The development of integrated business structures of Ukraine on innovative and investment basis

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Abstract
The article considers the directions of the development of integrated business structures based on innovation and investment in the agro-industrial complex of Ukraine. The paradigm of the development and functioning of integrated business structures of the agro-industrial complex of Ukraine, which intensify the innovative-investment process and network interaction of public-private partnership in a competitive environment, has been implemented. It is proved that the impact of public-private partnership on innovative-investment development and the creation of real value of business structures of the agro-industrial complex should be considered for different periods associated with the appropriate levels of evaluation of their effective cost-oriented platform. The efficiency of the functionality of business structures of the agro-industrial complex, which is characterized from the standpoint of time, level and integrated approaches, is determined. The temporal approach provides the allo-cation of three periods – short-term, medium-term and long-term, for each of which specific criteria for assessing the effectiveness of functionality is determined. A block diagram of qualitative criteria for evaluating the effectiveness of business structures in the introduction of innovations and investments in agriculture from the standpoint of the interests of a group of stakeholders in public-private partnership on a time basis is presented. The comparative characteristics of innovative-investment activity of business structures in high- and low-tech branches of the agro-industrial complex are determined. A model of integrated interaction of network interaction between business structures of the agro-industrial complex, institutes of agricultural development and stakeholders in public-private partnership has been developed. The institutional model of subsystems of the functional mechanism of harmonization of interests of business structures of agro-industrial complex and the state is offered. It is proved that the harmonious state regulation of investment activities of large agricultural producers (agricultural holdings) should be based on administrative, legal, organizational and economic methods and ensure compliance with norms and rules in the investment sphere at the level of relevant structural and functional institutions.

Keywords: integration, innovations, investments, business structures, agro-industrial complex.

Introduction
The processes taking place today in the world economic space are characterized by a significant intertwining of the interests of global economic and political players. As a result of the struggle for markets and resources, more and more segments of the global market are under the influence of transnational corporations, which dictate their terms of cooperation with other, less powerful economic entities. The latter, in order to maintain their place in the...
market, have to make more efforts, promptly responding to new challenges and finding new ways to form a competitive advantage, in particular, in rather narrow niches. At the same time, the nature and rapid dynamics of changes and rules of operation of business structures in the net-work interaction of the economic environment is becoming increasingly uncertain, which on the one hand requires the ability of businesses to respond quickly to market transformation, and on the other – indicates the need to reduce risks. New business conditions require business structures to make significant changes in approaches to doing business processes, which would increase the return on the use of available re-source potential and the development of their market opportunities. This problem is especially relevant for the agro-industrial complex of Ukraine, in which the raw material component of efficiency dominates.

Various aspects of the development and increase of effective activity of business in agro-industrial sector, as well as the restructuring of the structure of intersec-toral relations and the deployment of intersectoral integration processes – in the form of networks of

Material and methods

In order to maintain their positions and develop any business structures operating in the agro-industrial complex, innovations based on innovation and investment are required, which are inextricably linked with resources to ensure intersectoral connections and the development of intersectoral integration processes. Lack of resources necessitates the cooperation of independent partners who unite their resources to achieve competitive advantage. Bringing together several participants on the basis of government-partnership interaction, while maintaining their independence, is the first step in building synergies through the exchange of net-work information and ideas. Some issues of this area are considered from the standpoint of: organizational and structural optimization aimed at creating added value (Zamazii & Stadnyk, 205), the peculiarities of the

enterprises that unite many participants, were discussed by a wide range of scientists and practitioners, in particular, R. McAdam & N. Mitchell (2008), F. Moulaert & F. Sekia (2003), V. Stepanenko (2015), B. Yazliuk (2012). The study of areas of effective networking in the business structures of the agro-industrial sec-tor in order to increase the effectiveness of joint activities in a combination of public-private partnership, taking into account the diverse interests of participants was made by such scientists as M. Ruete (2014), W. Samuels (2003), C-B. Pafuna (2016), M. Heikkilä & J. Heikkilä (2013), S. Bröring (2010), R. Boschma (2005), R. Bilovol & A. Chaikina (2016), J. Berdegué, E. Biénabe & L. Peppelenbos (2016). However, a holistic mechanism for ensuring effective interaction of participants in business structures in the agro-industrial complex based on innovation and investment has not been developed today.

The purpose of our study is to implement the paradigm of the development and functioning of integrated business structures of the agro-industrial complex of Ukraine, which intensify the innovative-investment process and network interaction of public-private partnership in a competitive environment.

Material and methods

In order to maintain their positions and develop any business structures operating in the agro-industrial complex, innovations based on innovation and investment are required, which are inextricably linked with resources to ensure intersectoral connections and the development of intersectoral integration processes. Lack of resources necessitates the cooperation of independent partners who unite their resources to achieve competitive advantage. Bringing together several participants on the basis of government-partnership interaction, while maintaining their independence, is the first step in building synergies through the exchange of net-work information and ideas. Some issues of this area are considered from the standpoint of: organizational and structural optimization aimed at creating added value (Zamazii & Stadnyk, 205), the peculiarities of the
characterized from the standpoint of time, level and integrated approaches. The temporal approach involves the allocation of three periods – short-term, medium-term and long-term, for each of which a specific criteria for assessing the effectiveness of the functionality is defined. For example, short-term efficiency is determined by such criteria such as effectiveness, optimality, feasibility, flexibility, performance and quality; medium-term efficiency is associated with the criteria of adaptability and competitiveness; long-term efficiency - with the development, i.e. the growth of the value of the enterprise and the achievement of its strategic goals by meeting future demand (Prokopenko, 2019).

It should be noted that the qualitative criteria that characterize the functionality of the business structures of the agro-industrial complex on a cost-oriented platform in terms of time periods, can be formed in accordance with the needs of public-private partnership (Fig. 1). For example, the introduction of innovations to improve the quality of existing goods and services provided by business structures, or the creation of fundamentally new types of agricultural products should meet the needs of consumers and the interests of a group of stakeholders in public-private partnership.

The introduction of innovations in the medium term helps to increase the competitiveness of business structures of agro-industrial development, which from the standpoint of public-private partnership and an interested group of stakeholders (suppliers, creditors and others) is evidence of reliability and financial stability. This contributes to the
establishment of stable cooperation, as it ensures the interests of all stakeholders. Similarly, for employees of business a structure (strengthening the position of the latter in the market, and active adaptability to changes in consumer demand through the focus on innovative-investment development) is a guarantee of stable employment and timely payment of wages. In the long run, the introduction of innovations ensures the development of business structures, increase their value and return on investment, which is the main and direct criterion for ensuring the interests of owners as the main group of stakeholders (Izhevskyi, 2015).

Thus, the innovative-investment platform for the development and functioning of business structures is an important factor in forming the cost basis of intersectoral interaction of stakeholders in public-private partnerships, but their impact is mostly indirect and can be characterized by indicators of condition and efficiency of various resources (financial, production, labor, management, etc.). Assessment of the impact of innovations on the cost basis of network interaction in public-private partnership should be carried out in terms of their modal structure on the basis of subject content, namely, product, marketing, technological-organizational and managerial innovations.

For business structures operating in high-tech sectors of the agro-industrial complex, the introduction of innovations is a necessary component of ensuring their competitiveness, and therefore much attention and, accordingly, a significant share of investment resources of such enterprises are directed to research and development. In addition, innovations introduced in high-tech industries of agro-industrial complex are mostly completely new for both a specific market and the industry as a whole. In the branches of agro-industrial complex with a low level of automation and technological renewal, the introduction of innovations is not a fundamental issue, but rather an additional factor in the formation of competitive advantages of enterprises and increasing their value. In this regard, the implementations of innovations are often of an improving nature and provide adaptation of existing innovative technologies.

Differences in innovative-investment processes in terms of agro-industrial sectors require the application of new approaches to the formation of the functionality of business structures on the principle of public-private partnership. In addition, institutional factors, such as protection of intellectual property rights, state regulation of innovative-investment activities, etc., will have different degrees of importance for the activities of high- and low-tech business structures of the agro-industrial complex.

Orientation of institutions of agricultural development on innovative-investment reorientation of the environment of business structures of the agro-industrial complex is the main condition for starting the process of harmonization of interests in the institutional mechanism that unites institutions of all levels. That is, it is important to coordinate the action of all structural elements of the general mechanism of harmonization of interests of business structures and the state, which implements a continuous process of public-private partnership at all hierarchical levels of the agro-industrial complex.

Assessment of the quality of functioning of agricultural development institutions and their ability to meet the conditions of innovative-investment development of business structures of the agro-industrial complex proves the need for their modernization. The directions of modernization changes should concern the whole set of institutions that are directly or indirectly related to the formation of a favorable environment to ensure the process of harmonization of stakeholders' interests in public-private partnership (Fig. 2).
Modernization of the institutions of AIC

The goal is to form effective sustainable institutions
Subjects – the state, society, business
Tasks: realization of preconditions of the development and coordination of interests of stakeholders;
Principles of implementation - openness, transparency, progressiveness, system, continuity, social justice and responsibility

Directions of modernization changes in the functioning of business structures of the AIC

<table>
<thead>
<tr>
<th>Economic</th>
<th>Legal and political</th>
<th>Social</th>
<th>Scientific and technical</th>
</tr>
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<tbody>
<tr>
<td>protection and development of competition;</td>
<td>debureaucratization;</td>
<td>development of civil society institutions;</td>
<td>formation of a new</td>
</tr>
<tr>
<td>intensification of public-private partnership;</td>
<td>reduction of</td>
<td>state regulation of migration flows;</td>
<td>technological structure;</td>
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<tr>
<td>support for the intensification of production, renewal of the technological base;</td>
<td>corruption</td>
<td>raising living standards;</td>
<td>budget support of</td>
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<tr>
<td>diversification and development of new markets;</td>
<td>level;</td>
<td>social protection;</td>
<td>agricultural sectors;</td>
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<tr>
<td>stimulation of innovative business activity;</td>
<td>implementatio</td>
<td>minimization of social inequality</td>
<td>elimination of barriers</td>
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<td>support for entrepreneurship</td>
<td>n of law enforcement procedures</td>
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Indicators of integration of network interaction between business structures of agro-industrial complex, agricultural development institutions and stakeholders in public-private partnership

- reduction of administrative barriers; formation of a new inter-production network of regional agro-structural clusters; increasing the level of trust of business structures of the agro-industrial complex to state institutions; improving the reallocation of resources in agriculture; diversification of production activities; innovative-investment reorientation of the environment of functioning of business structures of agro-industrial business

Institutes of Agricultural Development (Ministry of Economic Development, Trade and Agriculture of Ukraine, Department of Strategic Planning and Macroeconomic Forecasting, Department of Agrarian Policy, Department of Intellectual Property Development, Department of Foreign Economic Activity and Trade Protection, Department of Investment, Department of Technical Regulation and Innovation Policy, Department of Regulatory Policy and Entrepreneurship, Directorate of Price Policy and Development of the Real Sector of the Economy, Department of Financial and Economic Activity, Department of Agro-Industrial Development of Regional State Administrations; Department of Agro-Industrial Development of District State Administrations)

Institutes for the development of public-private partnership (PJSC State Food and Grain Corporation of Ukraine (DPZKU); CU “Agrarian Union of Ukraine”; State Agency for Agricultural Insurance (agricultural risk management); Investment Fund LLC “Freedom Finance Ukraine”); contact audiences and stakeholders)

Fig. 2. Model of integrated interaction of network interaction between business structures of agro-industrial complex, institutes of agricultural development and stakeholders in public-private partnership

Source: authors’ own development

The key feature of the innovative-investment environment of the business structures of the agro-industrial complex as an object of institutional influence is its compliance with systemic features, where the subsystems of different levels and ranks of the agribusiness hierarchy interact, in particular:

- national level, where institutions of national influence are formed, focused on ensuring the development and coordination of the interests
of agricultural development institutions with agricultural structures as a whole;
regional level, which operates within the national institutions and forms the institutional environment that regulates the innovative-investment space for the diversification of incomes of agricultural enterprises at the regional level;
the level of agricultural enterprises (micro level), which implements regulatory influences within national and regional institutions and forms elements that reflect the operational and management characteristics of a particular agricultural producer.

From the standpoint of emergence, the interaction of business structures of the agro-industrial complex with the state there is a synergistic interdependence of their economic systems, providing a comprehensive effect as a whole. The organizational process of harmonization of interests of business structures of the agro-industrial complex and the state, represented by the institutions of agricultural development and public-private partnership forms the structure of functional relationships (budget, innovative-investment), manifested and implemented by generating income, profits of economic entities and redistribution of state budget funds for innovative-investment measures.

Results and discussion

Countries specializing in raw materials are increasingly lagging behind those countries whose economies supply high-processing products to the world market. The search for ways to create added value can be found among the most pronounced global trends in the global agro-industrial complex, discussed at a conference on land and poverty organized by the World Bank (Ovcharenko, (2016). There are two trends that can be applied to Ukraine: strengthening the service component of the agrarian business; transformation of existing models with a focus on medium and long-term prospects. The problem of added value in the agro-industrial complex was also considered in the state development programs. Thus, in particular, the Draft document “Unified comprehensive strategy and action plan for the development of agriculture and rural areas in Ukraine for 2015-2020” among the strategic priorities identified agro-industrial chain of added value and stated that the state “…promotion of various forms of organizations and representative offices of producers will increase their bar-gaining power and, accordingly, help to introduce economic practices adapted to global problems” (Martynyuk, 2017).

It should be noted that Ukraine does not want to approve the guidelines and priorities of the development of agro-industrial complex, but it is clear that among the priorities of the development of agro-industrial complex in the formation of organizational associations there are two main areas: creation of large agricultural holdings, the purpose of which is to unite enterprises in the technological chain of traditional export-oriented raw materials of agricultural origin (grain, oilseeds, etc.); creation of agricultural cooperatives aimed at uniting individuals, small and partly medium-sized businesses. This means the creation of large agricultural holdings that are engaged in the preparation and export of grain.

Analysis of the results of activity of the largest vertically integrated structures of the agro-industrial complex of Ukraine (Ukrlandfarming, Kernel, Myronivsky Khliboproduct, Astarta, Industrial Dairy Company, Nibulon, Svarog West Group, Agro-Trade, Agromars, Terra Food), (Dikaya, 2016), gives grounds for the conclusion that most of them are limited in the added value reserve. The production technological chain of the mentioned integration associations is represented only by production, efficient storage and partial processing of agricultural products.

The organizational system of Ukrainian agricultural holdings is aimed at the production of high-quality agricultural raw materials, provided by their industrial sectors, most of
which are represented exclusively by warehouses and elevators. The availability of storage facilities allows such companies to sell their agricultural products during the marketing year and significantly reduces the negative impact on sales price during and after harvest, reduces the risks associated with physical loss of crops. However, this approach does not allow taking advantage of organizational-structural and technological factors of integration, in addition, unable to ensure the development of the holding in modern conditions. The only reserve may be the increasing of the areas of arable land, which will increase the complexity of management due to the growing size of the management structure. In fig. 3, the subsystems of the functional mechanism of harmonization of interests of business structures and the state influence on the process of attracting investments and budget funds by economic entities in innovative technologies of the production cycle and sustainable development of rural areas are characterized.

Fig. 3. Institutional model of subsystems of the functional mechanism of harmonization of interests of business structures of AIC and the state

Source: authors' own development
Harmonious state regulation of investment activities of large agricultural producers (agricultural holdings) should be based on administrative, legal, organizational and economic methods and ensure compliance with norms and rules in the investment sphere at the level of relevant structural and functional institutions (Fig. 4). In particular, we propose to identify the following components of state regulation of the mechanism of harmonization of interests of agricultural holdings in attracting direct foreign investment in the agro-industrial complex: state support – providing guarantees to the investor regarding its activities on the territory of Ukraine, but subject to compliance with the principles of economic security of the country; state incentives – encouraging foreign investors to carry out profitable economic activities of large business structures by implementing the priorities identified at the state level of socio-ecological and economic development of the village; regulation of investment market development – involvement of new business structures in the innovative process of agricultural production.

![Fig. 4. Harmonization of attracting of foreign investment in agriculture by large business structures](image)

*Fig. 4. Harmonization of attracting of foreign investment in agriculture by large business structures*

*Source: authors’ own development*

Administrative and legal areas of state intervention in attracting direct foreign investment include the following: creating a legal framework for the development of public-
private partnership and determining the guarantee of activity for investors subject to the implementation of public-private cooperation; providing foreign investors with equal conditions of activity with domestic investors; enhancing the protection of foreign investors on the basis of the Washington Convention on the Settlement of Investment Disputes between States and Foreigners; simplification of the procedure for attracting foreign investment and overcoming corruption in state registration, removal of barriers to attracting foreign investment.

From the standpoint of the organizational component, the state should attract and support formative mechanisms for the implementation of innovative-investment projects on the principle of “single window” to ensure effective interaction with investors in implementing priority alternatives to implement protective regulators of investment activity in Ukraine (agricultural insurance) and increase activity efficiency of state and local authorities in interaction with investors.

From the areas of improving the economic component of the functional mechanism of harmonization of interests of business structures of the agro-industrial complex and the state, we should pay attention to the validity of bills, bylaws and other instruments within the formation of the domestic model of state support for agriculture which should contribute to the sustainable development of domestic agricultural production. This is, first, an unbalanced structure of agricultural production, where the share of crop production exceeds 70%, while the production of livestock products does not meet the internal needs of the market. Another urgent problem of agricultural sectors is the incompleteness of land reform, eco-friendly land use and so on. If these conditions are resolved, we can expect a further increase in the level of capitalization of profits of business structures in the agricultural sector and an increase in foreign investment in agriculture of Ukraine.

The introduction of a functional mechanism for harmonizing the interests of business structures of the agro-industrial complex and the state, which has a special impact on sustainable rural development will strengthen the strategic direction of the state on: institutional change, improving the existing one, adapting borrowed and introducing new agricultural development institutions in rural areas, enabling the combination of interests of all subjects of business structures and their consolidation; social changes associated with the formation of a large agribusiness socio-ecological and economic orientation on the vector of development on the basis of new strategic directions of development of agriculture and agro-industrial complex as a whole, built on budgetary and innovation-investment relations.

When forming the main provisions of the functional mechanism of harmonization of interests, its most rational structure should be considered one that systematically covers all components of innovation and investment potential of production in the business structures of the agro-industrial complex. Therefore, the key subsystems of the mechanism for the impact of regulatory instruments of the state on the functioning of agricultural holdings and introduced into interaction with them new business structures are: subsystem of business development on an investment basis – the state is interested in attracting external investment resources in agriculture and increasing investment attractiveness of rural areas by creating business incubators and startup projects; innovative subsystem of business structures – the state promotes the establishment of multilevel cooperation and security of development, through public-private partnerships and the development of agricultural insurance by both large business and small and medium enterprises in order to form competitiveness in world markets; subsystem of sustainable
development and social adaptation of economic entities in rural areas – the state through the regulatory instruments of the taxation system of business structures of all types provides balanced protection and development of rural areas.

We should note that integration processes radically change the conditions of business structures of various types, forming the so-called “internal markets”, in which the level of structure of relations between participants is much deeper than in traditional market transactions based on free choice of partners for exchange of resources among alternative market offers. Accordingly, it changes the economic behavior of participants in such markets – instead of aggressive competition for markets within the network cooperation is developed based on the mutual benefit of long-term economic relations. From the standpoint of maximizing public utility, cross-integrated structures operating in the form of dynamic networks deserve the most attention. Within these structures, the struggle for the consumer of smaller participants gives way to the struggle for participation in the chain of consumer value creation. The right to choose partners belongs to the principal – the owner (stakeholder) of key resources forms the business model of network interaction, focusing on maximizing the resource and market synergy of joint activities and, at the same time, seeking to consolidate key positions in creating added value (regarding the uniqueness of their competencies).

The differences between stable and dynamic networks are that in the latter the structure of the process of creating consumer value may change over time – and in place of some network members those members come that can offer a better way to perform part of the business process. For this purpose, marketing tools are used, which allow to assess the functional value of partners (current or potential) in alternative projects of network development.

Conclusions

Thus, in the Ukrainian agro-industrial complex there are two modern forms of integration of enterprises – vertically integrated in the form of large agricultural holdings and network interaction, which consists in the organization of business structures in rural areas. Agro holdings are an export component of agribusiness, but their reserves for added value creation are limited. In the long run, the impetus for the development of the agro-industrial complex could be small and medium-sized enterprises united in a network, in particular, agricultural cooperatives. At the same time, the creation of networks will eliminate the problems that stand in the way of other forms of cooperation, namely: the desire to maintain independence, lack of information about partners and how to conduct cooperation, unwillingness to disclose information to other companies. Cooperative businesses are given more opportunities to participate in new and more profitable markets as they gain the opportunity to unite around any innovation or change in the market. The cost of investment required for new purposes in such cases is determined in proportion to the network participants concerned. Those who do not have an efficient economic system can gain access to tools for organizational and inter-organizational innovation cooperative by providing them with consulting services and appropriate training to form a new quality of conducting business.

References


