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Economic Base Of Cooperation Development In Agrarian Product Market In Kyrgyz Republic

Base económica del desarrollo de la cooperación en el mercado de
productos agrarios en la república de kirguz

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Abstract.

The paper aims to describe the potential in building up the economic base of agricultural cooperation development in the Kyrgyz Republic, to propose an organisational and economic mechanism of cooperative relations in the Kyrgyz Republic, taking into account the complex development of agricultural production, logistics infrastructure and cooperation. Cooperation is viewed as an efficient economic mechanism to integrate small agricultural producers into the commodity distribution systems in the domestic and international agricultural food markets. Building on a review of sources describing the potential of cooperation in the modern environment, analyses of the agrarian structure and assessments of the economic base of cooperation, the paper proposes an organisational structure to navigate through the development of an effective agrarian structure, logistics infrastructure and cooperation in the Kyrgyz Republic.

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The paper is based on the materials from international development organisations, the National Statistical Committee of the Kyrgyz Republic and the findings of some researchers. The makings of the paper may be helpful summarising the international practice of development of cooperative relations, enhancement of institutional conditions and public policies of support of cooperation in the Kyrgyz Republic and should be of interest for a wide research audience in the area of agricultural cooperation.

keywords: economic base of agricultural cooperation, agrarian structure, production and agricultural service cooperation, trade and logistics centres for agricultural products.

Resumen

El documento tiene como objetivo describir el potencial en la construcción de la base económica del desarrollo de la cooperación agrícola en la República Kirguisa, para proponer un mecanismo organizativo y económico de relaciones de cooperación en la República Kirguisa, teniendo en cuenta el complejo desarrollo de la producción agrícola, la infraestructura logística y cooperación. La cooperación se considera un mecanismo económico eficaz para integrar a los pequeños productores agrícolas en los sistemas de distribución de productos básicos en los mercados de alimentos agrícolas nacionales e internacionales. Sobre la base de una revisión de fuentes que describen el potencial de la cooperación en el entorno moderno, análisis de la estructura agraria y evaluaciones de la base económica de la cooperación, el documento propone una estructura organizativa para navegar a través del desarrollo de una estructura agraria eficaz, infraestructura logística y cooperación en la República Kirguisa. El documento se basa en los materiales de las organizaciones internacionales de desarrollo, el Comité Nacional de Estadística de la República Kirguisa y las conclusiones de algunos investigadores. La elaboración del documento puede ser útil para resumir la práctica internacional de desarrollo de relaciones de cooperación, mejora de las condiciones institucionales y políticas públicas de apoyo a la cooperación en la República Kirguisa y debería ser de interés para una amplia audiencia de investigación en el área de cooperación agrícola.

Palabras clave: base económica de la cooperación agrícola, estructura agraria, cooperación productiva y de servicios agrícolas, centros comerciales y logísticos de productos agrícolas.

Introduction

In the increasingly globalised food market environment, the economic standing of agricultural producers largely depends on the competitiveness of the national agricultural industry they operate in. In the context of developing countries, which is the case of the Kyrgyz Republic, too, any analyses of production development in the agricultural product, commodity and food industry should emphasise the wide engagement of a large number of peasant (private) farms (PPFs) and private subsistence farms (PSFs) and their role in ensuring food security and enhancing the national diet (Maksimov, 2017).

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Cooperation is one of the economic mechanisms to enhance the competitiveness of agricultural producers. Today, cooperation is one of the most dynamic and intensely developing organisational forms of enterprise. Globally, there are more than 1.2 million agricultural cooperatives counting more than 112.1 million members. They operate from 35.4 thousand offices and commercial outlets around the world, employing 1.2 million full-time equivalent employees. Their cumulative asset worth is more than 133.8 billion USD and they generate annual revenues of more than 337.7 billion USD (Committee for the Promotion and Advancement of Cooperatives, n.d).

In 2017, the top 300 cooperatives by production volume included 97 agricultural cooperatives. 428 cooperatives in the agriculture and food industries had a turnover of more than 100 million USD per year; the top 20 cooperatives in the agriculture and food industries had an average turnover of 17.8 billion USD (World cooperative monitor. Exploring the cooperative economy, 2019).

Agricultural cooperation has not yet shown proper advances in the Kyrgyz Republic, even though the institutional base is in place to establish and operate agricultural cooperatives, including cooperative trade and logistics centres for agricultural products. The following documents were adopted: the National Development Strategy of the Kyrgyz Republic for 2018-2040 envisaging the development of agricultural cooperation (Presidential Decree of the Kyrgyz Republic UP No. 221, 2018), Law of the Kyrgyz Republic No. 70 "On Cooperatives" (2004), Regulation of the Government of the

Kyrgyz Republic No. 321 "On Approval of the Programme on the Creation and Development of Trade and Logistics Centres for Agricultural Products in the Kyrgyz Republic for 2019-2023" (2019) and other regulatory acts. However, there is no underlying organisational and economic framework of agricultural cooperation nor public support measures. The consequence is the downside trend in the number of operational agricultural cooperatives. REICE | 347

Current problems of agricultural cooperation, their transformation and role in the modern environment has been a research focus for many international organisations (World Bank (2019), FAO (2014), International Co-operative Alliance (n.d.), Committee for the Promotion and Advancement of Cooperatives (n.d.) and others), as well as national centres for agrarian problems and individual researchers, particularly in the Kyrgyz Republic.

A notable contribution in the contemporary research body comes in the works by J. Bijman describing the current aspects of agricultural cooperative operations (Bijman, 2016) and transformations of the decision-making processes involved (Bijman et al., 2013). The aspects of interactions in cooperative structures and adoption of innovative approaches are discussed by T. Mazzarol and S. Reboud (2019). The works by Z. Lerman analyse the regulatory framework of agricultural cooperatives in the CIS (Lerman, Sedik, 2014) and cooperative development in Central Asia (Lerman, 2013).

Theoretically and methodologically, there are prominent contemporary works by Russian researchers, such as I. N. Buzdalov (2008), A. G. Paptsov (2009), A. V. Petrikov (2018) and others. E. g., I. N. Buzdalov observes that cooperation in the support functions of farm production, i. e., processing, storage, transportation and marketing of agricultural products (the economic infrastructure) creates the "effect of scale" in a way (Buzdalov, 2008).

The practical aspects of agricultural cooperative operations are discussed in the works by A.V. Tkach, N.I. Chukin (2012), N.D. Avarskii, L.N. Klochko (2003), A.F.

Maksimov (2016; 2017) and others. E. g., the works by A. F. Maksimov substantiate the role and place of agricultural cooperation in the development of stable food value chains and make a point that, "One of the mechanisms to enhance the competitiveness of the agrarian industry is through cooperation of the constituents of its value chain" (Maksimov, 2017). REICE | 348

The problems concerning the need for cooperation of agricultural producers in the Kyrgyz Republic are addressed by many authors. E. g., Zh. Zh. Zhumabaev's study "Issues of improving efficiency of agrarian sector amid economic transformations in Kyrgyzstan" (2005) substantiates the potential of cooperative movement and the need for state support of rural cooperatives (Zhumabaev, 2005). However, given its problem scale and complex approach, it only addresses cooperation as a mechanism to improve efficiencies of PPFs and provides no consideration of the economic base of agricultural cooperation, the organisational and economic mechanism of cooperative relations in the republic nor the commodity distribution system for agricultural products, commodities and food.

Aspects of cooperation are also addressed in other contemporary research concerned with the issues of development and organisational forms of agricultural production in the Kyrgyz Republic (Akmataliev, 2006; Kalmanbetova, 2006; Hurova, 2011; Isaeva, 2013; Momunov, 2017). However, cooperation is only considered as a means to improve efficiencies in agricultural production in the conditions of land scarcity or fixed asset shortage faced by producers.

Meanwhile, there are almost no references to be found in terms of complex studies addressing the development of agricultural cooperation in the context of stable value chains of agricultural food products in the Kyrgyz Republic. Thus, the present paper, building on the above mentioned research, makes another step and employs analysis and economic assessments of agricultural cooperation to propose an organisational and economic mechanism to develop cooperative relations in the Kyrgyz Republic, taking into

account the complex development of agricultural production, logistics infrastructure and cooperation

Materials and methods

The paper was prepared as part of research work performed by the authors at the Nikonov All-Russian Institute of Agrarian Problems and Informatics, a branch of the All-Russia Research and Development Institute of Agricultural Economics. The object of the analysis concerned PPFs and PSFs making the economic base of agricultural cooperation, as well as economic relations, institutions and mechanisms supporting the operation and development of cooperatives in the Kyrgyz Republic.

The sources of empirical information included research from international development institutions, foreign and local researchers of the Kyrgyz Republic, data from the National Statistical Committee of the Kyrgyz Republic (NSC), information materials of the Ministry of Agriculture, Food Industry and Melioration of the Kyrgyz Republic and primary data gathered firsthand for this paper.

The study logically expands earlier research into the issues of development of agricultural cooperation and its membership base, arranging the management and development of an economic mechanism to support the functioning and development of a cooperative system in the Kyrgyz Republic.

Various methods were used in this research, including the abstract logical, analytical and economic and statistical methods.

Algorithm

The research algorithm is based on a sequence of steps concentrating on (i) the theoretical and methodological base in addressing the issues of development of agricultural cooperation and engagement of small economic forms of agricultural production; (ii) analysis of the agrarian structure and dynamics of its transformation; (iii)

assessment of the economic base and preconditions in the development of agricultural cooperation in the Kyrgyz Republic.

Following an analysis of the economic base (membership), the identified problems, trends and capabilities, an organisational and economic mechanism was proposed for cooperative relations in the Kyrgyz Republic, taking into account the complex development of agricultural production, logistics infrastructure and cooperation. REICE | 350

Analysis and Results

Agriculture is an important economic sector of the Kyrgyz Republic. Its share in the GDP (together with forestry and fishery) equaled 12.1% (or 71.3 billion soms) in 2019. Crop farming provides 51.1% of all agricultural products, animal farming, 48.5%.

Institutional transformations in the agrarian sphere have created a simple commodity production structure in the republic. As of January 1, 2020, there were 453.4 thousand economic entities operating in agriculture, including 342.2 thousand (75.5%) of PPFs and 110.4 thousand (24.3%) of individual entrepreneurs engaged in agriculture (National Statistical Committee of the Kyrgyz Republic, n.d.). The number of PPFs and individual entrepreneurs is rising (by 21% vs. 2014).

As of the beginning of 2019, PPFs operated 1,038.8 thousand ha of agricultural areas, including 925.5 thousand ha of crop land, including 636.1 thousand ha of irrigated land. Haylands occupy 85.2 thousand ha, perennial plantings, 19.5 thousand ha, pastures, 0.6 thousand ha.

Land scarcity in the extreme is typical for peasant economic forms in the Kyrgyz Republic. The average land use among PPFs as of the beginning of 2019 equaled 2.36 ha, a decline of 23.1% compared to 2005.

Almost 75% of PPFs are minor entities with land plots of less than 5 ha. 20% of farms are medium-sized, occupying between 5 and 25 ha of land. Only a small fraction of farms (5%, or approximately 20,000 of farms) are large entities operating on land plots of more than 25 ha.

Apart from small enterprise, a major supplier of agricultural products is the PSF segment (35.2% of the total output); according to the agricultural census of 2009, there were 473.1 thousand PSFs. Their production largely serves the household's own food requirements.

Experience suggests that such agrarian structure, given its simple commodity and largely consumption-driven type of production, limits the development of the agrarian sector of the Kyrgyz economy. An important factor in enhancing efficiencies and competitiveness of the national agricultural industry concerns the concentration of land

resources and attached production forces, cooperation and gradual transition from primarily small-scale to medium- and large-size production and subsequent development of a balanced agrarian structure of the national economy.

The economic base (membership base) of agricultural cooperation in the Kyrgyz Republic is made up of small and medium-size enterprises operating in the production of agricultural products, commodities and food. These include small (under 51 staff) and medium-size operations (51 to 200 staff) (As of January 1, 2020, there were 774 small and medium-size enterprises), PPFs and individual entrepreneurs, as well as commercial PSFs. REICE | 351

According to the National Development Strategy of the Kyrgyz Republic for 2018–2040, "Kyrgyzstan, using its geographical and climatic advantages, in the regional and the EAEU markets will become the leading supplier of high-quality environmentally friendly, organic agricultural products grown in mountainous and foothill areas. Medium and large processing complexes will be created in the agro-industrial complex of the country, logistics centers will be developed for exporting products to foreign markets. Farms will actively participate in the production process through cooperatives and agglomerations, which will allow producers to get direct access to value added contributing to increasing incomes of local population" (Presidential Decree of the Kyrgyz Republic UP No. 221, 2018). This will require cardinal institutional and organisational changes to facilitate consolidation of agricultural producers and improve efficiencies, as well as advancement of integration processes and cooperation.

The need to facilitate agricultural cooperative development in the Kyrgyz Republic, according to research, is shaped by the following factors:

- intensifying fragmentation and development of small-size agricultural producers with low return rates;
- weakness of the technical, production and financial base of the peasant sector and the industry as a whole, low accessibility of credit;
- prevalence of the land-scarce patchy land-use system, limiting the adoption of innovative technologies and the levels of operating agricultural equipment in peasant operations;
- extensive development patterns of the national agrarian sector, creating low productivity, which affects production levels and the quality of agricultural products;
- development of monopolistic and intermediary commercial structures in related spheres of the agroindustrial complex, which results in the inadequacy of cooperation and integration in the agrarian sector;
- underdevelopment of financial and credit services, agricultural servicing, marketing of agricultural produce, logistics infrastructure.

As of January 1, 2020, there were 684 operational cooperatives in the Kyrgyz Republic, 23% less than in 2014. Of these, 333 cooperatives were engaged in agricultural production. Their potential membership base is made up of small (under 5 ha) and medium-sized (from 5 to 20 ha) PPFs, household operations, including those where the principals are engaged in activities other than agriculture, and those owned by people in the retirement age unable to independently pursue production operations in their land holdings. REICE | 352

Law of the Kyrgyz Republic No. 70 “On Cooperatives” (2004) provides for the establishment of cooperatives of productive, processing, servicing and other types operating in the agrarian sector of the economy which can be categorised as "agricultural service cooperatives".

Agricultural cooperative development peaked in 2006, when the total count reached 1,240. The next four years (till 2011) saw a rapid decline to 374, which is less than a third of the above-mentioned level. Such dynamics reflected the introduction of the new Tax Code of the Kyrgyz Republic (2008), which incorporated articles to levy VAT on large farms. For tax optimisation purposes, most agricultural enterprises including cooperatives decided to split up their operations and re-register as PPFs. Since 2011, cooperative figures have shown a more stable trend. However, the downside trend persisted, and minor growth was only observed in 2013, 2014 and 2019.

Agricultural production cooperatives possess more land per farm compared to PPFs. 46% of cooperatives have more than 400 ha, 35%, 200-400 ha, and only 20% possess less than 200 ha. Cooperatives are on average bigger than PPFs more than a hundred times by the number of employees and almost 50 times by the crop land area.

A mid-term forecast based on the trend model of the number of agricultural production cooperatives indicates a decline at the annual rate of 10, thus, in 2025, the total may decline to 281. However, the worst-case scenario would bring it to 197 cooperatives in 2025, while the best-case figure would be 364. To deflect the current situation, measures are needed to intensify efforts on setting up agricultural cooperatives and providing support in their operation.

In production cooperatives, land plots and assets of the members are merged. Under applicable laws, land plots of cooperative members may be transferred to cooperatives for temporary use (lease). A principal factor in the development of production cooperation in the Kyrgyz Republic, in our view, would be the adoption of a norm permitting leases of land from non-members of the cooperative and land purchases from owners upon mutual consent. Such proposition might be de jure stated in the respective statutes regulating agricultural land transactions, particularly, in a new revision of Law of the Kyrgyz Republic No. 70 “On cooperatives” dated June 11, 2004.

Alongside agricultural production cooperatives, there are also agricultural service cooperatives being established and operating in the Kyrgyz Republic. In 2017, there were 45 such structures, mostly cooperative purchasing associations supplying equipment and spare parts to the farmers. Their potential membership base is made up by agricultural

production cooperatives, PPFs of all sizes and commercial PSFs.

PPF and PSF membership in agricultural service cooperatives does not limit the participants' production and economic independence. They may engage in such cooperatives to harness the effect of scale and transfer certain functions which may be arranged more efficiently through cooperation.

One of the busiest directions of agricultural service cooperatives relates to purchasing and supply activities that may be handled by trade and logistics centres for agricultural products operating within the national commodity distribution system. They make up for the missing logistics functions currently unavailable in the food value chains such as: storage, quality control, product transportation and delivery through the government procurement system; they provide a connection between producers and end users of the products – the local market and exporters; they ensure steady demand for the farmers' products by distributing orders and making contracts (futures) for production and supply in accordance with the market needs (Maksimov, Kalinichenko, 2019).

Trade and logistics centres take on the purchasing, transportation and storage of products, providing the opportunity for small agricultural producers to supply their produce directly from their fields (private farms) to such central storages. The number of suppliers thus increases and, consequently, competition among agricultural producers also rises. This provides them access to tenders to supply products for social institutions (schools, kindergartens, hospitals, etc.) and also a higher probability of winning in comparison to bidding as individual farmers, given the opportunity to bid lower prices as they consolidate purchasing in low-price seasons.

As can be seen from the experience of the UN FAO initiative of setting up a logistics centre in the Kemin district of the Kyrgyz Republic, such centres can also handle quality control. Regular laboratory tests and organoleptic control of products over the storage cycle can be arranged under an agreement on interaction with the District Centre for Disease Prevention and State Sanitary-Epidemiological Surveillance. Thus, each lot of products purchased from agricultural producers would be subject to appropriate testing for quality assurance.

In the Kyrgyz Republic, trade and logistics centres may exist at two levels, namely, local (district) and regional levels. District trade and logistics centres may operate in marketing local supply locally. Their capabilities may be complemented by the establishment of trade and logistics centres at a higher (regional) level, which may, on the one hand, purchase the products from district centres, generate wholesale consignments and pursue supplies to other regions or exports. On the other hand, they can handle imports of items that are not produced locally and supply them to district trade and logistics centres (Maksimov, Kalinichenko, 2019).

Currently, the development of a system of trade and logistics centres is underway in the Kyrgyz Republic, and such centres may serve as prototypes for cooperative centres. The Regulation of the Government of the Kyrgyz Republic on the creation and development of trade and logistics centres dated August 25, 2015, envisaged the opening

of two international trade and logistics centres and seven regional centres by 2017.

E. g., the modern trade and logistics centre Agroproduct Asia is already operational in the Sokuluk district of the Chui region, providing storage capacity of 7,000 tons of fruit and vegetables at a time. The centre for grading (by colour and size), sorting and packaging fruit and vegetables has a capacity of up to 10,000 tons per hour. The centre was set up using private investment of 20 million USD and is meant to serve the national markets of the Eurasian Economic Union (EAEU). Also, on-site at the trade and logistics centre, there are 60 ha of apple gardens cultivated with the use of espalier techniques, drip irrigation and hail protection.

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The Kadamjay district of the Osh region is home to the private trade and logistics centre Interfruit furnished with modern equipment for cleaning, sorting, disinfecting, drying and packing dry fruit, with four storage facilities for fruit and vegetables with an area of 250 sq. m. The project capacity is 400 tons of dry fruit per year. Compliant with the HACCP requirements, the enterprise will be able to supply its dry fruit for exports across the globe.

An example at the district level is the trade and logistics centre of the Aravan Agro Service cooperative in the Aravan district of the Osh region. The cooperative specialises in the production of potato seed and commercial potato. The trade and logistics centre built around a storage for fruit and vegetable of 300 sq. m and an office centre is equipped to handle not only potatoes, but other vegetables and fruit and berry, too. Investment came above 100 thousand USD.

Therefore, the development of agricultural cooperatives and trade and logistics centres would contribute to the stability of value chains of agricultural products, commodities and food serving both the domestic and external markets. That said, it is important to advance agricultural cooperation simultaneously in two directions, namely, in the production (horizontal) and agricultural service (vertically integrated) forms.

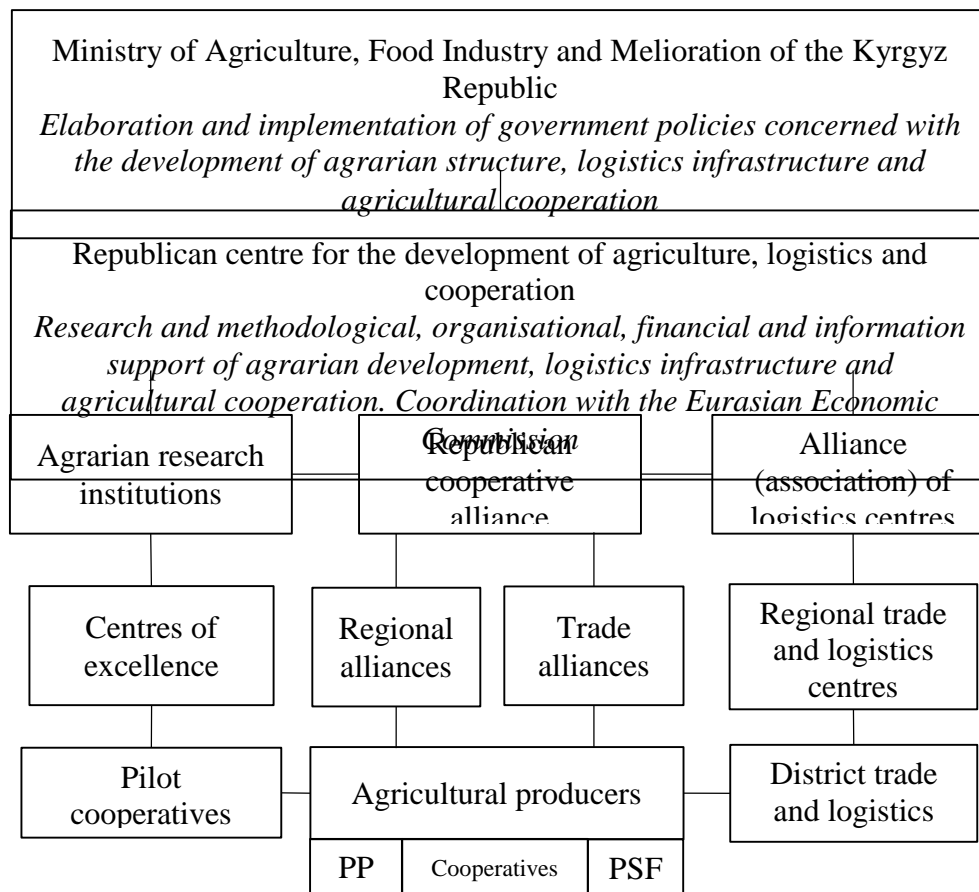
To pursue the gradual transition from small-commodity to larger-scale production and improve the stability of value chains in agricultural products, commodities and food, we propose the following mechanisms and measures to advance agricultural cooperation in the Kyrgyz Republic:

- development of a favourable institutional environment to support the functioning and development of agricultural cooperation, including amendments to Law of the Kyrgyz Republic "On Cooperation"; elaborating and adoption of a strategy and programme outlining specific mechanisms and measures of government support and the corresponding sources of funding;
- establishment of a single centre of excellence – the Republican centre for the development of agriculture, logistics and cooperation;
- facilitation of a balanced agrarian production structure by comprehensively addressing the issues of the development of large, medium-size and small PPFs based of production and agricultural service cooperation;

- building the cooperative system at the regional, industry and local levels and providing assistance to the constituent cooperatives in attracting financial support from public and international organisations;
- establishment of an agricultural development bank with the participation of credit alliances and microfinance organisations operating in rural areas. The state may also act as one of the founders and provide funding for infrastructure projects, extend public subsidies and grants, particularly for the development of agricultural cooperation;
- arrangement of food product flows via the system of trade and logistics centres for agricultural products at the district and regional levels;
- development of the system of information support for farmers and cooperatives.

The above measures and mechanisms of development of agricultural cooperation would depend on the efficient functioning of the organisational and economic mechanism of cooperative relations in the Kyrgyz Republic.

A major priority for the Ministry of Agriculture, Food Industry and Melioration of the Kyrgyz Republic should be the elaboration and implementation of government policies concerned with commercial production development on the basis of stable food value chains, establishment of a balanced agrarian structure and advancement of agricultural cooperation. This may warrant establishing a combined independent body building on the Ministry's existing structures – the Republican centre for the development of agriculture, logistics and cooperation (the Centre) (Figure 1).



Legend: - administrative relations; - functional relations.
Source: developed by the authors.

Figure 1. Organisational scheme of a Republican centre for the development of agriculture, logistics and cooperation (project)

The Centre may be primarily tasked with providing research and methodological, organisational, financial and information support in the development of an efficient agrarian structure, logistics infrastructure and agricultural cooperation. The Centre may engage in the elaboration and implementation of government programmes, coordination of research efforts in the modeling of specialised commercial PPFs, establishment of pilot cooperatives and trade and logistics centres, advancement of agricultural production and service cooperation, financial rehabilitation of cooperatives, integration into the common agricultural and food market of the member states of the EAEU, information and educational efforts in promoting the advantages of cooperation.

The organisational and methodological work should be conducted by the Centre in close interaction with agrarian research institutions, the republican alliance of cooperatives and its industry-related and regional representative offices, the association of trade and logistics centres and local authorities.

An important function of the Centre would be expanding and facilitating stable access to

financial resources for agricultural producers irrespective of the legal form and activity type. For that, in our view, the mission of Ayl Bank consolidating more than 86% of all loans extended in agriculture should be adjusted to position it as a development bank for agriculture, logistics infrastructure and agricultural cooperation. This would open up the agricultural market for other banks and expand the engagement of credit alliances and microfinance organisations in rural lending.

The objectives of arranging information support for farmers and cooperatives create urgency in the development of a single consultancy and marketing network within the framework of the Centre. Such a system would allow farmers and cooperatives to timely respond to changing circumstances in the Eurasian agricultural and food market and promptly make adjustments to the production structure.

Conclusions

The established simple commodity production structure in agricultural produce is adversely affecting the competitiveness of the industry, national food security priorities, diets and the pace of integration of the national agrarian sector into the commodity distribution system of the EAEU, which the country joined in 2015.

Despite the wide socioeconomic base in place, agricultural cooperation in the Kyrgyz Republic is still very weak. A vast majority of farms are not integrated in value chains serving the national and global markets of agricultural products. Meanwhile, the Kyrgyz Republic now offers a unique opportunity for developing cooperative relations both in the area of agricultural production and in the area of processing, storage, transportation and marketing, technical support and services.

The economic base of production cooperation is primarily made up by small and medium-size operations on land plots of less than 20 ha, meanwhile, agricultural service cooperation relies on nearly all kinds of agricultural producers, including production cooperatives. The priority direction of agricultural service cooperation relates to cooperative trade and logistics centres for agricultural products, making a connection between producers (farmers) and end users – local markets and exporters. They make up for the missing links in the value chains, such as consolidation, sorting, packing, storage, transportation, quality control and delivery via the commodity distribution chain

to the domestic and external markets.

The establishment of a Republican centre for the development of agriculture, logistics and cooperation will help to concentrate resources and enhance the development potential of agricultural cooperation in the Kyrgyz Republic.

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