The Influence of the Social and Economic Situation on Agribusiness

VIKTORIIA KYFYAK
Department of Business Economics and Human Management,
Yuriy Fedkovych Chernivtsi National University,
Chernivtsi, UKRAINE

LIUDMYLA VERBIVSKA
Department of Business, Trade and Stock Exchange Operations, Faculty of Economics,
Yuriy Fedkovych Chernivtsi National University,
Chernivtsi, UKRAINE

LIUDMYLA ALIOSHKINA
Department of Management, Uman National University of Horticulture,
Uman, UKRAINE

NATALIIA GALUNETS
Department of Administration and International Economics,
Mykolaiv National Agrarian University,
Mykolaiv, UKRAINE

LARYSA KUCHER
Department of Soil Science and Protection of Soils. Prof. M. K. Shikuli
National University of Life and Environmental Sciences of Ukraine
Kyiv, UKRAINE

SVITLANA SKRYPNYK
Accounting and Taxation Department, Kherson State Agrarian and Economic University
Kherson, UKRAINE

Abstract: Ukraine is known for its extremely fertile and high-yielding black soil. This incredible national wealth is also the reason for significant interest on the part of private agribusiness companies and international investors, who today consider Ukraine a strategic partner in addressing global food security. The socio-economic factors determining the state of agribusiness are well known, however, they affect this area in different ways in different countries. The purpose of the academic paper lies in representing the author's concept of the socio-economic conditions under which the transformation of agribusiness in a developing country takes place, in which the agricultural sector is a priority. Methodology. The authors put forward a hypothesis that the solution to this problem requires the development of agribusiness, a promising tool for which is financial support, including on the part of the state. In the process of conducting the research, in order to test the hypothesis outlined, the authors use methods of modelling socio-economic systems, as well as systemic, problematic analysis, methods of statistical analysis, induction and deduction. Results. As a result of the study, the authors come to the conclusion that the most important problem for the development of agribusiness in Ukraine is the lack and low availability of financial resources, which is caused by the high seasonality of the business, its low profitability and, accordingly, its low investment attractiveness. Integration of agribusiness spheres will help to solve this problem and increase the availability of financial resources for agricultural enterprises, which allows modernizing equipment and production technology, reducing production costs, increasing profitability and competitiveness. The academic paper considers the features of the socio-economic environment in which the agribusiness of Ukraine operates, noting the state of the agricultural market and the largest players on it. It has been determined by trend analysis that while maintaining existing trends, the volume of capital investment in agriculture by 2030 may increase by almost 1,8 times compared to 2020. Along with this, the main negative factors of agribusiness determining its effectiveness have been outlined, namely: significant fluctuations in world food prices and the devaluation of the national currency; import dependence on

certain groups of goods and the raw material nature of exports of agricultural products and a significant percentage of production of certain types of agricultural products in households. By the way, the academic paper has also considered the impact of the most significant factor of influence in 2020-2021 - the pandemic, which has significantly changed the ratio of supply and demand in agricultural markets and caused changes in the commodity structure of exports. It is also concluded that agribusiness in this socio-economic situation remains profitable and requires the revival of financial support for this important sector of the national economy.

Key-Words: capital investment, financial support, agribusiness, agriculture, factors, state (government) support, agricultural products, pandemic, COVID-19, impact.

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1 Introduction

Competitive agribusiness should ensure the sustainable development of the national economy in order to meet the demand of the country's population with food of adequate quality, export growth and a positive foreign trade balance, improving the welfare and living conditions of the rural population, balanced development of rural areas and landscape conservation, as well as creating conditions for the formation of social and political stability of the state in conditions of increasing uncertainty in the world economy.

It is the sphere of agribusiness relations as a branch of entrepreneurial activity that is most closely connected with the social development of the village, the vocational training of rural youth, the provision of jobs for rural residents and participation in development programs for individual territorial communities. Consequently, this issue is important for further investigations.

At the same time, the conceptual provisions for the implementation of agribusiness for creating an attractive investment climate and an effective socio-economic environment for its sustainable development and rural areas remain unresolved, not only in terms of inter-sectoral and intra-sectoral balance, stability and certainty in predicting environmental factors, but also when the dynamics of structural changes and processes of economic growth in the agro-industrial complex arise in interaction.

The issue of agribusiness is especially important for Ukraine, forasmuch as Ukraine is at the initial stage of formation of the agricultural land market. As a consequence of the opening of the land market, the issue of agribusiness responsibility to agricultural communities also arises. In addition, it is expected that investors of the agricultural sector will participate in the development of rural areas, which should be taken into account when planning and implementing agribusiness in Ukraine. Therefore, the issue of agribusiness development as a driver of the national economy is quite relevant.

The purpose of the academic paper lies in representing the author's concept of the socio-economic conditions under which the transformation of agribusiness in a developing country takes place, in which the agricultural sector is a priority. The object of the research is agribusiness in Ukraine.

2 Literature Review

The analysis of the scientific works of modern scholars on the issue of agribusiness development has shown that most studies are devoted to substantiating the expediency and necessity of developing agribusiness; among them works of the following scholars (Garthwaite et al., 2015), (He, 2015), (Jacknowitz et al., 2015), (Maitra & Rao, 2015), (Bannikova et al., 2015) should be specified. Along with this, a great amount of investigations are focused on highlighting national features of the development of agribusiness and solving the problems of socio-economic systems related to ensuring food security (Bernardes, 2015).

There are numerous developments in agribusiness, assessing the state of agriculture in Ukraine. The subjects of the research were as follows: general trends in the development of Ukraine's agro-industrial complex, export-import transactions in agriculture (Savchenko, Shutak, 2021; Rakhman, Knysh, 2019; Kvasha et al., 2019), definition of the "agribusiness" concept (Dolhosheia, 2011; Korniienko, 2019; 2020), regional aspects of agribusiness (Mykytiuk et al., 2019), the impact of agribusiness on rural development (Sokolov, Slavkova, 2016).

In particular, Sokolska et al. (2020) have studied the current state of agricultural production in their scientific work, as well as the financial system of agriculture and the instruments of the financial mechanism for enhancing agricultural development, the main factors limiting the flow of investment in the agricultural sector, the conditions for lending to agricultural producers, and modern tools for financial support of agricultural activities.

Kolomiets and McGrath (2015) note that the sustainable development of Ukraine's agricultural sector requires increased transparency, accountability and democratization of decision-making at the local and national levels. Ukrainian authorities and companies should engage in a transparent dialogue with local communities and civil society in order to ensure that issues and concerns are addressed and that society's problems are adequately resolved.

Namitulina et al. (2021), based on the use of the constructed mathematical model and analysis, have conducted a factorial experiment. The processing of the experiment's results has made it possible, on a formalized basis, to take into account external and internal pathogens and negative factors affecting agriculture, used in the decision-making process for the sustainable development of agriculture.

Kravchenko et al. (2020) have outlined the author's concept of socio-economic conditions in which the transformation of economic relations between participants in the agri-food market, in particular the livestock market of Ukraine, takes place. Along with this, they have conducted the assessment of the state of food, as well as a comparison of the same criteria for the position of participants in the agri-food market of Ukraine and four European countries, namely: Germany, France, Italy and Poland. The authors have noted the conditions for the functioning of participants in the agricultural market of Ukraine as unfavourable for the sustainable development of agriculture, especially livestock. The debt burden of external creditors is growing; the volume of direct investments from the countries of the world is decreasing; the growth of capital investments per employee is slowing down. Ukraine's food security is unstable. Taking into account the fact that the agricultural market is not able to correct all the negative phenomena, they propose to apply measures of state regulation.

Although agribusiness is the subject of scientific investigations, there are not enough studies on the impact of the socio-economic situation on it.

3 Materials and Methods

The following methods have been used in the research, namely: the method of economic analysis and synthesis in the process of studying the theoretical and methodological fundamentals of agribusiness; methods of comparison and analogies in the analysis and assessment of indicators, the method of modelling the volume of capital investment based on trend building; method of systematization and generalization in formulating the conclusions and results of the research.

By the way, the method of factor analysis has been also used in the research in order to identify factors of agribusiness development; the method of institutional analysis in order to identify modern and innovative means of influencing these factors and the method of problem analysis in order to identify major problems of agribusiness development and search for their solutions.

In order to determine the boundaries of the research and simplify work with the object of the research, methods of modelling socio-economic systems and system analysis have been used. The application of these methods makes it possible to represent the field of agribusiness as an open system operating within the national economy, and interacting with the global economy.

The information base of the research is based on statistical reports for 2010-2021 as follows: Statistical Review of the Social and Economic Situation of Ukraine, the Budget of Ukraine, Agriculture of Ukraine, Statistical Yearbook of Ukraine, Expectations of agricultural enterprises on the prospects for their business activity.

4 Results

Agribusiness is a sector of the market economy, including industries related to agricultural production as a single complex. The core of the complex is agriculture; only food is the final product. Agribusiness as an economic activity contributes to the development of rural areas through increasing household incomes and growth of tax revenues to local budgets, solving the problem of employment in small and medium-sized settlements. The ultimate goal of agribusiness lies in meeting the food needs of the population, mainly through its own production. Consequently, agribusiness is considered as a process of integration of individual economic entities into diversified enterprises (agricultural firms, trade cooperatives, conglomerates) in order to achieve maximum profit of its successful materialization in

the field of agricultural production (crop and livestock), its processing, storage of raw materials and products of its processing (trade in agricultural raw materials and products of its processing), production agroservice (agrochemical, transport, trade and supply services); consulting production services, etc.; social agricultural services (consumer cooperatives, cultural institutions in the countryside, medical institutions in the countryside, etc.).

Practical agribusiness is brought into correlation, as a rule, with a specific market for a particular product (regional, national, global). Currently, in most market economies, agribusiness is the most developed subsystem of the national economy. One of the reasons is the ability to generate a significant amount of gross domestic product. According to the data of the State Statistics Service of Ukraine (hereinafter referred to as the State Statistics Service of Ukraine), in 2021, the agricultural business has provided 10,l8% of the total GDP of Ukraine in 2020, and in January - November 2021 – 14,7% (in 2015 - 14%, respectively).

The key feature of any market is its balance, that is, the absence of surpluses and shortages of products produced by such a market (Table 1). In the agricultural sector, the market balance is ensured by exporting surplus products outside the territory of Ukraine, forasmuch as exports of agricultural products in 2020 amounted to 68,8% of national production and remained almost at the level of 2019 and increased by 15%, compared to 2018.

Table 1. Balance of the agricultural market of Ukraine in 2018–2020, million UAH

Key indicators of the agricultural market	2018	2019	2020
National production (в)	847587	842767	892852
Imports (i)	137511	148251	180004
Exports (e)	506250	572329	614368
The predominance of exports over imports % 368	368739	424078 386	434364 341
Domestic consumption (c) Calculated value c=в+i-e	478848	418689	458488

Source: Systematized on the basis of the data of the State Statistics Service of Ukraine.

In 2020, in the agricultural market of Ukraine, the balance of indicators “national production”, “imports”, “exports” and “domestic consumption” is observed despite the fact that these indicators in the study period are growing significantly. Production of agricultural products of national business has increased by 19,1%, imports - by 29,6%, exports - by 21,2%, and consumption - by 19,7% in 2019, compared to the beginning of the study period. Growing trends evidence the active development and rapid dynamics of the agricultural market of Ukraine.

It is appropriate to emphasize that the national agricultural market is export-oriented (Figure 1).

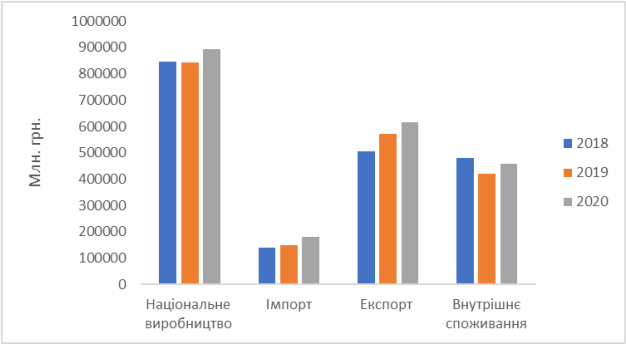

Fig. 1: Dynamics of the ratio of imports and exports of agricultural products in Ukraine, 2018-2020
Source: systematized on the basis of the data of the State Statistics Service of Ukraine.

As a result of comparing and analysing the indicators of imports and exports of agricultural products of national production, a clear trend towards the predominance of exports over imports is observed - by 341% in 2020 (in 2019, the difference

was more significant - 386%). This confirms the export orientation of national business.

A significant amount of foreign agricultural markets are now available to large agribusinesses. In the sphere of agribusiness, the leading direction of which is crop production, the largest participants should be assessed by the size of the land bank. They will henceforth be referred to as latifundists of Ukraine (land ownership occupying a significant area). Thus, for instance, there are numerous agricultural holdings in Ukraine, which are divided by the size of the land bank, capitalization on the stock exchange and the volume of exports, the largest of which are specified in Table 2. It should be noted that Kernel, Ukrlandfarming and MXP invariably remain the biggest latifundists.

Table 2. Characteristics of agricultural holdings

Name of the subject of the agricultural market	Specialization	Characteristics of exports	Volume of land bank, thousand hectares
Agroholding "Kernel"	producer and exporter of sunflower oil, a key supplier of agricultural products from the Black Sea region to world markets	to more than 80 countries around the world	506
Agroholding MHP "Myronivsky Hliboproduct"	producer of chicken meat and grows cereal crops, as well as carries out other agricultural activities (production of meat and sausage products and ready-to-eat meat products)	to more than 80 countries around the world	370
Agroholding "Astarta-Kyiv"	production of sugar and related products, cereal crops and oilseeds, dairy products and meat, as well as soybean processing and biogas production	to countries of Asia and Africa	220
IMC "Industrial Dairy Company"	cultivation of cereals, oilseeds, as well as production of dairy products	to China, the Middle East, EU and North Africa	120
"ADM Trading Ukraine"	production of sunflower oil and trade in cereal crops	China, EU	No data available
UkrLandFarming	production and sale of grain (corn, wheat, barley and rapeseed); eggs and egg products; sugar from sugar beet grown on the Group's lands; breeding of cattle for the production of meat and raw milk; seed and leather production	to 40 countries around the world	475
Agroprosperis Group	producer of crops: cereals (wheat, corn) and oilseeds (sunflower, rapeseed, soybeans)	to countries of Asia, the Middle East, Europe and North Africa; the largest share - 30% - falls on India, EU countries -23%	300
Ovostar Union	producer of eggs and egg products	to European countries, the markets of the Middle East, Asia and Africa; more than 50 countries	60
Nibulon	export of grain and oilseeds (wheat, corn, barley), agricultural production	to more than 75 countries around the world	82,5

Source: Summarized according to https://latifundist.com/rating/top100#324 and the data of their official websites of agricultural holdings.

It is also necessary to pay particular attention to the fact that export markets are significant opportunities for the development of Ukrainian agribusiness, which are now used by its large representatives.

There are numerous representatives of big business in the agricultural market. For instance, 28 of them occupy positions in the top 200 largest companies in Ukraine in terms of revenue in 2020. The largest participant in the agricultural market both in terms of land bank and revenue is LLC "Kernel-Trade" (67,4 million UAH in sales revenue in 2020, it is the part of Kernel Holding), as the fifth largest company in Ukraine. Its leading position among farmers has remained unchanged since 2017. The market leaders also include as follows: PJSC "Myronivsky Hliboproduct", LLC Agricultural Enterprise "Nibulon", however, they have suffered from losses), LLC "ADM Ukraine" and Subsidiary Enterprise with foreign investments "Suntrade".

Other participants in the agricultural market are farms and small and medium agribusiness entities. Their best characteristic as participants is the productivity and profitability of the business, which directly affects the development of the whole market.

Taking into account the specifics of operation makes it possible to highlight the greatest impact of the following factors on agribusiness, namely:

1. Significant fluctuations in world food prices and the devaluation of the national currency.

The food price index (FAO Food Price Index) of the Food and Agriculture Organization of the United Nations (FAO) reflects the dynamics of international prices for a basket of food products and is calculated on the basis of average values of price indices. This indicator in 2021 is the maximum for the last 10 years (Figure 2). According to the results of 2021, the average value of this indicator was 125,7, which is 27,6 points (28,1%) higher than the value of this indicator for the previous year, and a significant increase compared to the previous year has showed the value of all sub-indices. Thus, over the past decade, world food prices have been volatile, with rising prices for cereal crops and oils and fats are particularly positive for domestic farmers, forasmuch as these product groups are strategic in the export of domestic agricultural products to the world market.

For instance, according to the data of the State Statistics Service of Ukraine, in the structure of exports of agricultural products in 2020, products of plant origin (53,6%), fats and oils of animal or vegetable origin (25,9%) prevail, indicating a continuation of the trend of the raw material nature of exports of agricultural products, which is unfavourable for the development of agribusiness. At the same time, the decrease in exports by groups has been observed: live animals; products of animal origin, products of vegetable origin against the background of growth of finished food products, fats and oils of animal or vegetable origin.

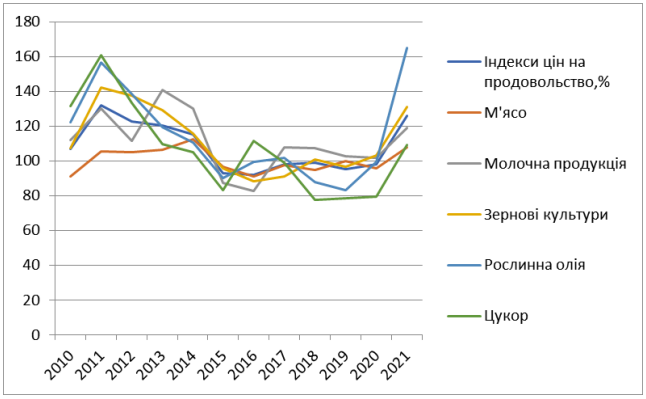

Fig. 2: World Food Price Index
Source: compiled according to the data of FAO

Therefore, the factor of volatility of prices for agricultural products has been and remains influential for agribusiness, and, consequently, is not a brake on the path to development. Considering that most agricultural products are exported or prices are adjusted to export parity, it is more important for agribusiness to have the stability of the national currency or slow devaluation of the national currency. A significant revaluation of the hryvnia, for instance, in 2019 (the devaluation index was 85,5%), when the main export of grain was carried out, led to significant losses for agribusiness, even in the presence of adequate prices for agricultural products.

2. Import dependence on certain groups of goods and raw materials of agricultural exports.

In general, imports, as well as exports of agricultural products in 2020 are growing. Moreover, this tendency is observed for all product groups. In the structure of imports, the share of finished food products (45,7%), as well as products of plant origin (30,6%) prevails. Ukraine is import-dependent for certain groups of goods. The most vulnerable positions, from the point of view of import dependence, are the commodity items as follows: "fish and crustaceans", "edible fruits and nuts", "alcoholic and non-alcoholic drinks and

vinegar", "tobacco and industrial tobacco substitutes".

3. A significant percentage of the production of certain types of agricultural products in households.

In 2020, households have produced products for the amount of 326 604 million UAH (in actual prices) or 36,6% of the total production of gross agricultural output (mainly crop production). At the same time, the share of households is declining in agricultural output, which is a positive tendency, forasmuch as non-financial corporations and the general government sector have the opportunity to apply the latest production technologies in accordance with current national and European requirements and strengthen competitive positions in agricultural markets.

The agricultural sector is one of the largest employers in Ukraine due to the fact that its feature is the ability to reflect the situation in the entire labour market and it is a set of multifaceted and synergistic interaction of needs in professional competencies represented there. The agricultural sector offers an adequate and competitive salary; forms and develops the innovation and investment environment, as well as ensures career growth and employment stability (Figure 3). However, work in difficult weather conditions, low manufacturability of agricultural products, and seasonal nature of work in agriculture, irregular working hours and higher wages abroad for similar work lead to the loss of human resources of agricultural holdings. It is the digitalization and the latest technologies that form the stability of staff work in agribusiness.

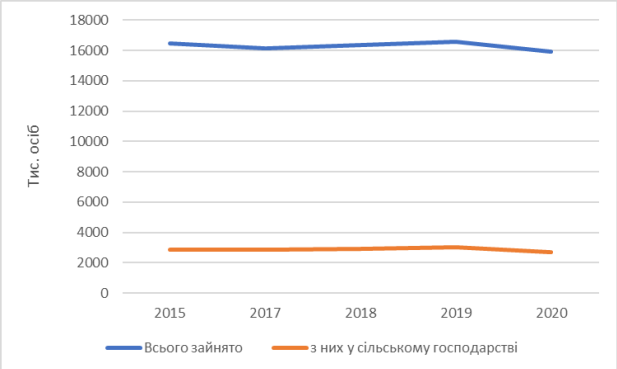

Fig. 3: Dynamics and structure of the employed population in agribusiness of Ukraine, 2017–2019, thousand people

Source: Systematized on the basis of the data of the State Statistics Service of Ukraine.

It should be emphasized that during 2015-2020 in Ukraine, a steady increase in the share of the employed population in agriculture, forestry and fisheries aged 15-70 is observed. For instance, while in 2015, 17,5% of the employed population of Ukraine worked in agriculture, then by 2021, its share has decreased to 17,1%.

From among the total number of employed persons of this age, one in six worked in agriculture, forestry and fisheries in 2020. It was agriculture, forestry and fisheries that were the main activities of the informally employed population (44,1%).

The most attractive employer is a large agribusiness, including the enterprises as follows: Kernel, Myronivsky Hliboproduct Holding (MHP), and Astarta, according to the Rating of the best employers in Ukraine in 2021, formed by the publication "Focus".

Labour productivity in agricultural enterprises, regardless of their size and form of ownership, is constantly growing. For instance, while in 2015, the industry average indicator was 624,0 thousand UAH per employee in agribusiness, then by 2020, it increased by 37,4% - to 857,2 thousand UAH per employee, respectively. Taking into account the fact that labour productivity reflects the efficiency of the business entity, its significant growth over five years characterizes the growth of the efficiency of agribusiness in Ukraine.

In terms of profitability, the average industry operating profitability in 2020 decreases to 24% compared to 2015 - up to 19,0%. Profitability of all activities has also decreased compared to 2015, from 30,4% to 13,9% (by -16,5%). At the same time, the lowest profitability of agribusiness in Ukraine was observed in 2020. In 2019, the situation improved slightly, but did not approach the level of 2017.

In addition to profitability and productivity, indicators of profitability of agricultural enterprises are also important. Such indicators provide an opportunity to characterize the average profitability and efficiency of the whole agricultural market (Figures 4, 5).

Fig. 4: Financial result of agricultural enterprises of Ukraine, 2015–2020.

Source: Systematized on the basis of the data of the State Statistics Service of Ukraine.

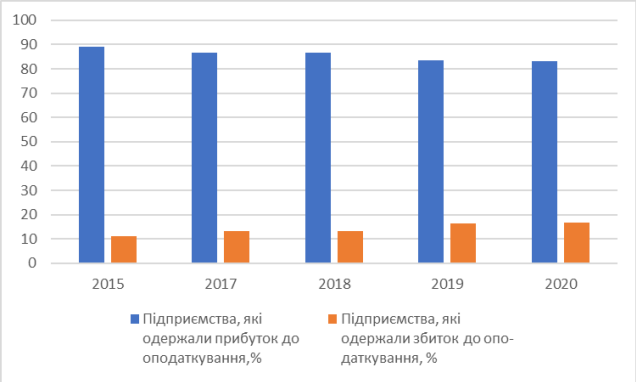

Fig. 5: Distribution of agricultural enterprises of Ukraine depending on the type of financial result, 2015-2020, %
Source: Systematized on the basis of the data of the State Statistics Service of Ukraine.

Thus, in 2020, profitable enterprises – 83, 2% dominate in the Ukrainian agribusiness. Although their share is somewhat decreased compared to 2015, when there has been 89% of profitable agribusiness, the prevailing share is still present.

A more in-depth analysis of the production profitability of the main types of agricultural products for 2020 has revealed that under the conditions of preservation of the current economic model of agribusiness, its payback will remain at the minimum level of maintaining profitability, and in some areas, the loss will be quite high. For instance, the level of profitability has increased in the production of sunflower, grain crops, fruit crops and berry, vegetable crops; however, the loss remains in the production of wool, sheep, goats, cattle for meat, eggs, grapes, poultry for meat.

In fact, agribusiness in Ukraine is a high-risk industry due to poor public policy and lack of effective development strategies. Focusing on the demand-supply situation of the agricultural market, it is also necessary to take into account the principles of sustainable development of rural areas and, in accordance with the needs, to balance the commodity structure of agricultural production in order to reduce production costs, increase profitability and economic efficiency. Currently, the opening of the land market in 2020 requires the construction of new models of economic development of agribusiness.

In order to ensure the permanent development of the agricultural market in Ukraine, the state has developed certain tools for supporting business. The most significant tools are as follows: financing from the state budget, tax refunds and financial assistance to farmers for the development and implementation of innovative projects in the agricultural sector. More and more budget funds are allocated every year to finance the needs of the agricultural market (Figure 6).

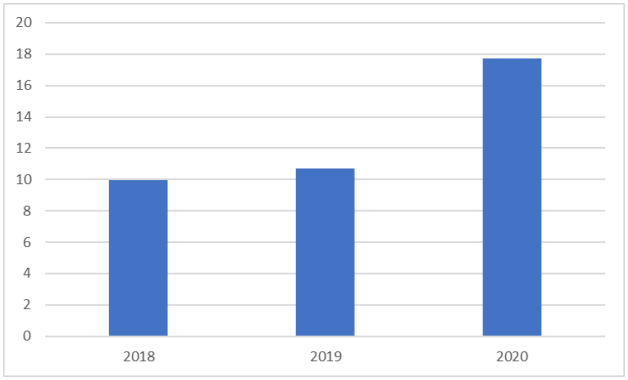

Fig. 6: Dynamics of budget expenditures for the development and support of the agricultural market of Ukraine in 2018-2020, % as of the volume of expenditures in economic activity
Source: Summarized on the basis of the Ministry of Finance "Budget of Ukraine 2020".

Therefore, in 2020, state funding for agribusiness has increased both in absolute and relative terms of economic expenditures. It should be emphasized that while expenses on economic activity in 2020 amounted to 168 990,0 million UAH, then 14 469,0 million UAH of them were directed to finance specifically agriculture; however, this does not correspond to the dynamics of their growth in general.

Sustainability of agribusiness, modernization of its material and technical base is provided by capital investments, which in turn will help increase the volume of agricultural production (Figure 4). For instance, the largest capital investment in this area accounted for 14,3% in 2017 of all investments in economic activity. However, although capital investments increased by 2,7 times over 10 years, at the same time, in agriculture in particular, their reduction continued, which began in 2019 to 10% and 50,680,000 UAH, respectively (Figure 7).

Capital investments in agriculture in January - December 2021 at actual prices amounted to 58,6 billion UAH, that is, 90% of the volume of the corresponding indicator as of 2018. The rate of decline was 10%.

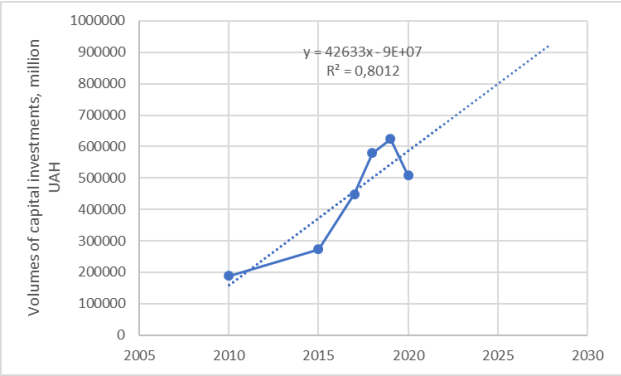

Fig. 7: Forecast of capital investments in agriculture of Ukraine in 2010-2030, million UAH
Source: Developed by the author based on data of the State Statistics Committee.

It has been established that if such trends continue, the volume of capital investment in agriculture by 2030 may increase by almost 1,8 times compared to 2020.

Thus, agribusiness has felt the impact of the global economic crisis, which was a consequence of the pandemic, in Ukraine, in particular. However, conducted surveys of representatives of agribusiness indicate that the national agricultural market has developed under certain restrictions and under the influence of negative factors even before (Table 3).

Table 3. Assessment of the impact of factors slowing down the development of agribusiness in Ukraine, the 3rd quarter of 2015 – the 3rd quarter of 2021, %

Factors	2015, Q3	2016, Q3	2017, Q3	2018, Q3	2019, Q3	2020, Q3	2021, Q3
insufficient demand	11	12	8	10	12	8	8
weather conditions	26	26	30	28	28	38	28
shortage of labour	2	2	2	5	4	3	3
lack of materials, equipment	7	5	4	3	2	3	2
financial constraints	44	36	32	27	24	23	20
other factors	27	25	25	22	22	26	22
nothing restrains	24	33	32	36	36	33	42

Source: Compiled according to the data of the State Statistics Service

It should be noted that in Q3 of 2021, 42% of respondents believe that nothing restrains the development of agribusiness, however, in 2015, only 24% of respondents adhered to such viewpoint. The survey also shows that the main factors affecting agribusiness are weather conditions, financial constraints, etc. The least important factors in the agribusiness development were the lack of materials, equipment and labour. Thus, it is the financing of agribusiness that is the driving force that can provide an opportunity for Ukraine to become a centre of world food security and an international organic hub.

A new macroeconomic factor that has affected agribusiness is the COVID-19 pandemic as a global health crisis that is already having devastating consequences for the global economy, both directly and through the necessary measures to curb the spread of the disease. This influence is also felt by the agribusiness of Ukraine (Figure 8). Although food supplies are still satisfactory nowadays, in many countries, measures taken to curb the spread of the virus are beginning to disrupt supplies of agri-food products to markets and consumers both at home and abroad. The sector is also undergoing significant changes in structure and for some goods – in demand. On the one hand, the pandemic poses serious challenges to the food system in the short term, on the other hand, it is also an opportunity to accelerate transformations in the food and agricultural sectors in order to increase their resilience; most countries have recognized agriculture and the agri-food sector as important and free from business closures and restrictions on movement. For many countries, the direct impact of the pandemic on primary agriculture must be limited, forasmuch as the disease does not affect the natural resources on which production is based.

On international trade in agricultural products	On the supply chain
Demand for products will decline in the short term, forasmuch as travel restrictions around the world and quarantine restrictions in Ukraine's largest trading partners affect consumption and expenditures. With borders closed and decreasing global demand for imported products, agricultural trade is still being impacted by the coronavirus. Exports to China and EU countries are likely to be most negatively affected. Agricultural producers may also rack up losses due to the sector's strong dependence on imported equipment and plant protection products. The influence of coronavirus has been added to the existing problems of agribusiness in Ukraine. The main factors influencing the demand are as follows: slowing global economic growth: from 5,5% in 2021 to 4,1% in 2022 and 3,2% in 2023 as deferred demand fades and fiscal and monetary support shrinks around the world, with significant implications for income and consumer spending; changing consumption patterns: increasing the number of both basic and ready-to-eat products that can be stored; changing purchasing methods: reducing restaurant attendance, increasing e-commerce supplies and increasing home consumption.	Unstable market conditions have had a negative impact on a number of supply chains in the field of agricultural exports. Reducing the availability of labour remains a concern for the food and agribusiness, especially in the horticulture, agriculture and food industries. Reduced demand for exports, as mentioned above, is a direct consequence of the pandemic. Longer delivery times due to reduced transport and logistics services and limited travel (reduction of air and sea freight traffic) - this aspect is monitored forasmuch as it applies to imported goods for both food production and production needs, such as packaging, as well as the impact on the availability of agricultural chemicals and raw materials. Strengthening biosecurity measures - this could potentially lead to increased costs through tighter verification measures and other biosafety protocols. Restrictions on the movement of people and sick people: strong impact on migrant workers; labour shortage in agriculture, processing and distribution enterprises. Logistics: transport and trade restrictions.

Fig. 8: The influence of the coronavirus pandemic on agribusiness
Source: Developed by the author.

Restrictions on the movement of people across borders and quarantine measures lead to labour shortages for the agricultural sectors of many countries, especially those, characterized by periods of peak seasonal demand for labour or labour-intensive production.

On the other hand, in some cases, there may be an accumulation of surpluses, while creating a load on warehouses, and for perishable products, there is an increased risk of loss. For some products, supply-side disruptions are exacerbated by declining demand (in particular, foods that are usually not eaten at home and luxury items). Combined, these effects put pressure on household income. Moreover, these losses of farm household income may be offset by a reduction in off-farm income.

Reduced consumption of food outside the home will have a particularly strong impact on developed countries. The closure of restaurants and food outlets at schools, hotels and food service establishments has reduced the market for some commodities - such as French fries, seafood and dairy products - with some of these losses offset by increased demand on the part of supermarkets. Demand also seems to have shifted from valuables to basic and ready-to-eat products that can be stored. Along with this, a significant increase in e-commerce is observed.

Measures taken to prevent or slow the spread of COVID-19 also disrupt food supply chains. The food industry is vulnerable to the negative impact on the workforce caused COVID-19 spreading (workers are ill or isolated), and incurs additional production and distribution costs as a result of health and safety measures implemented in order to reduce risk.

Markets of perishable commodities are likely to suffer more than markets of cereals and finished products. In addition, additional verifications may be required in response to new biosecurity mechanisms for the sector introduced in response to COVID-19.

Measures to curb the spread of COVID-19 cause delays and disruptions in transportation and logistics. Closure of borders and additional procedures and inspections led to congestion and delays, which has affected the transit of perishable products.

The closure of airlines and the rising cost of international freight due to declining trade and the lack of commercial passenger flights pose significant problems for the export of high-quality perishable foods, including seafood, fruits and vegetables.

Transport restrictions and quarantine measures can also impede access to the necessary food businesses. For instance, there are reports that interruptions in the production of fertilizers by some suppliers - due to lack of workers - have created difficulties for CO2 producers and, consequently, for the food industry. After all, CO2 is used for various needs of the food industry (freezing, carbonation of beverages, as well as for storage of products in a controlled atmosphere, such as packaged meat, which allows increasing consumption time). This creates problems for food producers, including carbonated beverage producers and large dairy groups. It should be noted that the logistics of agribusiness has been transformed. As a result of the ban on the operation of food markets for small farmers and private households, many sales markets were lost during the period of relevant measures.

The pandemic has changed the demand for agribusiness products in Ukraine, forasmuch as the population loses solvency due to business closures, low wages and inflation. Demand is especially declining for expensive and high value-added goods (beef, high-quality dairy products), perishable goods, tropical fruits and vegetables, nuts and organic products. However, at the same time, the demand for inexpensive so-called “borscht set”, various types of grain and cereals, local products with a low price threshold will increase.

The COVID-19 pandemic could have short- and long-term consequences for food and waste. Supply chain losses could increase in the short term due to logistical bottlenecks and reduced demand for perishable foods often consumed outside the home (for instance, milk, eggs and fresh fish).

The COVID-19 pandemic has not shocked the supply of basic grains yet. Nevertheless, several large exporters have restricted exports, while some countries that import grain to feed their populations have increased their purchases to provide sufficient supplies to tackle the pandemic.

Decreased demand for agribusiness products leads to a lack of working capital, which in turn causes as follows: reduced sales of agricultural machinery, strengthening the monopoly in agribusiness.

On the positive side, the pandemic has caused a massive return of workers, which in the short term will provide the necessary workforce for agribusiness entities. However, over time, the need for this will decrease, due to digitalization, automation and mechanization of agribusiness. Agribusiness is the basis of Ukraine’s food security and the factors affecting it should be properly monitored in this context as well. Thus, the productions of agribusiness products and prices for it form the situation within certain commodity groups (oil prices - prices for feed grains; price for bioethanol - prices for corn, sugar cane). Looking to the future, COVID-19 provides an opportunity to increase the sustainability and productivity of agribusiness.

COVID-19 has also raised the safety of people involved in production during the pandemic. The way out of this can be the establishment and transformation of food systems and their installation on a more sustainable basis.

FAO representatives have also noted that during the COVID-19 pandemic, Ukraine reaffirmed its status as a reliable international partner, adhering to all its commitments to regular food supplies.

5 Discussion

The results of the research conducted are somewhat limited by its universality and focus on Ukraine, in general, due to the abstraction from the national features of different countries and the consideration of agribusiness as a model of socio-economic system. For this reason, a promising direction for further investigation in the field of agribusiness development lies in taking into account the specifics

of individual countries and analysing the reality of specific socio-economic systems.

Zamryha (2021), analysing the impact of the pandemic on agribusiness confirms the findings of the lack of state support for the industry, absence of support and coordinated communication between producers, including vegetables, logistics structures, retail chains.

In this context, Ijaz et al. (2021) have assessed the impact specifically on meat production and concluded that the coronavirus has a negative impact on consumer purchasing power and, consequently, demand, which has led to the cessation of meat processing plants. In addition, meat producers and processors have faced difficulties in collecting and shipping products through quarantine, reducing labour, restricting the movement of animals within and outside the country, and changing local and international export market legislation. These conditions have had a negative impact on the meat industry due to reduced capacity for meat production, processing and marketing. Along with this, they have made a supposition that integration among all stakeholders in the meat industry is essential to the sustainability of the industry's supply chain; consequently, it can cope with the destructive conditions that may arise in the future.

Surrny et al. (2021) have studied the socio-economic impact of the COVID-19 pandemic on the chicken supply chain in Indonesia. The results of their study have revealed that the spread of COVID-19 has had a serious economic and social impact on the sustainability of business in the livestock sector, especially attacking the logistics system as a means of providing food for the population. As a result, price disparities between regions are large, price movements are extreme and natural (uncertainty), consumption and production are sharply reduced, imported products are blocked, and labour is sharply decreased. The supply chain system is disrupted due to obstacles on the part of the distribution system; consequently, the production accumulates at the producer level; prices are falling and demand is also decreasing due to reduced purchasing power; however, in areas with stable demand, high prices and lower purchasing power are kept due to the dismissal of many employers. The economic impact due to the COVID-19 pandemic has been in the form of an oversupply that has driven down the price of chicken in the market. In addition to the significant economic impact, the social impact of the spread of COVID-19 virus on chicken farming has consequences, especially for conventional livestock / farms.

6 Conclusion

Thus, based on the conducted research, it can be concluded that the socio-economic situation in Ukraine affects agribusiness ambiguously. In particular, the negative impact of the crisis on the agricultural sector is less compared to other sectors of the economy as a result of the constant demand for food. However, the globalization of the agricultural market can change due to the crisis when borders are closed and food trade is restricted, and the price in one country can significantly increase for certain agricultural products, while in another country, it can significantly decrease and, as a result, the formation of a price that is unfavorable for the manufacturer and a decrease in its production. The crisis will have a significant impact on agriculture, which is directly linked to energy prices.

If trends continue, it is predicted that investment in agribusiness, despite the crisis, may even increase. Agribusiness in Ukraine, providing a high level of food security, has significant advantages in the current socio-economic situation; it requires financial support and strategic assurance for further functioning.

In light of the influence of COVID-19 on agribusiness, this impact will make it possible to learn more about the problems and vulnerabilities in the food system in order to identify the necessary investments and reforms that will further strengthen the sector's resilience to a number of future shocks and challenges. It is important to involve stakeholders in the process of understanding the full impact of the pandemic on different groups of populations and the lessons to be learned. In particular, it will be significant to examine existing tools for sustainability in the food system in order to determine which policies are most effective and what new measures may be needed to respond to systemic shocks. It is assumed that it is the integration between all agribusiness stakeholders that is very important for the sustainability of the industry's supply chain, and it can cope with such disruptive conditions that may be in the future.

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