plots without fear

of problems with the tenant. This outcome of events is a necessary step towards the sustainable development and progress of agriculture in Ukraine.

“Ukraine needs comprehensive, scientifically based, purposeful and constructive agricultural policy, which in its logic and principles not only complies with the course of the accelerated market transformation of the country’s economy but is rather its leading element and encouraging factor. None of Ukraine’s sectors has such favorable preconditions for deep and qualitative reconstruction as agriculture and the other spheres of the Agro-industrial Complex”.

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