

AGRICULTURAL COOPERATION AS AN INNOVATION FOR RURAL DEVELOPMENT

Oleksandr Shpykuliak¹, Olena Sakovska²

Abstract. *The purpose* of this article is to investigate agricultural territories and their impact on agricultural cooperatives. In this case, the cooperative acts as a mechanism for rural development. The defining feature is that the mechanism of integrated development of rural territory to provide a comprehensive solution to the problems of the economy of the area and settlement, the formation and increase of investment attractiveness of the territory of the rural settlement and the creation of a “working” climate for private business are agricultural cooperatives. Analyzing the state of cooperation in the context of the European integration tendencies, which currently permeate the agrarian sector of the Ukrainian economy, studying the experience of cooperation among farmers of the European countries can be useful both from the point of view of its adaptation to domestic realities, and from the point of view of the most significant mistakes in development and miscalculations in rural areas. In addition, marketing studies have been conducted in rural areas of Ukraine, which have revealed the most significant areas of rural settlement development, including the creation and development of enterprises of meat, construction, tourism and recreational clusters and the development of joint ventures as growth points that activate the development of small and medium-sized businesses around them and the formation of interregional ties and rural cooperatives. *Methods.* Creating an agricultural consumer supply cooperative is the most effective mechanism for developing identified growth points and creating infrastructure to support them in rural Ukraine. The basis for the construction of an agricultural cooperative in rural areas is the formation of a model of maximum cost reduction for all members of the cooperative. *Results.* The further development and effective management of the cooperatives will contribute to solving socio-economic problems, improving the well-being of the peasants and, as a consequence, ensuring the integrated development of rural areas. *Value/originality.* Analyzing the activities of agricultural cooperatives operating in the world, we point out that research on the institutional foundations of the cooperative and its functioning as a mechanism of economic self-regulation give reason to claim that the cooperative does not have sufficient state support for its development. As a consequence, the number of cooperatives is steadily decreasing, we believe that the cooperative system of interaction of economic agents in the agricultural sector should include nationwide programmatic measures on institutional adaptation of cooperation as a mechanism of market self-regulation, a special form of integration, institutional mechanism for regulating entrepreneurship and the basis of cooperation, rules, traditions, organizations and institutions, the task of which is to determine the behavior of economic entities for the sake of satisfaction individual and social goals in the system of production and exchange of goods and services.

Key words: agricultural cooperation, European Union, rural areas, Ukraine, cooperative organizations, agricultural production.

JEL Classification: D73, H70, H72, H77, R50

1. Introduction

An integral component of the economic systems of the member countries of the European Union is the cooperative organizations. Their role in the agricultural

sector of the European countries is especially noticeable. The activities of the cooperatives of the European Union, based on the principles of democracy, transparency, and solidarity, provide the agricultural producers with

Corresponding author:

¹ National Scientific Center “Institute of Agrarian Economics”, Ukraine.

E-mail: shpykuliak@ukr.net

ORCID: <https://orcid.org/0000-0001-5257-5517>

ResearcherID: AAH-7498-2020

² Uman National University of Horticulture, Ukraine.

E-mail: sakovska_lena@ukr.net

ORCID: <https://orcid.org/0000-0003-2676-6170>

Researcher ID: AAD-7646-2019

access to financial and logistical resources, internal and external sales markets, and contribute to the social and economic development of rural areas.

Ukraine has the very diverse conditions and opportunities for the development of rural territories; therefore, without the evaluation of the potentials of specific territories, it is impossible to develop a strategy for the development of region and rural territories. Consequently, the ensuring of sustainability of rural territories is possible only on the basis of an integrated approach that involves a comprehensive study of the problems, prerequisites, factors, and ways of further development in their relationship, identifying various solutions and, ultimately, developing a system of agricultural cooperation in rural areas.

Today, the majority of the Ukrainian population does not accept cooperative organizations as more attractive and alternative organizational and legal forms of business. Such views on cooperative business structures have been formed under the influence of the Soviet forms of cooperation, such as former collective and state farms, and, now, agricultural firms. The formal processes of privatization, conducted in most of them, do not facilitate their participation in the development of cooperation. As a result, mainly agricultural production cooperatives and other commercial enterprises (joint ventures, limited liability companies, private enterprises), but not agricultural service companies, have emerged in place of reorganized collective and state farms. The development of service cooperatives also prevents the presence of intra-system cooperative problems, the lack of targeted and constant support from the state.

In the context of the European integration trends, which are currently permeated the Ukrainian agricultural sector, studying the experience of cooperation of farmers in the European countries can be useful both from the standpoint of adaptation to domestic realities, and from the standpoint of taking into account the significant errors and miscalculations in the development of the cooperative movement of these states in rural areas.

The cooperation is a partnership in economic area, it is implemented through many organizational forms. An agricultural cooperative is a system of various agricultural cooperatives and their unions, set up by agricultural producers in order to meet their economic and other needs.

Agricultural cooperative is one of the organizational and legal forms of farming. It is an organization created by agricultural producers for joint production or other economic activities, based on the pooling of their property shares in order to meet the material and other needs of the cooperative members.

An agricultural cooperative is one of the organizational and legal forms of farming. It is an organization, created by agricultural producers for joint production or other economic activity, based on the unification of their

property share contributions in order to meet the material and other needs of members of the cooperative.

Market research, conducted in the rural areas of Ukraine, has made it possible to identify the most significant directions of rural settlement development, including the creation and development of enterprises of meat, construction, tourism and recreational clusters and the development of joint ventures as growth points, which intensify the development of small and medium businesses and the formation of interregional ties and agricultural cooperation around themselves.

2. Economic crisis effects on consumer behaviour

According to the Ministry of Agrarian Policy and Food of Ukraine, as of January 1, 2017, 1097 agricultural service cooperatives were registered in Ukraine, 589 of which, or 53.7% of business entities, were active and united 24.8 thousand people. The structure of service cooperatives at the national level by areas and activities is shown in Table 1. By the areas of activity, the majority of members of service cooperatives associate their economic activity with milk production, tillage and harvesting, the specific weight of which in the overall structure is 25.6 and 25.8%, respectively.

Due to the village cooperatives, 1636 working places on a permanent basis have been created. In contrast to the development of agricultural cooperatives abroad, in Ukraine, the cooperative relations in the areas of supply and processing are just beginning to be implemented. The members of service cooperatives sold 48.7 thousand tons of milk, 200 tons of meat, 2.8 thousand tons of grain (Mazur, Tomashuk, 2019).

Creating of agricultural consumer supply and marketing processing service cooperative is the most effective mechanism for the development of identified growth points and the creation of infrastructure to support them in the rural areas of Ukraine.

The strategic directions of development of agricultural cooperative have been formed, the following types of activity of agricultural cooperatives in Ukraine in rural territories have been defined: processing, supply, sale, service.

The essence of the cooperation: attraction of the investments by the cooperative within the framework of private-public partnership for the formation of meat processing complex of rural settlement, including the enterprise for slaughtering cattle, processing of skins and by-products, enterprises of complete waste-free deep processing of raw meat into finished products for the purpose of its further realization in the domestic market, the transport and logistics sector; development of livestock production, crop production, fisheries, beekeeping, processing of wild plants, development of domestic tourism.

The basis for building a cooperative in rural areas of Ukraine is the formation of a model of maximum cost reduction for all members of the cooperative. A comprehensive approach is taken into account, when developing a cooperative development plan.

Key income-generating centers of cooperation are tied to traditional activities that have historically developed in the territory under the influence of weather, climate, geographical and other factors; meat and dairy farming, production and deep processing of agricultural products, development of rural tourism.

Agricultural production cooperative is a commercial organization created by citizens for joint activity on production, processing and marketing of agricultural products, as well as for performing other activities not prohibited by law, based on the personal labor participation of its members (Mazur, Tomashuk, 2019).

The only constituent document of a cooperative is a charter, which must contain the following mandatory information:

the name and location of the cooperative, the object and purpose of its activities, the procedure and conditions for joining the cooperative, the size of share contributions and the procedure for their payment, rights and duties of members of the cooperative and associate members, composition and competence of cooperative management bodies, the order of distribution of income and losses, nature and procedure of personal labor participation in the activity of a production cooperative, responsibility for violation of obligations for personal labor participation, conditions of formation and use of the reserve fund, the size and conditions of formation of indivisible funds, if they are provided, procedure for valuation of land plots, land shares and other property, contributed to the share contribution, conditions of subsidiary responsibility of the cooperative members, the procedure and conditions of reorganization and liquidation of the cooperative, other information provided by law (Lindenfors, Patrik, 2017).

The sources of formation of a cooperative's property can be both own and borrowed funds; herewith the share of borrowed funds should not exceed 60%. The own funds are formed at the expense of share contributions of members of the cooperative, income from its activities, as well as due to the income from the placing funds in banks and securities. A member of a production cooperative must pay at least 10% of the mandatory share contribution by the time of its registration and the rest should be paid within a year from the moment of its registration; a member of a consumer cooperative must make at least 25% of the mandatory share by the time of registration, and the rest should be paid within the time limits, provided by the charter of the cooperative.

Increasing the role of agricultural cooperation in the development of civil society and rural territories is possible only if a large part of population is involved

in such a movement and the scope of cooperation is expanded.

Insufficient development of the local self-government institution, inability of local authorities due to limited financial resources or for other reasons to solve problems of rural population causes the development of agricultural cooperatives in rural areas of Ukraine (Mazur, Tomashuk, 2019).

Co-operation is a logical stage in the further development of administrative and economic reforms. An important component of the agrarian transformation is the development of a cooperative movement in the countryside.

3. Survey methodology

Agricultural cooperative is the center of formation on the territory of meat processing and tourist complexes.

The meat processing complex has united the formation of raw materials base, deep processing of meat raw materials and sale of finished products in the production chain.

The indicators of rural development through the development of a rural cooperative are presented in Table 1.

The supply of raw materials to deep processing shops will be done in several ways: purchase of raw meat from suppliers; transition to own raw materials through the formation and development of livestock farms, the stimulation of personal farms by guaranteed sales of meat products; harvesting, production and storage of feed, launching of a slaughterhouse and a primary meat processing plant; production of crop and vegetable growing; creation of transport and logistics sector and distribution channels.

Agricultural cooperative is able to combine eight platforms, which house summer and year-round houses for tourists, baths, equipped areas for summer and winter recreation, fishing, hunting, food outlets, necessary infrastructure for transit and event tourism, mini-farms, bee-gardens, fish farming, shopping malls, where one can buy environmentally friendly products.

The economic and social effectiveness of the program measures is expressed in the cooperative's increase in production of agricultural products due to increase of labor productivity, providing employment, creating new working places, improving living conditions in the countryside, attracting young professionals, budget revenues at various levels and extra-budgetary funds of taxes and fees, reducing unemployment payments, formation of new directions of development – meat, tourist-recreational, construction clusters. The association of entrepreneurial initiatives in a cooperative allows to obtain a synergistic effect from reducing the costs of production and services, as well as to use the opportunities of private-public partnership for the benefit of rural settlement development.

Table 1

Indicators of rural development through the development of a cooperative

№	Name	Year							TOTAL
		2020	2021	2022	2023	2024	2025	2026	
1	Expected income on the PSP, total		85	328	457	612	942	2060	4484
	including								
	cooperative		74.9	221.3	319.9	361	411.7	481.1	1869.9
2	Investment, total	48.9	650.1	2042.8	1089.5	512.7	552.1	360.0	5256.1
	including								
	cooperative	48.9	558.4	969	806.8	394.8	422.9	50	3250.8
3	Working places	20	215	358	429	527	585	637	2771
	including								
	cooperative	20	85	295	393	434	458	479	2161
4	Tax effect, total	1.9	19.8	54.5	61.2	69.8	103.2	96.5	407.2
	including								
	cooperative	1.9	17.3	44.3	47.8	40.5	44.7	41.1	237.6

Table 2

Directions of complex development of the cooperative in rural areas for 2020-2025

№	Name	Investments, mln. UAH	Expected revenue mln. UAH	Number of working places, units
1	Meat processing complex (cattle slaughtering workshop, processing workshop raw meat, transport and logistics)	162.4	503.1	44 (year-round)
2	Animal breeding farms	1195.9	174	83 (year-round)
3	Crop production (vegetables, root crops, grains, oilseeds, fruit crops)	463	221.7	120 (in season)
4	Fish farming	27	31.5	15 (in season)
5	Beekeeping	2.8	5.6	4 (in season)
6	Tourism and recreation	233	352	192 (year-round)
7	Collection and deep processing of wild plants, pine nuts			
8	Purchase of equipment for the preparation of feed, vehicles	275		15 (year-round)
9	Organization of infrastructure (supply of roads to facilities, electricity, water, etc.)	55.1		
10	Storage, processing of agricultural products, procurement of feed (elevator, vegetable store, silos, sales)	164.3		120 (in season)
	TOTAL	2730.8	1359.9	342 (year-round) 589 (in season)

4. Conclusions

In the future, small-scale farmers and private peasants' farms can become members of service cooperatives. In Ukraine, out of 32.1 thousand farms, 97.5% are small-scale farms with an area of up to 1000 ha and a staff of up to 50 people. They cultivate 55.5% of arable land and produce 52.2% of the gross agricultural output of all farms, 82.2% of which are farms with an area of agricultural land up to 100 ha, with a share of 30.6% in land use. In addition, there are 4.3 million private farms, operating in the country, which cultivate 6.5 million hectares of land and produce about 50% of the gross agricultural output.

The development of an agricultural cooperative, which in the long run will unite small agricultural producers from among farmers and private farmers, requires state support in specific areas.

Implementing targeted programs, the state should comprehensively support potential participants in

cooperative relations in the areas of development of supply, procurement and marketing, processing and transport infrastructure, create favorable conditions for attracting foreign investments, provide access to insurance and credit resources on preferential terms, to encourage young people to live and work in rural areas. This requires the development of appropriate transparent mechanisms, through which state support will be provided and the introduction of new instruments for its allocation, taking into account the differentiated approach and co-financing opportunities.

The revival and development of the Ukrainian countryside, stability and socio-economic well-being of the rural population are impossible without a well-defined strategy. One of the strategic directions for the development of rural territories should be the agricultural service cooperative. The establishment of agricultural service cooperatives in Ukraine is a complex socio-economic problem. The solution to this problem

is impossible without a clear understanding of the essence and principles of cooperative organizations, the development of cooperatives in the countryside as part of the state's agricultural policy, the creation of appropriate legal framework and the implementation of the necessary organizational measures.

The development of agricultural cooperatives in Ukraine will allow to use the advantages of large commodity production and to take into account the interests of rural commodity producers, contributing to the revival of the peasant as the owner of production, the real owner of the means of production and products, produced by him or her and, as a result, the development of rural territories of Ukraine. A fundamentally important element in strengthening the material and technical base of agricultural cooperatives is their participation in state and regional programs for the development and support of the cooperative movement in rural areas.

In July 2016, 6 agricultural service cooperatives ASC "Yahidnyi Krai" village Losiatyn, ASC "Shchedryi Kray" village Staryi Pochaiv, ASC "Dary Laniv" village Rudka, Kremenetsk district, ASC "Zelena Krynytsia" village Koshliaky, Pidvolochysk district, ASC "Krynychky" village Kotiv, Berezhany district and ASC "Staryi Mlyn" village Tseniv, Koziv District, which were created within the framework of the project EU / United Nations Development Programme "Community-Based Local Development", signed a declarative Protocol on the Establishment of the Cooperative Association "Association of Agricultural Cooperatives of Ternopil Region" (Tomashuk, 2017).

The experience of the organization of agricultural cooperatives of Ternopil region shows, that the cooperative model of management is an important step in the future of the Ukrainian peasantry. The most important is that cooperatives return life to the region.

The "Persnyi Yahidnyi" cooperative in Dnipropetrovsk region became not only the first in this field in the region, but also the first in Ukraine, that began to make a profit without foreign grants or financial infusions of big agribusiness.

The chairman of the registered cooperative "Persnyi Yahidnyi" (village Mohyliv, Tsarychanka district, Dnipropetrovsk region) Andrii Oseledets admits: informal cooperation of berry-professionals in the village has been practiced since 2014. Then, four owners instead of rushing everywhere with the idea of the cooperative took up the real cases: they began to buy together basic resources, to arrange logistics and to unite consignments of goods. An important element of cooperation was the exchange of experience" (Tomashuk, 2017).

It is noteworthy that none of the hosts were local, all came from the city. It is even more interesting that only they (and there are more than a dozen of them, and at the moment they all have joined the cooperative)

were the professional producers of berries in a large (4000 inhabitants) village. Of course, many villagers sold berries in the season. But only those, who united in the cooperative this year, grow berries professionally: on drip irrigation, raspberries – on the trellis, etc.

Members of the cooperative of scientists of the Institute of Agrarian Economics of the UAAS of Ukraine, members of the cooperative of scientists of the Institute of Agrarian Economics of the UAAS of Ukraine. The experience in professional berry growing is very different for everyone: from one year to 10. Their areas are small – from 0.5 to 2 hectares, usually 1-2 hectares. Currently, the cooperators have a total of 24 hectares of berries: 14 hectares of raspberries (both summer and remontant varieties), 7 hectares of strawberries, a little blackberries and grapes. And these areas are scattered up to 30 km. According to the chairman of the cooperative, current participants of the "Persnyi Yahidnyi" can collect a batch of 60-100 tons of raspberries and 50-60 tons of strawberries.

The effect of the cooperation was seen immediately. The main thing, according to one of the participants: the producers, who were competitors before, became partners.

For example, they found out very quickly, that the same dealers were paying them a price, differed by several hryvnias, and that was for the products of the same quality. Therefore, setting a single price, they have already achieved more favorable conditions. The large volume of the batch made it possible to increase further the price of sale.

Additional benefit was the registration of the cooperative. After having created a legal entity, the owners were given the opportunity to sell the products on a non-cash basis. This has significantly expanded the potential of customers through retail chains and large freezing and processing plants. So now the cooperative works with any category of buyers: the dealers, the processors, freezers, and with retail.

A. Oseledets said: "The cooperation has allowed to receive almost the highest price in Ukraine for raspberries this season – 16-20 UAH / kg." At the same time, he noted, that even at such a price for raspberries, cooperatives "flew in". So they want to uproot part of the area. The main reason for the current decline in the prices was that the chairman of the cooperative did not consider overproduction, but coordinated pricing by large freezers, which made the weather on the market.

Cooperatives have also received very significant benefits from general purchases of basic resources. Together they bought drip irrigation, fertilizers. This helped the chairman to save 50% of his expenses.

A crucial element in strengthening the material and technical base of agricultural cooperatives is their participation in state and regional programs for the development and support of cooperative movement in the countryside. The further development and effective

management of the cooperatives will contribute to solving of socio-economic problems, improving the welfare of the peasants and, as a consequence, ensuring the integrated development of rural areas.

The directions for the development of agricultural cooperation should include: measures to create favorable regulatory, socio-economic conditions for the organization and development of rural cooperation at national, regional and municipal levels; improving and expanding the current state support mechanism; qualitative increase in the number of rural cooperatives in different areas of activity; a significant increase in the profitability of agricultural producers by improving the quality of products and raw materials with active participation in cooperative activities; ensuring more complete and better provision of services to agricultural producers and the rural population; creation and development of an independent cooperative marketing system for agricultural products, which is able to compete with large retail chains; effective development of cooperative institutions in order to accelerate the socio-economic development of rural areas and improve the quality of life of the rural population.

5. Conclusions

The creation and effective functioning of cooperatives is possible if there are appropriate prerequisites of social, legal, economic and psychological character in society, that is, sufficient social capital. The absence of at least one of these prerequisites can be a significant obstacle to the creation of cooperatives, or may suspend this process. And vice versa, the more realistic the prerequisites, the faster their formation, further unification and formation of an integral cooperative national system on a national scale.

Studies of the institutional foundations of a cooperative and its functioning as a mechanism of economic self-regulation give reason to argue that the

cooperative does not have sufficient state support for its development. As a result, the number of cooperatives is constantly decreasing.

We believe that the cooperative system of interaction of economic agents in the agricultural sector should include national program activities for institutional adaptation of cooperation as a mechanism of market self-regulation, a special form of integration.

The institutional mechanism for regulating entrepreneurship and cooperation includes a system of basic and derivative institutions, rules, traditions, organizations and institutions whose task is to determine the behavior of economic entities to meet individual and social goals in the system of production and exchange of goods and services.

The development and implementation of rural development policy in the new paradigm are now being joined by partnerships of various sectors - from public to private, local authorities, rural communities, local activists and local science.

A series of thematic publications, based on the baseline study "Review of the situation, regarding the implementation of partnerships of urban and rural territorial communities in the context of decentralization and changes in state regional policy in Ukraine", developed by a group of experts from the Civil Society Institute to implement the project "Partnership of urban and rural communities as an effective instrument for local economic development" with the support of the Program "U-LEAD with Europe".

Such approaches have, eventually led that the farmers in some European countries demand an increase in such subsidies almost every year. However, such budget expenditures, which were acceptable in the conditions of economic growth, became too heavy in the conditions of recession. Research in the agricultural labor market suggests that grain farming requires 7-8 workers per 1000 ha of arable land, livestock – 100 people, and berry farming 150 people for the same 1000 ha of land.

References:

- Aleskerova, Yu., Mulyk, T., & Fedoryshyna, L. (2018). Improving credit protection analysis methods reports of main agricultural enterprises. *Baltic Journal of Economic Studies*, vol. 4, no. 2, pp. 1–7. doi: 10.30525/2256-0742/2018-4-2-1-7
- Aleskerova, Yu., Fedoryshyna, L., & Koval, N. (2018). Features of loan security for the reproduction of fixed assets for agricultural purposes. *Baltic Journal of Economic Studies*, vol. 4, no. 4, pp. 1–5. doi: 10.30525/2256-0742/2018-4-4-1-5
- Aleskerova, Yu., & Todosiychuk, V. (2016). Fiscal multipliers in Ukraine. *Economy and management organization*, no. 4(24), pp. 36–43.
- Rogach, S., Vdovenko, L., & Polishchuk, O. (2019). Agriculture of Ukraine under the joint policy of the European Union. *Baltic Journal of Economic Studies*, vol. 5, no. 3, pp. 178–183. doi: 10.30525/2256-0742/2019-5-3-178-183
- Plakhtii, T., Fedoryshyna, L., & Tomchuk, O. (2019). Socio-economic component of preferential taxation of individuals' incomes. *Baltic Journal of Economic Studies*, vol. 5, no. 2, pp. 171–175. doi: 10.30525/2256-0742/2019-5-2-171-175
- Polova, O., & Ruda, O. (2019). Modern Technologies in Economy and Management. Collective Scientific Monograph: The Academy of Administration in Opole.
- Todosiichuk, V. L. (2018). Kontseptualni zasady upravlinnia finansovymy resursamy derzhavnoho pidpriemstva [Conceptual principles of financial resources management of a state-owned enterprise]. *Infrastruktura rynku*, vol. 26, pp. 56–64.

- Kohn, Alfie (1992). *No Contest: The Case Against Competition*. Houghton Mifflin Harcourt.
- Fehr, Ernst. "Altruistic punishment in humans" (PDF). Macmillan Magazines Ltd. Archived from the original (PDF) on 29 September 2011. Retrieved 20 July 2011.
- Hamilton, W. D. (1964). The Genetical Evolution of Social Behaviour. *Journal of Theoretical Biology*, no. 7, pp. 1–16.
- Frans de Waal (2016). "Are We Smart Enough To Know How Smart Animals Are?" ISBN 978-1-78378-305-2, p. 276.
- Clutton-Brock, T. (2002). Breeding together: Kin selection and mutualism in cooperative vertebrates. *Science*, vol. 296(5565), pp. 69–72. doi: 10.1126/science.296.5565.69
- Lindénfors, Patrik (2017). *For Whose Benefit? The Biological and Cultural Evolution of Human Cooperation*. Springer.
- Kohn, Alfie (1992). *No Contest: The Case Against Competition*. Houghton Mifflin Harcourt, p. 19.
- Hamilton, W. D. (1964). The Genetical Evolution of Social Behaviour. *Journal of Theoretical Biology*, no. 7, pp. 1–16.
- Sakovska, O., & Shpykuliak, O. (2019). State regulation of the functioning and development of agricultural cooperatives in the grain market. Proceedings of the 33rd International Business Information Management Association Conference, IBIMA 2019: Education Excellence and Innovation Management through Vision 2020. 33rd IBIMA Conference: 10-11 April 2019 Granada, Spain. Editor Khalid S. Soliman, pp. 8316–8321.
- Yablochnikov, S., Kuptsov, M., Omelchenko, O., Gupta, S. K., Reznik, N., Hatsko, A., & Sakovska, O. (2019). Modelling of informational counteraction between objects in economy. *International Journal of Engineering and Advanced Technology*, vol. 8, issue 6, pp. 3797–3802.
- Yevdokimova, M., Zamlynskyi, V., Kuznietsov, E., Sakovska, O., & Hatsko, A. (2018) Evolution of social responsibility applied to the concept of sustainable development: mainstream of the 20th century. *Journal of security and sustainability issues*, vol. 8, no. 1, pp. 69–78.
- Clutton-Brock, T. (2002). Breeding together: Kin selection and mutualism in cooperative vertebrates. *Science*, vol. 296(5565), pp. 69–72. doi: 10.1126/science.296.5565.69
- Tomashuk, I. V. (2017). Problems and prospects of management of rural development. *Baltic Journal of Economic Studies*, vol. 3, no. 5, pp. 214–220. doi: 10.30525/2256-0742/2017-3-5-214-220
- Mazur, K. V., & Tomashuk, I. V. (2019). Governance and regulation as an indispensable condition for developing the potential of rural areas. *Baltic Journal of Economic Studies*, vol. 5, no. 5, pp. 67–78. doi: 10.30525/2256-0742/2019-5-5-67-78