

# Strategic Management of the Investment Process in the Agricultural Sector (for Example, Agricultural Enterprises and the Food Industry)

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Received 05 April 2020; Revised 30 April 2020; Accepted 11 May 2020

## Abstract

The article presents the results of a study of the nature and characteristics of investment processes in the agricultural sector (by the example of agriculture and food industry in Ukraine), as well as recommendations on the modernization of the mechanisms for strategic management of these processes. It is noted that the restoration and development of Ukraine is possible on the basis of the effective development of agricultural entrepreneurship, which can be achieved through the use of a set of interrelated measures of a financial, economic, industrial, technical, organizational and social nature, aimed at the withdrawal of such anti-crisis and restoration organizations or their achievement profitability and competitiveness. The state policy for the development of agricultural enterprises should provide for the creation of a favorable investment climate for domestic and foreign investment. The authors note that in modern conditions of development of the national macroeconomic environment, the solution of this problem involves not only the development and formulation of market strategies, but primarily the solution to the problem of creating and implementing an effective mechanism for implementing intra-industry strategic decisions. At the same time, it should be taken into account that many issues of the formation and implementation of the state policy for regulating the development of agricultural enterprises in the face of institutional uncertainty and financial instability have not yet received adequate coverage.

The authors concluded that direct government subsidies for agribusiness in Ukraine are harmful. They are distributed opaque, distort competition, produce corruption and nervousness. As a result, the interest of diligent agricultural producers is declining. Corruption and opacity lead to an unreasonable increase in prices for agricultural products. Based on the analysis, it is shown that the best way of state support for agricultural production is investment in rural areas - an increase in investment costs for roads or education in rural areas. It should also be taken into account that one of the tasks of state policy is to increase employment in rural areas, therefore it is necessary to support not only individual producers, but also "non-agricultural" employment, for example, "green tourism". Also, government support should be distributed "automatically", and not selectively. For this, it is important to develop and implement appropriate criteria.

The economic security of economic entities in the agricultural sector should be the subject of an economic strategy in the food industry. The reduction or exclusion of business entities from participation in many areas of intra-industry life creates enormous economic risks (threats) for the near and long-term prospects of the food industry. Therefore, in order to ensure socio-economic development in the food industry, it is necessary to develop and introduce intra-industry socio-economic policies that will ensure the growth of key indicators in the national macroeconomic environment.

**Keywords:** Management, Investment, Investment process, Agro-industrial complex, Agriculture, Food Industry.

## 1. Introduction

The deepening of Ukraine's integration into the European Union should contribute to ensuring dynamic civilizational development. This requires not only the adaptation of the domestic model of social order to European practice, but also, first of all, the achievement of the Central European level of socio-economic development of Ukraine as a whole and the parity of its regions.

The state, through its special role, defines the rules of the game in society. It can both promote the development of agribusiness enterprises, and restrict their activities through various levers of state regulation. The state policy

in the field of agroindustrial complex will contribute to the achievement of both the short-term and strategic goals of the state. Restoration and development of Ukraine are possible only on the basis of the effective development of agrarian entrepreneurship, which can only be achieved through the use of a complex of interrelated measures of a financial, economic, production, technical, organizational and social character aimed at the withdrawal of such crisis management and recovery entities or achieving their profitability and competitiveness (Babenko et al., 2020). Undoubtedly, the state policy of development of enterprises of agrarian and industrial complex is to create a favorable investment climate for investments in the enterprise. The agroindustrial complex should ensure

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coordination of interests of the state and investors taking into account the existing ratio of supply and demand in the capital market, real possibilities of Ukraine, create conditions of investment activity that would be more attractive from those offered by other potential importers of capitals.

In the current conditions of development of the national macroeconomic environment, not only the issues of developing and formulating market strategies in the food industry of the country, but above all the problems of creating and implementing an effective mechanism for implementing intra-sectoral strategic decisions are of primary importance. Intra-sectoral tasks that are related to the implementation of strategic decisions are accomplished through the strategic process (Bila et al., 2019).

The purpose of the paper is to clarify trends in the development of agroindustrial enterprises in the context of improving the state policy and investment potential of Ukraine (Babenko, 2013), study the theoretical and practical and legislative bases of the state policy on the activities of agribusinesses, forecasting on this basis the priority directions of improvement of the state policy of activity of agroindustrial enterprises and providing recommendations on increase of efficiency of economic development of enterprises of agroindustrial complex of Ukraine (Tromp et al., 2020).

The research of the development of enterprises in the context of improving the state policy and investment potential was carried out by such domestic and foreign economists as K.A. Alekseyeva, V.F. Banar, V.Y. Bilinska, T.A. Voronyuk, O.V. Horpinich, O.V. Grigorenko, L.A. Yevchuk, I.B. Zhiliaev, Y.V. Karakai, T.M. Kovaleva, O.B. Salikhova, L.V. Sus, L.V. Peltek, S.V. Onyshko, B.G. Chizhevsky, M.M. Shevchenko and others.

## 2. Materials and Methods

The methodological aspects of the state's regulatory influence on economic development and the search for effective directions of the state policy's impact on enterprise activity were studied by foreign scholars such as M. Albert, D. Grayson, K. O'Dell, W. Endahl, F. Kene, J. Keynes, G. Kremnev, A. Marshall, M. Meskon, K. Nort, A. Smith, P. Samuelson, L. Mises, F. Hayek, M. Friedman, J. Guildler, A. Laffer and many others whose works remain relevant to this day.

However, some important aspects of the formation and development of a methodological, legal and practical basis of the state policy of regulation of development of agroindustrial enterprises in conditions of institutional uncertainty and financial instability have not yet received proper coverage (Davydenko, and Buryak 2019). First of all, this concerns the study of priority directions of improvement of the state policy of activity of agroindustrial enterprises, aimed primarily at increasing the competitiveness of agroindustrial production.

## 3. Results and Discussion

The state policy in the field of agrarian sector in 2015-2017 positively and negatively affected the activity of agribusiness enterprises. In order to address the real needs of the agroindustrial complex, the Ministry of Agrarian Policy and Food of Ukraine has developed a strategy for the development of agriculture and rural areas for the period 2015-2020 (Development of agriculture and rural areas, 2015-2020). The strategy covers a broad and comprehensive list of issues affecting the agricultural sector as a whole, including land administration, research and education in agriculture, access to financial resources, state support mechanisms, food safety, environmental protection, etc. (Malyarets et al., 2017). The document was developed with the participation of representatives of the European Union, the United States Agency for International Development (USAID), the Food and Agriculture Organization of the United Nations, the World Bank, as well as other organizations and countries. Among the expected results of the program implementation was the growth of exports of agricultural products by 3-4% per year and an increase in export opportunities of the food industry of Ukraine in the EU market by 5-7%. In addition, Minagroprod expects to increase food production in the country by 6-8% due to the implementation of this program (with an increase in consumption of main food products by 3-7%), and baby food - by 9%. Also, the European Union has allocated EUR 3 million to help Ukraine implement the Agricultural Development Strategy for 2020 (Ukrainian agrarian confederation, 2020).

The main objective of the strategy is to increase the competitiveness of agriculture and promote the development of rural areas on a sustainable basis in accordance with EU standards and international standards (Khudyakova et al., 2019). The strategy covers 10 key priorities that provide a comprehensive, impartial, realistic concept of development and general principles for reforming the Ukrainian agroindustrial complex, namely (Oliinyk, 2017):

- business climate and counteraction to corruption, the creation of a stable legal system that meets international and European standards, in particular by implementing the Association Agreement between Ukraine and the EU (Panashenko, 2019);
- land reform;
- institutional reform of the Ministry of Agrarian Policy, state enterprises, institutions, organizations belonging to its sphere of management;
- food security and taxation;
- development of agricultural food chains of added value;
- institutional development of rural areas, revival of the Ukrainian village;
- access to international markets for agricultural products, trade policy and export promotion;
- agrarian science, education, innovation and advisory services;
- environmental protection and management of natural resources, including forestry and fisheries;

- in addition, tax and customs policies should be based on a long-term plan, not to change annually, and to set the lowest level of the minimum single tax.

In the context of our research, we will consider the directions of improving the state policy of agribusiness enterprises, which are the most significant for the development of agribusiness in Ukraine.

1. Simplification of administrative procedures and raising the level of predictability of Ukraine's investment policy (Upadhyaya, 2019).

The large number and high cost of permits and licenses and related corruption, as well as the unpredictability of the legislative framework in the area of investment policy and investment support, increase the value of transactions and create uncertainty that impedes investment in agriculture (Zhuravlyov et al., 2019).

We can state that since 2016 there has been a significant reduction of administrative procedures, in particular after the adoption of the Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine on Facilitation of Business Conditions (deregulation)" in April 2015.

Also, the existing organizational support structure for investments is underway in the reorganization phase and is part of ongoing reform. Today, the structures responsible for investment policy are in a state of restructuring and liquidation, namely: the State Agency for Investment and Management of National Projects of Ukraine and the State Committee of Ukraine for Regulatory Policy and Entrepreneurship. Their investment support functions were transferred to the newly established Investment Department of the MERC (Davydenko et al., 2019).

2. Effective use of incentives for investing.

Effective investment promotion attracts investment in the sector most in need, draws attention to profitable investment opportunities and helps foreign investors identify local partners. In Ukraine, the investment advancement rests, in particular, on incentives to invest. However, such incentives, as well as general policy in the field of agriculture, lack the continuity, analysis of economic efficiency and a clear target limiting the impact of incentives. Incentive investment is mostly in the form of preferential taxation, but in Ukraine, in order to stimulate investment, subsidies and dotation are used actively.

According to the draft state budget, the Ukrainian government plans in 2018 to allocate 7.3 billion UAH to farmers. In particular:

- 2 billion UAH - to pay direct subsidies to farmers. Article in the budget - "Financial support for agricultural producers"). It is a system of subsidies, which correlates with the payment of VAT to the company;
- UAH 1.6 billion will direct partial compensation of the cost of newly built livestock complexes;
- UAH 1.0 billion allocates support for farming;
- UAH 1.0 billion compensation of 20% of the cost when purchasing Ukrainian agricultural machinery;
- about 700 million UAH will be used to compensate for the purchase of pedigree stock. Also, we remind that in

2017, 4 billion UAH were put into subsidies (State Budget Project of Ukraine, 2020).

1. Free access to agricultural land of economic entities and land reform.

Most of the land ownership rights are already officially registered through the provision of state acts confirming the right to own land, with a clear setup for owners of border areas. The land cadastre is under development. However, the existence of a moratorium on the sale of agricultural land impedes the realization of property rights. The moratorium was aimed at protecting the owners of small plots, but more to the benefit of large producers. Under such circumstances, the cost of land is reduced, land valuation is difficult, land fragmentation takes place, land transaction costs increase, access to financing is limited due to the impossibility of mortgaging land. This hinders investment in infrastructure, in particular irrigation, and reduces incentives to support soil fertility.

However, the practice shows that AIC enterprises were able to access agricultural land, mainly through land lease. In order to facilitate access to land, the procedures for registration of leases are simplified. In order to weaken the monopoly position of the State Agency in the market of land resources of Ukraine, the institutional mechanism of land use and land management is in need of reform (Shorikov, and Babenko, 2014).

We believe that when carrying out the land reform it is necessary to:

- accelerate the creation of a single land cadastre for better separation of ownership and easy-to-handle land transactions.
- create an alternative mechanism for resolving land disputes. This is a more effective and quick way to resolve disputed land issues.
- reduce the number of employees of the State Land Resources Agency of Ukraine and transform it into a modern cadastral service.
- A moratorium on the sale of agricultural land is gradually removed, starting with separate territories with perfect cadastral records and strong political support for reforms. This approach has allowed focusing on the careful development and adjustment of new market institutions and the concentration of resources for registration of land in a limited area.
- The sustainability and effectiveness of institutional structures supporting investment in the agroindustrial complex of Ukraine.

2. Further liberalization of trade in agricultural products.

After the accession of Ukraine to the World Trade Organization (WTO) duties on all goods were significantly reduced. The conclusion of several regional and bilateral trade agreements, including the Deep and Comprehensive Free Trade Agreement (DCFTA) with the EU, made it possible to reduce the fees for identified partners. However, tariff measures, along with quotas, licenses and sanitary, phytosanitary and customs barriers, remain in effect when exporting agricultural products, in particular with regard to grain exports. During 2016-2017 a number of steps were taken to reduce the number of

measures to stimulate trade, but additional efforts are needed to remove remaining regulatory and administrative barriers.

3. Additional investment in infrastructure, in particular, in the transportation and storage of grain, is needed.

The availability and quality of the country's infrastructure, including transport, warehousing, energy and irrigation infrastructure, remains low. A serious problem for Ukrainian agrarians remains their limited ability to save and profitably sell grown crops.

In Ukraine, the combined capacity of all certified elevators is about 30 million tons. In 2017, there is a serious shortage of storage capacity of grain, which is 25-30 million tons. Given that the cost of building one ton of elevator capacity is \$150-250, then the investment potential of the grain storage sector is at least \$5 billion. According to the results of the study "The largest holdings in crop production in Ukraine," conducted by AgriSurvey, about 28% of Ukrainian agroholdings do not have any capacity for harvesting in their structure at all. At the same time, agroholdings with their own grain storage facilities still do not cover 100% of their need for grain storage facilities (Investments in agriculture of Ukraine, 2020).

In order to meet potential demand, the ability to transport, load and reload the grain will require an increase in capacity by 70%. Indeed, the rapid growth in the demand for grain transportation in 2016-2017 was not satisfied with the corresponding expansion of the offer, mainly due to the monopoly position of the state-owned railway. In 2016, in Ukraine, about 90% of the grain is used for rail transport, and the share of road transport does not exceed 10%. In spite of the dramatic increase in private investment in storage facilities, additional investments are needed to meet future needs, for example, to double existing capacity by 2020 (Investments in agriculture of Ukraine, 2020).

1. To change the structure of farming on agricultural land.

In 2016 in Ukraine, the structure of management on agricultural land was as follows:

- 35% (15.1 million hectares) of the total area of agricultural land is used by households that are not legal, state support and tax-free. Such households ensure the production of 44% of agricultural products in Ukraine (primarily potatoes, meat, milk, vegetables and fruits).
- 2.2% (0.9 million hectares) of agricultural land is cultivated by state agricultural enterprises. Other 17.2% (7.3 million hectares) are owned by central and local authorities. These areas are either not processed at all or are used not for agricultural purposes or are processed illegally. According to statistics, 2.0 million hectares of state agricultural land are leased.
- 45 thousand (19.5 million hectares) of the total area of agricultural land are used by 45 thousand registered private agricultural enterprises, which mainly lease land from the state (about 2 million hectares) and households (about 17, 5 million hectares).

Different agricultural enterprises belong to the same owner and are united in large agricultural holdings. Agroholdings process about 6 million hectares of

agricultural land and provide 22% of Ukraine's agricultural products, in particular, exporting agricultural raw materials, namely cereals and oilseeds (The structure of agricultural enterprises by size, 2017).

Taking into account the aforementioned, we recommend the following proposals for improving the management structure of agricultural land:

- a prohibition on the state to cultivate agricultural land for profit (with the exception of land subject to privatization);
- minimize the number of agricultural enterprises with an area of over 1000 hectares,
- The average area of one agribusiness enterprise should be about 59 hectares, that is, agricultural enterprises are evenly distributed around the average indicator by their size.

2. The main obstacle to investing in the agroindustrial complex remains its financing.

Access to funding remains limited, especially for farms. In the period from 2015 to 2016, according to the Global Competitiveness Report, 16.7% of respondents identified access to financing as the number one obstacle to doing business, outpacing corruption and ineffective public administration. Events that took place in Ukraine in 2014 have increased external risks and restrained access to financial resources (World ranking according index of global competitiveness, 2016-2017).

In 2017, the following types of additional funds were available to the AIC enterprises: bank lending; investment; agricultural receipts; commodity loans; bill financing. If we talk about the tendencies of attracting additional funds from agro-industries to finance their activities, then there is no doubt that the most promising are bank lending and agricultural receipts.

The banking sector accounts for 95% of the assets of the financial sector, therefore, agribusiness enterprises often use bank loans as a mechanism for access to financing, although the high level and volatility of interest rates, along with the lack of information on the borrower's creditworthiness, impede the development of bank lending. 75% of Ukrainian agrarian companies consider limited access to loans as the main barrier to increasing agricultural production volumes. 60% of enterprises do not have access to the resources involved. About half of the producers sell their crop immediately after harvest to receive funding for ongoing activities (International Finance Cooperation, 2020). In the work of the agroindustrial complex with banks there are three problems: the cost of credit resources, the quality of collateral in the agricultural sector and the lack of long-term financing.

Most small and medium enterprises of agroindustrial complex do not have access to financing and do not use existing tools because of lack of collateral. Therefore, their investment is strictly limited, even if they can get credit from a credit union, usually at high interest rates. Therefore, in order to improve access to lending to small and medium sized enterprises of the agroindustrial complex; we propose the establishment of a Loan Guarantee Scheme (LAS). This mechanism will

encourage banks to lend to small agribusiness enterprises due to risk sharing and partial guarantee of loans to participating banks. In case of non-fulfillment of obligations by the borrower, the bank turns to the PSC for partial compensation. To do this, it is necessary to develop criteria for the eligibility of the use of SGC, so that the mechanism is aimed exclusively at enterprises with limited access to the loan. The pricing mechanism should ensure the acceptability of the level of cover and commission rates, while preventing the emergence of moral hazard.

With the launch of SGC Ukraine will be able to use the successful experience of Poland. In 2013 Polish State Development Bank - BGK, - launched a portfolio guarantee instrument to support small and medium-sized enterprises agribusiness to finance by reducing the credit risks of commercial banks. For less than a year, this program provided funding for nearly 15,000 small and medium sized enterprises agribusiness to more than \$ 1.5 billion (OECD Food and Agricultural Reviews, 2015).

The available option for attracting additional funds is agrarian receipts. The project launched in Ukraine is based on the experience of using this tool for Brazilian

agrarians since 1994. In Ukraine, starting from 2014, the project on the introduction of agrarian receipts was in the status of "pilot" and acted only in the Poltava region. According to the Ministry of Agrarian Policy and Food of Ukraine, for the 2014-2015 years, 10 agrarian receipts were issued for a total amount of about 40 million UAH (approximately 1.4 million USD). For the representatives of small and medium agribusiness in the Poltava region, the tool of agrarian receipts has become a real option for attracting additional funds. From 2015-2016, the project of agrarian receipts will extend its geography to 3 oblasts: Kharkiv, Vinnytsya and Cherkassk. Advantages of agrarian receipts are presented in Table 1.

In addition, small and medium sized enterprises of the agroindustrial complex could use financial literacy training aimed at improving their financial management skills and strengthening their understanding of legal and regulatory issues. This contributes to their use of alternative financing mechanisms, in particular leasing schemes, warehouse and agrarian receipts, state financing in the form of forward purchases by the State Agrarian Fund (State Budget Project of Ukraine, 2020).

Table 1  
Advantages of agrarian receipts (AR) before other financing instruments

For AIC enterprise 1	For financial institutions 2
Speed and ease of design	Simplicity of transfer of rights by agrarian registration
Speed and ease of design	Optional foreclosure procedure
The presence of an incentive (fine), which prompts the creditor to confirm the proper execution of the receipt	Short term of enforcement proceedings
Accumulation of the positive history of the implementation of agrarian receipts and the public availability of such information facilitate receipt of funding in the future.	Automatic extension of the pledge in case of delay

Note. \* Made by the authors.

1. Ensure that educational systems and research systems meet the needs of agrarian enterprises.

Investors in agriculture face the problem of recruiting skilled workers with appropriate skills, as there is a gap between the skills they form in the education system and the skills needed in the labor market. Agroindustrial firms lack technical professionals for production, such as agronomists and veterinarians. The existing gap in skills is due to insufficient cooperation between the agrarian education and training system and the private sector; overloaded theory with a curriculum with inadequate practical training; as well as the prevalence of corruption, which alters the quality of education. The weakness of advisory services limits farmers' access to technical advice and innovation.

The low level of state funding for research and development in agriculture is hampering farmers' access to technical advice and innovation. In addition, in Ukraine there are insufficiently developed agricultural cooperatives, because of distrust generated by the inherited history of cooperatives. Ukraine needs to use advisory services models developed in some OECD member countries, and this would facilitate farmers' access to new technologies.

The participation of the private sector in research and development in agriculture contributes to the use of the potential of modern fundamental research and will form a critical mass of teachers and researchers in the agricultural sector. A successful example of private business support for agribusiness is the Maha Foundation in Italy, which will help Ukrainian universities to practice a more entrepreneurial approach, as do the universities in OECD countries, and offer new services to the agribusiness sector.

2. Stimulating private sector participation in the development of the agroindustrial complex.

As the best international practice of effective public-private partnership (PPP) proves, the private sector is the most active participant in the development of the agroindustrial complex. This format of cooperation involves a thorough project development by the state along with the private sector, taking into account the distribution of risks between them and clearly defined mechanisms for solving disputed issues. For example, since 2003 in Poland, 46% of waste utilization is owned by the private sector and half of all storage and sorting capacity. Estonia has completely privatized transportation by rail (Transition Report, 2004).

### 3. Strengthen environmental protection.

The state policy in the field of agroindustrial complex must respond quickly to the main environmental problems, which is soil erosion, agricultural runoff and low energy efficiency. Present the recommendations for improving the environmental protection performance in Ukraine, namely to:

- Raise the responsibility of the private sector for environmental protection results.
- Support the introduction of environmentally friendly technologies.
- Strengthen the realization of the right to own land.
- In the process of developing agricultural policy consider adaptation to climate change.

The strategic process in the food industry is the cyclical orientation of the process of formulating, developing and implementing a sectoral development strategy in order to increase the level of competence of its segmental components, which will ensure its effective functioning in the national macroeconomic environment.

The intra-sectoral strategic process has the following aspects:

- aimed at the implementation of intra-industry strategic components;
- has appropriate stakeholders for whom value is created;
- is purposefully carried out according to a certain interrelated algorithm (strategic substantiation, strategic analysis, strategic evaluation, strategic choice and implementation of intragranular strategy) and has a cyclical nature due to the revision of strategic guidelines of functioning and development of the subjects of food industry.

The concept of the strategic process in the food industry is to form an intra-sectoral mechanism for a continuous, focused and dynamic process of identifying, producing, using and updating sources of competitive advantage in the food market and refining development strategies that will provide the planned strategic results.

According to the results of structural research of the strategic process in the food industry, we will note that without a clearly defined and substantiated object, a market strategy is as unpromising as in the absence of certainty of its other elements. Scientific research lacks a well-defined definition of the subject matter of the strategy, and scattered casual utterances require a critical attitude and scientific justification.

The subject is an attribute of any activity and is easily defined as the answer to the question "what is the subject's activity directed at?". Philosophical direction identifies the aspect of the transformation of the object in the process of its consumption (or assimilation, production or production), then the object can be called a specific material or ideal object, which is directed or actively and meaningfully transformed by the subject.

An object is a thing, a specific material object, perceived by the senses. In science, part of an object, a certain aspect of it, investigated in a particular case. In philosophy, it is the object or thought of the subject. A concept that denotes a certain integrity that is isolated from the world of objects in the process of practical and spiritual activity. In a less strict sense it is identified with

the concept of an object or thing. In education and science - a certain range of knowledge and skills, which usually contains meaningful information from some science, which is taught to students within the educational system (Development of agriculture and rural areas, 2015-2020). Symmetric concept of "object" is a concept of "means" that can be formally obtained by the logical principle of duality, changing the place or role of the corresponding object in the structure of economic activity in the relevant macroeconomic environment and replacing it to use. It is known that a facility is any kind of entity that directs the activity of a macroeconomic entity and that is actively, reasonably and reasonably used by it for its intended purpose. Therefore, using and interpreting thus the concept of "object" and "means" allows you to distinguish in the strategic process of the food industry, that is, in the subjective activity of the strategist, a new class of processes that include the transition of the object of strategy from the state of "object" in the state of "means" or vice versa.

In the food industry, the degree of competence of the subject of the market strategy can be judged by the degree of the formation of intra-branch processes of transformation of objects into means, by the method, speed and accuracy of their realization.

It should be noted that the logical symmetry or duality of the concepts of "object" and "means", as well as their possibility of theoretical transformation into each other, allows to describe the mechanisms of transition in the food industry of a real subject of market strategy into external or internal means, in the course of which the subject strategies open up appropriate operational capabilities in the macroeconomic space, taking into account strategic benchmarks.

The systemic goal of food business entities operating under appropriate conditions of competition is to suppress fluctuation phenomena, that is, to counter threats and challenges from the external and internal macroeconomic environment, to enhance the resilience of the intra-industry socio-economic system.

Fluctuation is an unplanned deviation or fluctuation of any value from its intended value.

The processes of socio-economic growth and socio-economic fluctuations have long been regarded as related phenomena in the macroeconomic environment. Note that for a long time certain phenomena were investigated separately. From the outset, time series of macroeconomic indicators that were devoid of trend segments were investigated because trends were considered to be exogenous with respect to fluctuations. Trends have aspects of a long-term component with a corresponding spatial orientation of increasing or decreasing the time series over a given period

Socio-economic growth in the food industry should be based on studies of long-term growth trajectories and their stability. Research in the food industry of macroeconomic phenomena is a separate modeling of intra-industry socio-economic growth and intra-industry socio-economic cycles. It should be noted that if the information component of observations in the food industry is

characterized by sinusoidal ups and downs, then there is a cyclical pattern of behavior in the industry. Most often, cyclical fluctuations in the intra-industry environment are the result of periodic changes in the national macroeconomic environment. In the food industry, if the information component is influenced by seasonality factors, such as processing of agricultural raw materials, then they exhibit a seasonal pattern of behavior in which constant periodic changes are repeated annually. It should also be noted that the information component of the dynamic range of socio-economic growth in the food industry can be influenced by a large number of random factors (natural, political and socio-economic). The adaptive model of the dynamic range of socio-economic growth (AMg) in the food industry is determined by the formula:

$$Mg = Tg + Cg + Sg + (Fgn * Kn) + (Fgp * Kp) + (Fgs * Ks), \quad (1)$$

- Tg – intra-industry trend;
- Cg – is a cyclic intragranular component;
- Sg – intragranular component of seasonal nature;
- Fgn – random factors of a natural nature;
- Kn – is the coefficient of the degree of influence on a particular natural factor;
- Fgp – random political factors;
- Kp – is the coefficient of the degree of influence on a particular political factor;
- Fgs – random factors of socio-economic nature;
- Ks – is the coefficient of the degree of influence on a particular socio-economic factor.

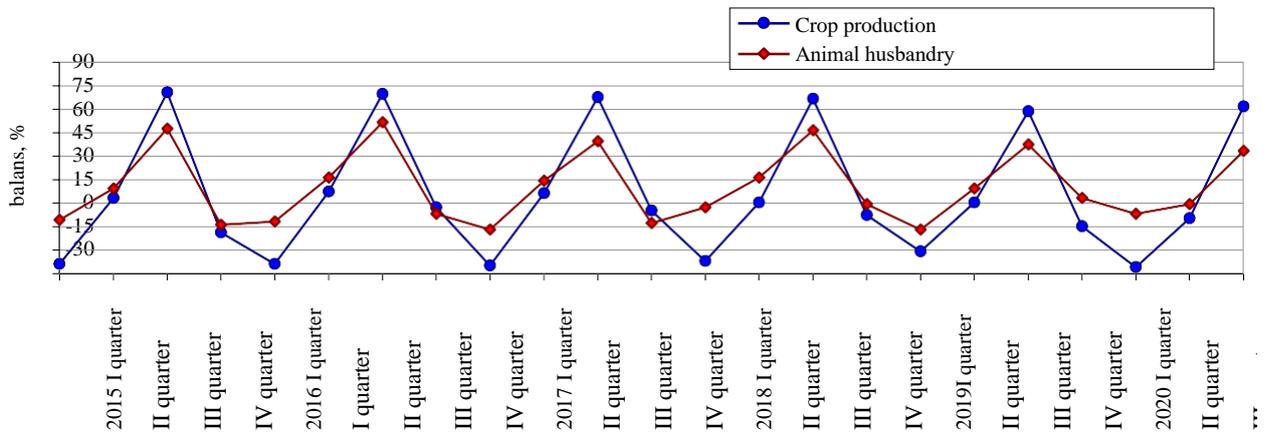


Fig. 1. Expected changes in agricultural production

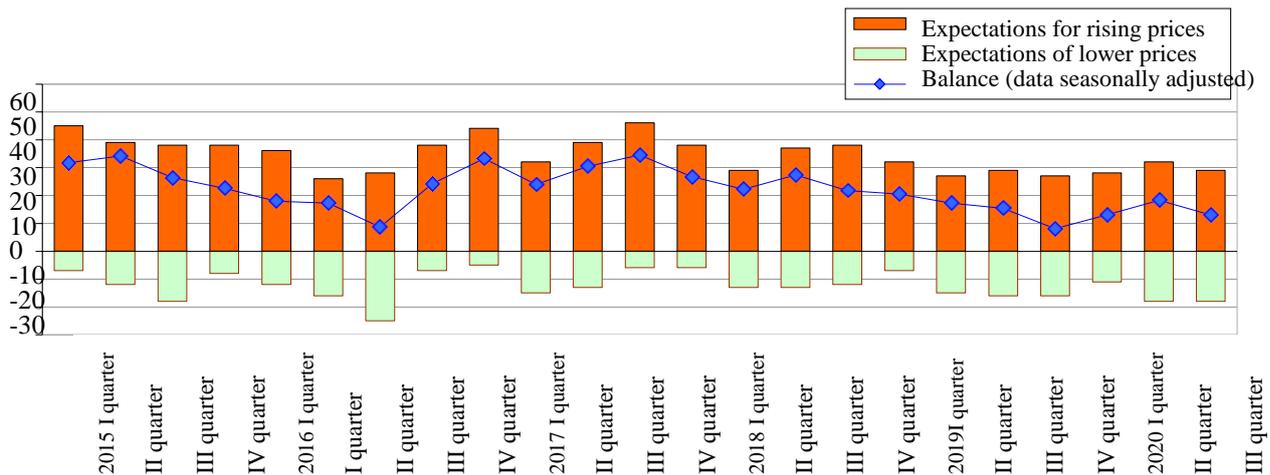


Fig. 2 Expected changes in product prices

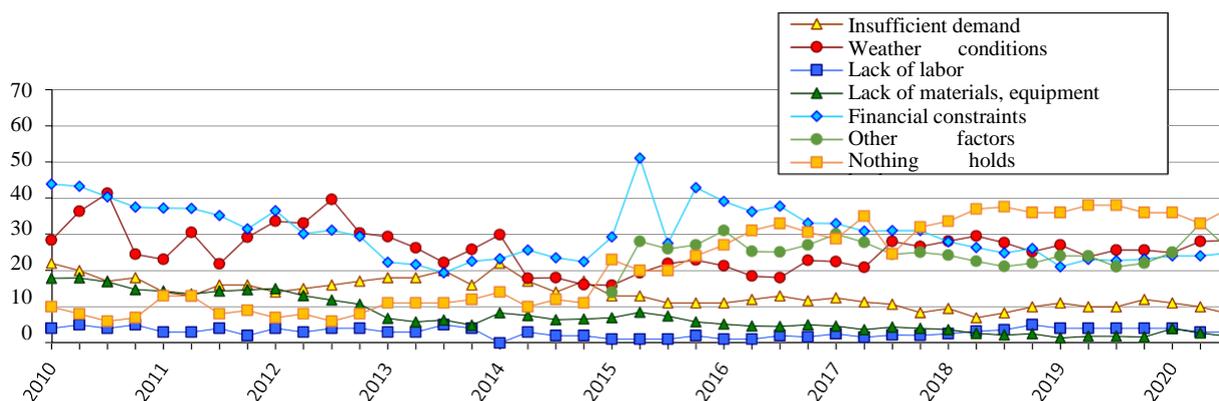


Fig. 3. Factors constraining agricultural activity

The additive model of the dynamic series of socio-economic growth in the food industry is applied provided that the dynamic series has approximately the same changes throughout the study period. Of particular importance in the model are adjusting coefficients that take into account the appropriate degree of influence (Food and Agricultural Reviews Agricultural Policies in Viet Nam, 2019).

The multivariate model of the dynamic series of socio-economic growth (MMg) in the food industry is determined by the formula:

$$Mg = Tg * Cg * Sg * (Fgn * Kn) * (Fgp * Kp) * (Fgs * Ks) \quad (2)$$

The multivariate model of the dynamic range of socio-economic growth in the food industry is applied if the changes in the dynamic series increase in the corresponding period.

Applying a dynamic and additive model of dynamic socio-economic growth in the food industry necessarily requires graphic support. The results of the obtained values of expected changes in agricultural production (Ukraine) can be seen in Figure 1.

Expected changes in product prices are present on the Figure 2. At the same time, it is necessary to consider the factors constraining agricultural activities (Figure 3).

Abstracting from the process of socio-economic growth in the food industry, with the aim of concentrating attention on fluctuation studies, simulate dynamic cycles of intra-industry business activity and vice versa, focusing on long-term dynamics of socio-economic intra-industry activity, and model the growth of production results of production and production growth. indicators, without analyzing the fluctuating behavior of sectoral macroeconomics x indicators. But there is a sufficient likelihood of significant interdependence between the phenomena of intra-industry growth and fluctuations, that is, the likelihood of endogenous effects between the relevant phenomena affecting the development of the food industry. The unresolved issues of the interconnection and interplay of socio-economic growth and socio-economic fluctuations in the food industry are the elucidation of

their nature. The endogenous approach to socio-economic growth in the food industry forms a natural construct for a better understanding of the causal relationship between intra-industry trends and fluctuations.

In recent years, the notion of socio-economic security within the economic or geographical segment has been associated with the concepts of suppressing fluctuation and counteracting threats and challenges in the intra-sectoral macroeconomic environment of the food industry.

Geographic segment is the separate part of intragranular activity for the production and / or sale of a certain type (or group) of food products in the relevant macroeconomic environment.

Main aspects of the geographical segment in the food industry:

- political and socio-economic conditions of the geographical region;
- inter-industry interconnection between business activities in different geographical regions;
- territorial location of production facilities that provide food production;
- intra-industry risks that are specific to the relevant geographical region.

In its turn, the business segment is a separate part of a food business entity's activity in the production and / or sale of a particular type (or group) of food product that has the relevant differences.

The need for security is inherent in any economic system, including the food industry. A safe environment is one of the most important conditions for the functioning of the entities involved in the production and sale of food.

In the current conditions of functioning and development of the food industry, the transformation of intra-sectoral economic security into socio-economic, where the influence of human factors increases.

The manifestation of such influence in the external environment of the food industry is the formation of its socio-economic responsibility, and in the internal - the creation of socio-economic partnership in the macroeconomic environment of the country. The prerequisites for providing intra-industry socio-economic security in a socially-oriented national space and

globalization processes can both provide new intra-industry opportunities and create new or exacerbate existing threats in food-related activities. Food business operators in their business activities must constantly reconcile interests that are largely economic in nature and socially oriented.

Security is interpreted as a state of protection of vital interests of national subjects against internal and external threats. The objects of socio-economic security are real-world phenomena, processes and relationships, the protection of which is one of the tasks of the strategic management system.

The concept of "security" is opposite to the concepts of "danger" and "threat". Modern explanatory vocabulary gives these definitions to these concepts. Threat – opportunity, inevitability of danger. Danger is the possibility, the likelihood of some disaster, misfortune, harm, etc. The difference between an economic threat and an economic danger is determined by the probability of losses, the transition from a potential opportunity to a real one (Ukrainian agrarian confederation, 2020).

The socio-economic threat in the macroeconomic aspect is a potential opportunity for the relevant macroeconomic factors to harm economic entities. The real manifestation of the intra-industry threat is focused on the intra-industry socio-economic danger, which is the real form of the corresponding threat in the food industry.

Intra-sectoral socio-economic security focuses on the security of socio-economic relations in the industry, provides systemic protection of economic activity from the negative impacts of the environment, simulates the process of elimination of various manifestations, etc.

Intra-sectoral socio-economic security justifiably shapes a system of measures that will ensure the competitiveness of food industry operators and their financial and economic sustainability, as well as contribute to increasing the level of social well-being in the relevant environment. Intra-sectoral socio-economic security is characterized by a set of interrelated qualitative and quantitative indicators, the main one being the level of intra-industry socio-economic security.

The level of intra-sectoral socio-economic security characterizes the state of the resource provision and its use according to the established criteria of the level of socio-economic security in the industry. Ensuring maximum security of the main functional components in the food industry is the main guideline for achieving a high level of socio-economic security.

Security as a result of inter-industry security activities is multi-faceted. The interests of economic entities, individuals, societies, and the state do not always and not all overlap, and in some cases their security is mutually complementary, in others the conflict between them is positioned.

A low intra-industry security level can correspond to both a low and a high level of state security, and conversely, a high level of intra-industry security can be implemented against the background of both low and high levels of security in the country. Intra-sectoral security shows the ability of the system to prevent damage to the sectoral

economic system, distinguishes its security state and reveals the property of the developed system of security measures in the industry.

#### **4. Conclusion**

From the conducted research. It is known that the sectoral division of state support should work solely on the growth of productivity in a particular industry. And from this point of view, direct state subsidies for agribusinesses in Ukraine are harmful. As such accrual only results in deterioration in the productivity of agricultural producers, and as a consequence - the growth of food prices. We believe that the best way of state support for farmers would be higher spending on roads or education in rural areas. Because farmers lose unskilled labor or logistical problems no less than in the absence of direct subsidies from the state. Also, if the goal of state policy is to increase employment in the countryside, then not only farmers should be supported, but also "non-agrarian" employment, for example, "green tourism". Also, state support needs to be distributed "automatically" between enterprises of agrarian and industrial complex, according to well-defined criteria that do not give room for corruption.

It can be concluded that the economic security of its business entities should be the subject of an economic strategy in the food industry. Reducing or eliminating business entities from participating in many areas of intra-industry life poses enormous economic risks (threats) to the immediate and long-term prospects of the food industry. Therefore, in order to ensure socio-economic development in the food industry, an intra-sectoral socio-economic policy must be developed and put in place that will ensure the growth of key indicators in the national macroeconomic environment.

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