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## **COMPETITIVENESS OF PRODUCERS IN THE AGRICULTURE OF UKRAINE**

Key words: competitiveness, agriculture, producers, agricultural holdings, farms, households

**ABSTRACT.** The purpose of the study was to identify trends in the development of modern Ukraine's agriculture and outline ways of increasing competitiveness of all producer types under conditions of agricultural dualization and marginal groups of enterprise polarization. Ukraine's agriculture has fast obtained a significant sum of money, thus contributing to the intensification of investment and a transfer of capital to this industry, to a large extent, because the general trends in agriculture development are characterized by a deepening of its dualization and polarization in two major producer sectors - large enterprises (with a marginal group in the form of agricultural holdings, engaged in the production of export-oriented products), and small producers (with the marginal group in the form of households, specialized in the production of products mainly for their own needs and the internal market, including niche products). Therefore, competition between producers is mostly carried out within each of these polar production groups. The level of competitiveness of producers in both sectors is quite high, but in each case - due to different factors. In order to increase development efficiency of all agricultural producers and their competitiveness level, appropriate socio-economic modernization of the existing model of agriculture is needed in order to equalize the conditions of access to necessary resources and of functioning conditions in general for all types of producers.

### **INTRODUCTION**

In Ukraine's agriculture the tendency towards the dualization of this industry is intensively developing – it is increasingly polarized by two sectors: corporate (large enterprises, including agricultural holdings) and individual (small enterprises and individual households), between which diversified farms and agricultural enterprises of a diversified range of organizational forms and sizes are located. As each of these groups of agricultural producers has its own peculiarities and advantages and disadvantages, it is relevant to constantly monitor the development of the situation and develop measures to prevent possible negative consequences of their functioning and promote the development of their positive effects. This basically forms the main goal of the research – to identify the main trends of modern agriculture development in Ukraine under conditions of dualization and substantiate the main ways of increasing its competitiveness level.

## MATERIAL AND METHODS

The information used in the course of the study was obtained from the official information sources of the State Statistics Service of Ukraine (SSSU), the Ukrainian Club of Agrarian Business (UCAB), official sites of agricultural holdings and other agricultural enterprises, personal observations of the author and publications on these problems. During the processing of information received, the dialectical approach to the study of trends in the development of organizational types of agricultural producers by size was used as well as methods of historical and logical unity – in the study of the evolution of contemporary organizational forms of producers; methods of analysis and synthesis – studying the quantitative parameters of individual indicators of different types of agricultural producers functioning and identifying and systematizing the main positive and negative effects of them, and in combination with induction and deduction methods – to formulate final conclusions based on the results of the research.

The study suggested that it is logical for an enterprise to be competitive when it is efficiently operating and retaining its share of products in the market for a long time [Módos 2001]. Because of problems with the quantification of the level of this competitiveness, as a more practical approach, a competitive enterprise is considered to be one that is able to make a profit [Cuervo 1993]. Competitiveness is measured by looking at efficiency of resources [Gallardo et al. 2003], thus focusing on the production of products with a high level of productivity of available factors and the achievement of a high level of return from them. With this approach, the Resource Cost Ratio (RCR coefficient) was used in this study to assess competitiveness levels between groups of agricultural enterprises of different sizes - the value of  $0 > \text{RCR} < 1$  indicates that an enterprise has a competitive advantages. The use of the EBITDA-indicator (Earnings before interest, taxes, depreciation and amortization) made it possible to identify the existence of a relationship between the size of an enterprise and the effectiveness of operation on the example of agriholdings. EBITDA does not make it possible for specific conclusions about the profitability of a particular company to be drawn, but gives a retrospective view and by making corresponding comparisons gives an understanding of where the company is heading precisely in terms of the dynamics of its economic activity and its relative level of efficiency. To sort producers by size, the criteria defined in the Economic Code of Ukraine were used, the main ones being parameters of employee numbers and amount of income<sup>1</sup>. For competitiveness calculations, indicators of resource availability and the production results of 15 large, 15 medium and 15 small agricultural producers of the Lviv region of the Ukraine were used. For these calculations, the sampling of producers was carried out using random selection. There are no accountings in households, so conclusions about its competitiveness are based on information, obtained due to direct observation.

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<sup>1</sup> Large – the average number of employees during the reporting period (usually a calendar year) is more than 250 people and the annual income exceeds the amount equivalent to EUR 50 million, determined by the average annual rate of the National Bank of the Ukraine; on average – have a staffing of 50 to 250 people and annual income within the amount equivalent to EUR 2-50 million.

## RESEARCH RESULTS

The agrarian sector of the Ukrainian economy has become a powerful driver for the development of the country's economy as a whole, as evidenced by the structure of Ukrainian exports. The largest export of agricultural products was in 2017 – almost USD 18 billion (12% of the country's GDP), and by the share of exports in the country in 2015, which constituted – 42.4% (44% in 2017, 32% in 2018) [SSSU 2018]. Ukrainian agriculture has become a relatively “fast” generator of currency funds, thus contributing to the intensification of investment and a transfer of capital to this industry, to a large extent contributing to the emergence and development of super-large enterprises – agricultural holdings. The second factor enabling the rise of agricultural holdings in the Ukraine is down to privatization processes that made new owners of land shares who did not have the necessary resources to cultivate these lands willing to lease such parcels to more successful owners of such resources for almost nothing. Over a short period of time, just agricultural holdings became the holders of resources.

Agricultural products in the Ukraine today are produced by two large groups of producers – enterprises (large, medium and small), a marginal sector in which there are just agricultural holdings, and a group of households.

Depending on the size, according to criteria defined in the Economic Code of the Ukraine, about 94% of agricultural enterprises can be attributed to small enterprises, and 5.8% – to medium enterprises [Kernasyuk 2016]. So the share of large agricultural enterprises in their total number in the Ukraine is 0.2%.

Calculations, made on the basis of UCAB data [UCAB 2019, p. 66-92], showed that the share of enterprises in agricultural production for the years 2000-2018 increased from 38.4% to 58.8%, incl. in crop production – from 49.3% to 62.8% and animal husbandry – from 21.0% to 47.5%. Including, the share of the most largest enterprises – agricultural holdings – the numbers are as follows: 23.1%; 20.3%; 30.8%, respectively, in 2018. In the structure of gross crop production of enterprises about 43% constitutes grain production and about 40% – technical. In animal husbandry production – about 62% – livestock and poultry production, about 20% – milk. In 2018, the share of enterprises as a whole in wheat production increased from 67.5% to 81.4%, maize – from 83.3% to 85.9%, barley – from 45.7% to 57.7%, sunflower – from 86.1 to 87.8%, soybeans – from 93.1% to 94.8%, rapeseed – at 99.9%, milk – from 23.8% to 24.3%, pork – from 51.0% to 54.8%, poultry meat – from 86.6% to 86.9%, cattle meat – from 24.8 to 26.2%. The share of agricultural holdings only in wheat production is 21.2% in 2018 (against 23.3% in 2017), maize – 36.9% (37.6%), barley – 9.5% (9.5%), sunflower seeds – 22.6%, (22.2%), soybeans – 34.9% (33.9%), rapeseed – 39.8% (31.9%), milk – 9.8% (9.6%), pork – 27.9% (26.5%), poultry meat – 73.8% (72.7%), cattle meat – 8.4% (8.2%). Agricultural holdings have an absolute advantage in crop yield and animal productivity.

Thus, the share of households in agricultural production in 2000-2018, although decreased, is still quite significant – 37.2% in crop production and 52.5% in animal husbandry [UCAB 2019, p. 65] despite the fact that the number of pigs and cattle heads in households has had a decreasing tendency by an average of 4-5% per year. In the structure of crop production of these producers, about 60% is occupied by potatoes, 20% – grain

and 10% –technical, in the structure of animal husbandry products – about 50% is milk and 35% – constitutes the production of livestock and poultry [UCAB 2019, p. 66]. The specificity of their field of activity allows to predict a constant long-term perspective of their presence. Currently, 57% of Ukrainian agricultural land is used by agricultural enterprises, the rest (43%) is used by individual households (against 22% in 2000).

A stereotypical attitude toward small enterprises and producers of mainly family-type farming, represented mainly by households are considered “subsidiary” and “unpromising” as reflected in the formation of the market infrastructure and the system of state support to the agrarian sector. Furthermore, opportunities to enter into external markets is limited as peasant individual farms practically do not have any direct access to it. Neither do they have any direct access to the external products market. This is a neglect of the needs of these farms. From more than 3 million people employed in the agrarian sector, over 2 million are considered to work in private farms, but their employment is practically unformalized and exist outside the social insurance system (see also Table 1).

Thus, the process of agricultural dualization in the Ukraine results in the presence of two polar marginal groups of producers – agricultural holdings (as the largest enterprises) and households (Table 1).

Table 1. Bipolarity of agriculture in Ukraine

Parametric characteristics	Agricultural holdings	Households
Using land area [mln ha]	5.62	5.1
Average land use of one unit [ha]	10,000-500,000	1.2
Number of employees [thous. persons]	> 100.0	2,372.0
Share in the production of agricultural products [%]	23.1	41.2
Amount of foreign investment [bln USD]	1.5	-
Direction of specialization	Commercial mainly export-oriented production (growing of cereals, sunflower, corn, poultry, processing)	Small labor-intensive production (vegetables, fruits, niche products, dairy cattle breeding)

Source: own calculations according to the Ukrainian Agribusiness Club [UCAB 2019]

Any form of cooperation in the sector of small enterprises and households is either formal or non-existent, so such producers do not have adequate access to necessary resources - credits are too expensive, their small size does not allow them to form the required batches of products to enter foreign markets and they mostly function solely at the expense of their own resources. The exception for them is a new, “niche” direction of development, where on small areas they can earn significant profits per unit of area and, at the same time, have the opportunity to even sell products abroad. Talk is about activities in the field of growing crops such as asparagus, big blueberries, truffles, saffron, coriander and other spices, blueberries, cranberries, raspberries, blackberries, plums, apricots,

strawberries, walnuts, gooseberries, sea buckthorn, honeysuckle, dogwood, dogrose, spelta, kinoa, poppy, chickpea as well as breeding snails, producing donkey milk, mare milk, goat milk or buffalo milk, including the production of appropriate cheeses, producing ostrich meat and eggs and many others. Such undertakings do not require a large land area but simultaneously generate a considerable income. This direction of business is too much of a troublesome affair for large enterprises, so bigger enterprises avoid them.

In the agricultural enterprise sector, two large groups of enterprises categorized by size of agricultural land could be identified in the Ukraine at the end of 2017: medium-sized – with a land area of 1,000 to 3,000 ha, which in its general structure occupies a share of 31% of total agricultural land of agrarian enterprises, and large ones – with an area of more than 7,000 ha – constituting a share of almost 32%. Together they manage almost 63% of total agricultural land. Of the total number of workers employed in sectors of agriculture, forestry and fishery, their largest share in overall structure is concentrated in medium-sized agricultural enterprises – about 57%, and small – 33%, while in large ones – only 8% (author's calculations based on the [SSSU 2018]).

Of the 4,580.1 thousand ha constituting the total area of agricultural land used by private farms as agricultural enterprises, the share of parcels with an area of over 1,000 ha in overall structure is almost 40% [Kernasyuk 2018, p. 14].

In the structure of commodity product volume in agriculture, forestry and fishery, the largest share is occupied by medium enterprises – 51% and small – 32%, the share of large enterprises is only 17% in total (according to SSSU). That is, more than 80% of the total volume of commodity products of the industry is produced by small and medium-sized agricultural enterprises, although their role in the development of the domestic agrosector is often underestimated.

Large and medium-sized enterprises have relatively better indexes than small ones by share in the total number of profit-making farms [Kernasyuk 2018, p. 14] – about 2-3 times comparing with enterprises of the same direction of specialization. In large enterprises the average annual volume of sales of goods per one employee is almost 3 times higher than in medium ones (author's calculations).

Accordingly, larger enterprises are generally more competitive than smaller and medium producers when they are viewed in the plane of the same market and direction of specialization, as evidenced by the results of calculations (Table 2).

However, as we can see, well-known regularity in the Ukraine is not entirely true - quite small producers have a level of competitiveness lower than large ones (according to RCR

Table 2. Estimation of RCR values in groups of agricultural producers by different size

Producer groups by size	Number of surveyed producers in the group	RCR values	
		2016	2018
Large	15	0.79	0.87
Medium	15	0.68	0.75
Small	15	0.71	0.79

Source: calculated on the basis of producer data

values), but relatively slightly higher than medium ones, due to the difference in the fields of activity and activation of small producers in the sphere of «niche» production. In this case, the small producer group includes data from really small enterprises, such as those specializing in the production of strawberries, big blueberries, vegetables, potatoes, meat and eggs of ostriches, donkey milk, snails, as well as household data.

The course on ‘farmerization’, taken in the beginning of the independent functioning of the Ukraine, as a whole, did not meet expectations, and today about 39 thous., farms produce on average 10% of agricultural production (with fluctuations of 1-3% of livestock production to 15% of crop production), which in general forms about 2% of its market share. Only 3% of farms specialize in the production of livestock products [Maslak 2015]. The area of land used in 70% of farms is up to 50 hectares (including 35% – to 20 ha), and the average area of agricultural land per one farm is 147 ha; arable land – 141.4 ha. On average, 1 farm accounts for 2.9 employees, including 1.8 – hired employees [Maslak 2015].

Ukrainian agricultural holdings, which are especially large enterprises, have certain specific features comparing to similar enterprises in other countries: a significant centralization of capital; flexibility and mobility in choosing organizational forms; a possibility of risk diversification; confidentiality of control for business owners; efficiency of financial and tax planning; significant bureaucratization of management and complexity of the hierarchical structure [Shapurov 2011, p. 32]. Their characteristic feature is also main crop specialization. A general idea of agricultural holdings in the Ukraine can be formed on the basis of several parametric characteristics of some agricultural holdings ranked in the rating (Table 3).

The results of the conducted analysis shows that the effectiveness of a large company grows on average until it reaches the size of less than 100 thousand ha – then the scale starts to work in the opposite direction and the company’s efficiency reduces. Various factors affect the level of EBITDA/ha, including the direction of specialization. For example, crop production has never been a strong site of the “Kernel” company (annual revenue (2018) – USD 48,966 million) – the largest Ukrainian producer and exporter of sunflower oil. The EBITDA/ha of the company = USD 85, so it did not even enter this rating [Forbes 2018].

The general effectiveness of the functioning of agricultural holdings as an organizational form of agribusiness is quite controversial. They ensure the concentration of resources and the optimization of economic relations among suppliers, producers of raw materials and their processors, to a certain extent, contributing to the improvement of the material condition of owners of land plots (shares), especially pensioners, whose share in the total number of landlords exceeds 50%. For example, the sum of rent for the year, which is carried out only by “UkrLandFarming”, is more than UAH 150 million. Large agricultural enterprises in the Ukraine are the main suppliers of currency to the country, in most cases they pay taxes, develop a modern industrial and logistic infrastructure, but are mostly oriented towards the production of exporting products and mainly – as raw materials, except for sunflower oil, which is exported, thanks to agricultural holdings, The Ukraine is the only country in the world where agricultural lands are used extensively and too aggressively (under conditions of free land for lease existence). They also cause

Table 3. The rating of Ukraine's largest agricultural holdings by level of efficiency

No.	Agricultural holding	Year of foundation	EBITDA/ha* [USD]	Size of the land bank [ha]	Land in cultivation [ha]
1	Svarog West Group	2006	700	80,000	80,000
2	Grain Alliance (Baryshev Grain Company)	1996	560	50,000	45,000
3	Agrospecservice	1998	520	41,000	40,415
4	Chysta krynica	2000	500	50,000	50,000
5	Industrial Dairy Company (IDC)	2007	420	136,700	136,700
6	Vinnitsa Agroindustrial Group	2009	347	43,053	42,848
7	Trigon Agri	2006	336	49,000	49,000
8	UkrLandFarming	2008	311	653,000	653,000
9	Agreyn	2008	300	130,000	130,000
10	Rostock-Holding	2010	297	60,000	47,000
11	AgroGeneration & Harmelia	2007	244	120,000	103,000
12	Ukrprominvest – Agro	2002	237	122,000	122,000
13	Agroprosperis	2007	232	430,000	410,000
14	Myronivskyy Hliboproduct	1998	231	380,000	360,000
15	Nibulon	1991	225	82,300	81,500
16	KSG Agro	2001	200	94,000	30,000
17	APK-Invest	2006	190	41,000	38,000
18	Ukrainian Agrarian Investment	2005	179	234,000	175,000
19	Agro Invest Ukraine	2006	156	30,000	26,700
20	Astarta	1993	124	245,000	235,000

\* cultivating land

Source: own calculations based on Forbes data [Forbes 2018]

monoculture, non-compliance with crop rotation, a significant reduction of environmental protection activities, a release of agricultural workers, growth of the number of unemployment of the rural population and the number of labor migrants, the deformation of the sex-age structure of the rural population and rural depopulation. Agricultural holdings are not interested in realizing long-term capital investments in agricultural lands and in their qualitative use under conditions of the absence of guarantees of long-term use of land. Lease agreements are concluded mainly for a period of 4-5 years (49%).

Such enterprises cause unemployment in the countryside as a result of the fact that they require much less work to carry out large volumes of work, thereby increasing the level of social tensions in rural areas. The social effects of agricultural holdings in the Ukraine are practically mostly limited by the circle of workers of these structures.



The impact of agricultural holdings on the natural environment is almost uncontrolled at all by the government, which automatically allows them to omit this factor in their activities [Kalinchuk 2007, p. 6]. This, by the way, concerns mainly all producers in the Ukraine.

## SUMMARY

The results of analysis and the identified trends confirm the known thesis that there can be no competition between small and large enterprises in one market, because it is pointless. Big enterprises compete with each other while small ones compete with each other in their niches. Competition in agriculture in the Ukraine is present only among enterprises of similar specialization and size: competition for land resources is currently emerging among large enterprises, and, in turn, competition for water. In the sector of small producers, including households, competition, as such, may, to some extent, only manifest itself as a price competition on the commodity market during the sale of products or its supply to the trading network.

In the Ukraine, large enterprises, like agricultural holdings, are engaged in the production and market oriented on export crops and sunflower oil, where they have a high level of competitiveness, but their level of efficiency in the agricultural holdings sector grows only to below 100,000 hectares. Small enterprises, together with households, are mainly engaged in the production of vegetables, fruit, meat and milk, where their level of competitiveness is also quite significant, especially – in the production of various “niche” products, which they produce practically exclusively and have an absolute advantage over large enterprises. This also confirms the known thesis that the level of producer specialization significantly influences the level of competitiveness of this enterprise in its market segment.

At the same time, the well-known, rather automatic thesis about the higher level of competitiveness in larger enterprises existence is not entirely true, at least in the current situation in the Ukraine – very small producers even have a slightly higher level of competitiveness, comparing with medium ones, due to the activation of small producers in the sphere of “niche” production.

The obtained results also lead to the conclusion that it is quite likely that further development of the process of agricultural dualization and polarization, which is accompanied by a further shift of production of a group of products with an export-oriented nature to the sector of large enterprises, will continue.

Agricultural holdings, despite the presence of certain deficiencies in their activities and some contradictions between them and the economic and social environment, will also develop, increasingly giving a large commodity character for domestic agriculture. The presence of a large number of both positive and negative features in agricultural holdings raises the need to develop legislative support and state regulation of the activities of these structures in the field of agrarian business in order to increase their positive advantages and minimize the negative consequences of their functioning.



A significant role in agriculture, both in the near and longer term will still be played by Ukrainian households, whose activities will develop and improve in their product market niche. What is objectively necessary, in this sector of the agrarian economy, is the development of cooperation, especially in the sphere of producer supply and sale of products.

In general, the effective development of all agricultural producers and their higher competitiveness require effective socio-economic modernization of the existing model of the branch in order to equalize the conditions of access to necessary resources and general conditions of functioning for all types of producers.

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## KONKURENCYJNOŚĆ PRODUCENTÓW ROLNYCH NA UKRAINIE

Słowa kluczowe: konkurencyjność, rolnictwo, producenci, agroholdingi, gospodarstwa farmerskie, gospodarstwa domowe

## ABSTRAKT

Celem badania było zidentyfikowanie trendów w rozwoju współczesnego rolnictwa Ukrainy i nakreślenie sposobów zwiększenia konkurencyjności wszystkich rodzajów producentów w warunkach dualizacji rolnictwa i polaryzacji ich marginalnych grup. Rolnictwo Ukrainy stało się sferą relatywnie szybkiego uzyskiwania znacznych kosztów walutowych, co przyczyniło się do intensyfikacji inwestycji i transferu kapitału do tej branży, w dużej mierze z tego powodu, że ogólne trendy w rozwoju rolnictwa charakteryzują się pogłębieniem poziomu jego dualizacji i polaryzacji dwóch głównych sektorów producentów – sektora dużych przedsiębiorstw (z marginalną grupą w postaci agricholdingów, zaangażowanych w produkcji przeważnie na eksport) oraz sektora małych producentów (z marginalną grupą w postaci gospodarstw domowych, specjalizujących się w produkcji głównie na własne potrzeby i na rynek wewnętrzny, w tym produktów niszowych). Oznacza to, że konkurencja między producentami odbywa się głównie w ramach każdej z tych polarnych grup produkcyjnych. Poziom konkurencyjności producentów w obu sektorach jest wysoki, ale w każdym przypadku ze względu na różne czynniki. W celu zwiększenia wydajności rozwoju wszystkich producentów rolnych i poziomu ich konkurencyjności konieczna jest odpowiednia modernizacja społeczno-ekonomiczna istniejącego modelu rolnictwa, w celu wyrównania warunków dostępu do niezbędnych zasobów i ogólnych warunków funkcjonowania dla wszystkich rodzajów producentów.

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