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Activation of Business Processes in Service Cooperation of Rural Territories of Ukraine

Activación de procesos de negocio en la cooperación de servicios de territorios rurales de Ucrania

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Abstract

The determinants of interdependent business processes of development of service cooperation in rural territories of Ukraine are considered in the article. A comprehensive methodological approach to assessing the aggregate system of indicators, covering active business processes of forming the optimal level of the functional potential of service cooperatives and providing an individual approach to the diagnosis of their operating system in rural areas is substantiated. The network of service cooperatives of rural areas by types and areas of activity, as well as the amount of state support for agricultural service cooperatives in Ukraine are analyzed. The integrated level of the state of the functional potential of service cooperatives in rural areas of Ukraine is determined. From the standpoint of the process approach, an indicative assessment of the level of functional potential of service cooperatives in rural areas according to the indices of productive, business, investment-innovation, and foreign economic activity of the operating system is proposed. The growth of the determinant relationship of active business processes in the operating system of service cooperatives of a new type is aimed at increasing the resource supply of rural areas, taking into account the stimulating and disincentive factors of their development of security and social responsibility.

Keywords: service cooperatives, rural areas, active business processes, resource provision, functional potential, economy.

Resumen

Aspectos determinantes en los procesos comerciales interdependientes del desarrollo de la cooperación de servicios de los territorios rurales de Ucrania se consideran en el artículo. Se fundamenta un enfoque metodológico integral para evaluar el sistema agregado de indicadores, que cubre los procesos comerciales activos para formar el nivel óptimo de potencial funcional de las cooperativas de servicios y proporciona un enfoque

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individual para el diagnóstico de su sistema operativo en áreas rurales. Analizamos la red de cooperativas de servicios de áreas rurales por tipos y áreas de actividad, así como la cantidad de apoyo estatal en las cooperativas de servicios agrícolas en Ucrania. Así, se determina el nivel integrado del estado del potencial funcional de las cooperativas de servicios en las zonas rurales de Ucrania. Desde una perspectiva de enfoque de procesos, se propone una valoración indicativa del nivel de potencialidad funcional de las cooperativas de servicios en el medio rural según los índices de actividad productiva, empresarial, inversión-innovación y económica exterior del sistema operativo. El crecimiento de la relación determinante de los procesos de negocios activos en el sistema operativo de las cooperativas de servicios de un nuevo tipo cuenta como objetivo aumentar la oferta de recursos de las áreas rurales, considerando los factores estimulantes y desincentivadores de su desarrollo, seguridad y responsabilidad social.

Palabras clave: cooperativas de servicios, áreas rurales, procesos comerciales activos, provisión de recursos, potencial funcional, economía.

Introduction

Service cooperation in rural areas, as a specific form of socioeconomic activity and as an urgent typification of rural entrepreneurship in European countries is represented by the cooperative sector. However, in countries that do not have a high level of economic growth, the data sector is experiencing development problems and lacks adequate competitiveness in a market environment. The inhibition of service cooperative movement in rural areas is a consequence of the reluctance of peasants to cooperate. It is due to the lack of financial benefits from modern business processes, which based on cooperative relations and mechanisms for innovation in business do not take into account the limiting conditions of resources, use of new technologies, and updating of material and technical base. Structural intensification and legal support for the organization of cooperative relations in rural areas should help strengthen the economic condition of the country based on the implementation of decentralized rural areas. The formation of a new quality status of cooperative services in these territories should take a worthy place at the national level and requires a review of the existing levers of innovation in rural areas with limited financial resources and human capital.

Integrated cooperative relations in the countryside can create additional jobs, increase the level of income of peasants, and ensure the preservation of cultural, historical monuments, and natural resources. The proof of this phenomenon can be the developed innovative systems of effective development of business processes in rural areas, which have an extensive industry structure and high service infrastructure in the regions. These issues were studied by Bilyi (2009), Buzun (2018), Fidelman (2002), and Kharchenko and Kharchenko (2016).

The authors Bohomolova and Ostroverkh (2017), Budnik (2019), Keleberda (2019), and Sabluk (2006), developed the transformational levers of the cooperative movement on decentralized rural areas, which have a logical relationship with the global socioeconomic policy of European countries and the current external political situation of economic development, depending on quantitative and qualitative characteristics of internal and

external space. Chupryna and Yuzovytska (2019), Omarkhanova (2022), Hazuda (2008), and Hnatyshyn *et al.* (2020) proved that all business processes of economic development as a whole and in individual economic entities of the service cooperative have additional internal reserves to increase infrastructure and are related to competitiveness, stimulating investment activity.

The priority of our study is to substantiate a comprehensive methodological approach to evaluating an aggregate system of indicators, covering active business processes of forming the optimal level of the functional potential of service cooperatives and providing an individual approach to diagnosing their operating system in rural areas.

Materials and methods

Service cooperation in rural areas, as a special form of management, is represented by a set of business processes that operate in a single system and provide service, innovation, financial, marketing, sales, and complementary relationships (Table 1). Rural service cooperation is aimed at accelerating the turnover of assets with an intensive performance of services by all parts of the service process. Orientation of service cooperatives of rural areas to gain opportunities to compete with other entities of the cooperative sector increases their viability in the market and ensures the effectiveness of their actions to implement the latest technological equipment and update the range of services to meet the needs of rural areas.

Table 1. Typology of business processes in the economic component
of service cooperation of rural areas

Tabla 1. Tipología de procesos de negocio en el componente económico de la cooperación de servicios de las zonas rurales

Type of business process of service cooperation in rural areas	Basic classification features
Service	Organization of repair facilities; energy and fuel supply; supply of the production process with the necessary resources; staffing.
Innovative	Planning the development of new technologies and new services; making investments in the development of innovations.
Financial	Providing a fee for temporary use (temporary possession) of their assets under the lease agreement; granting for fee rights arising from patents for inventions, industrial designs and other types of intellectual property; participation in the authorized capital of other enterprises (organizations) (including interest and other income on securities); joint activities of the enterprise (under a simple partnership agreement), sale of fixed assets, and other assets other than monetary assets (except foreign currency); provision of the organization's funds for use; interest on the use of funds by the bank are in the account of the organization in this bank.
Marketing	Implementation of product promotion on the market; search for new markets; conducting marketing research.
Sales	Storage of manufactured products and their sale; organization of transport economy; uninterrupted container supply, implementation of other activities related to the sale of products (service, establishing contacts with customers).

Source: own elaboration based on Palinchak et al., 2021; Horbonos, 2004; Lytvyn, 2012; Keleberda, 2019.
Fuente: elaboración propia en base a Palinchak et al., 2021; Horbonos, 2004; Lytvyn, 2012; Keleberda, 2019.

The organization of cooperative relations and integrated business processes in rural areas based on purposefulness, voluntariness, evolution, complexity, and improvement of industrial and economic relations are closely interrelated with processing, trade enterprises and financial organizations. They create a single structure for the formation of non-current and current assets, in compliance with the principle of proportionality inthe distribution of profits between the founding members of the formations, drafting a package of regulations, etc. (Kucheriava, 2017: 28).

At the same time, the fundamental system-forming values of the development of service cooperation in rural areas are based on the integrated formation of business processes (Figure 1). Due to the globalization of business processes, the international economy is having an increasing impact on domestic markets, increasing the trend towards equalization of prices for means of production and food. Therefore, it is logical that one of the important determinants of the development of the cooperative sector in the country is the active connection of service cooperatives in rural areas with related areas, which bring products to the consumer, creating farmers' cooperatives, and thus stimulating business processes and competitiveness of business structures in the European integration space (Panteleimonenko, 2014: 55-57).

Figure 1. System forming values of service cooperation in the integrated formation of business processes
Figura 1. Sistema formador de valores de cooperación de servicios en la formación integrada de procesos de negocio

Openness and voluntariness of membership	The Service Cooperative is open to all legal entities and individuals, as a voluntary organization that provides services to all participants and performs membership responsibilities, without discrimination on any grounds.
Signs of corporate governance	Service cooperatives are democratic associations with signs of corporate governance, in decision-making, performance of control function.
Participation of members in economic activity	Registered capital of a service cooperative is an equal contribution of its members. The obtained profit is directed to the reserve fund of the cooperative, part of which is indivisible; to support other activities; distribution of income among members in proportion to their business operations with the cooperative.
Autonomy and independence	Autonomy of the service cooperative is manifested through self-help and self-control of its members. When concluding agreements with counterparties, stakeholders (including state institutions) or creditors, service cooperatives reserve the right to seek financial resources from external sources on the basis of democratic control by members and maintaining autonomy.
Information, training and education	Service cooperatives provide advisory support, educational and professional training of members; promote effective social responsibility of cooperative relations, technological information and effectiveness of their functional potential.
Cooperation of service cooperatives	Service cooperatives are obliged to serve the interests of their members, strengthening cooperative relations in local, regional, national and international programs.
Socially responsible behavior	Determines the economic behavior of the service cooperative in achieving sustainability and competitiveness on the basis of environmentally friendly production in rural areas, with the level of safety of business processes, improving the quality of services and living standards of the rural population.

Source: own elaboration based on Salamin, 2016 and Prylipko, 2018. Fuente: elaboración propia en base a Salamin, 2016 y Prylipko, 2018.

According to the existing concept of the competitive criterion (Competitive yardstick approach), the balance of the cooperative movement should meet the needs of farmers' associations in decentralized rural areas to overcome temporary difficulties, without intensifying their participation in commodity markets, and thus solving problems of servicing the peasants by supplying, for example, seeds or fertilizers. However, the limited access of farmers' unions to the foreign market encourages them to compete in the domestic market. Under such conditions, the criteria for socially responsible marketing increase for small service cooperatives, as the market is dominated by companies that have harmonious relations with society both internally, through employees, and externally, through the impact on consumers (Salamin, 2016: 129).

Since the service cooperative in the countryside is a necessary element of the economic system of rural areas, the mechanism of their implementation has a socioeconomic nature, with clearly defined features. This requires the development of adequate methods for assessing the functional potential of service cooperatives. Such factors of production as land, labor, and capital take part in the reproduction of the functional potential and the creation of the consumer value of the services of the service cooperative. Therefore, the expenditure of resources and obtaining concrete results are the basis of any production. At the same time, in different types of service cooperatives, the same amount of resources provides far from the same results, which, ultimately, is reflected in their functional state and conditions of self-financing. In this case, they talk about the different efficiency of service cooperatives (Tulenkov, 2012: 105).

A methodical approach to assessing the determinants of service cooperatives is proposed, which, using an aggregate system of indicators, covers active business processes of forming the optimal level of the functional potential of service cooperatives and provides an individual approach to operating system diagnostics in rural areas.

Evaluation of the effectiveness of service cooperatives should take into account aspects of efficiency, as understanding the determinants of business processes is provided by criteria of functional potential and generalizing effective indicators of the use of funds, labor objects and labor for a certain period of time (ratio of results to costs incurred) (Palinchak *et al.*, 2020). Thus, the ratio of indicators to determine the effectiveness of business activities of service cooperatives on the set of components of their operating system is:

$$E_f = \frac{Q}{C}, \quad (1)$$

where, Q – an effective indicator of the service cooperative from the implementation of active business processes; C – a cost component of the implementation of active business processes in the activities of the service cooperative.

Economic efficiency, according to equation (1), outlines the circle of "cost-output." Therefore, this indicator characterizes the relationship between the number of units of resources spent on the maintenance of rural areas and the number of products obtained as a result of services provided. The greater the number of products, works and services received from specific cost items, indicates higher efficiency, and vice versa. That is, the issue of improving efficiency involves maximizing the amount of income per unit

of material, labor, and financial costs (resources). However, maximizing output or per-forming works, and services while minimizing costs is mathematically incorrect. It is possible to maximize active business processes using existing (set) or available resources, which form an effective platform of functional potential and allows relative advance-ment, to increase the efficiency of the result above the cost level. Improving the result of work in the short term, with increasing costs, suggests that the economic system of service cooperatives in rural areas has become more efficient.

Determining the level of efficiency of service cooperatives is possible with indicators that are stimulators and disincentives of functional potential (sales of products of their members, providing participants with the necessary resources and providing them with the necessary services, etc.). Based on this vector of research, it is possible to form criteria for the effectiveness of cooperative farms. The main criterion for the efficiency of production or implementation of works and services is the growth of productivity of social labor, which is especially relevant for farmers' cooperatives. From the economic point of view, for cooperatives that are service-oriented and focused on providing services to their members, the criterion of efficiency should be considered to achieve maximum satisfaction with the requirements of service facilities, for example rural areas. Indicators that reflect the criterion of efficiency, represent useful indices of the effect per unit of cost. Therefore, one should expect different performance effects and levels of indicators of the effective activity of service cooperatives in establishing criteria and criteria limits of functional potential in the cooperative movement of resource provision (Shevchenko *et al.*, 2016: 88).

We should note that the system of performance indicators is unified, but from the standpoint of the non-profit status of functional capacity, the financial result cannot be a criterion for determining the number of performance indicators of the operating system. The reason for this phenomenon is that part of the income of service cooperatives is immediately distributed among its members in the form of price premiums and price supplements. This underestimates the size of the cooperative's profit, and, accordingly, the level of calculated indicators (Riabkova, 2013: 209). At the same time, the assessment of the activity of service cooperatives according to the criterion of resource efficiency for the needs of rural areas is necessary to identify reserves for resource capacity utilization. Therefore, the evaluation of the indicators of an effective operating system of service cooperatives in rural areas should include the following indices:

Index of efficiency of the resource component of the operating system of the service cooperative (a positive criterion is the increase of the indicator) (Shevchenko *et al.*, 2016: 89):

$$I_{pp}^{ef} = \frac{P_r}{C_{ru}}, \qquad (2)$$

where, P_r – the amount of loading resources of the service cooperative in the activation of business processes for the performance of works and services, EUR; C_{ru} – the amount of costs for the use of resources in the service of the cooperative in rural areas, EUR.

The efficiency index of the consumable component of the operating system of the service cooperative (a positive criterion is the increase of the indicator) (Shevchenko *et al.*, 2016: 89):

$$I_{prp}^{ef} = \frac{C_{ru}}{C_t}, \qquad (3)$$

where, C_{ru} – the amount of costs for the use of resources in the service of the cooperative in rural areas, EUR; C_t – total costs of the service cooperative, EUR.

Index of efficiency of the marketing component of the operating system of the service cooperative (positive factor is the reduction of the indicator) (Shevchenko *et al.*, 2016: 89):

$$I_{mp}^{ef} = \frac{C_{ru}}{I_{ms}}, \qquad (4)$$

where, C_{ru} – the amount of marketing costs of the service cooperative, EUR; I_{ms} – the amount of income from marketing services of the service cooperative, EUR.

Index of efficiency of the financial component of the operating system of the service cooperative (positive factor is the decrease of the indicator) (Shevchenko *et al.*, 2016: 90):

$$I_{fp}^{ef} = \frac{C_{frpi}}{I_{fid}}, \qquad (5)$$

where, C_{frpi} – the amount of financial costs for resource provision of innovations of the service cooperative and their coverage, EUR; I_{fid} – the amount of income from financial investments in the innovative development of the cooperative for the service in rural areas, EUR.

Index of efficiency of sales turnover in the operating system of the service cooperative (positive factor is the increase of the indicator) (Shevchenko *et al.*, 2016: 91):

$$I_{tur} = \frac{G_{turnover}^c}{G_{turnover}^l}, \quad (6)$$

where, $G_{turnover}^c$ – the volume of sales turnover of the service cooperative in the current period, EUR; $G_{turnover}^l$ – the volume of sales turnover of the service cooperative in the previous period, EUR.

Index of efficiency of innovation costs in the operating system of the service cooperative (positive factor is the reduction of the indicator) (Shevchenko *et al.*, 2016: 91):

$$I_{in} = \frac{C_{innovation}^c}{C_{tinnovation}^l}, (7)$$

where, $C_{innovation}^c$ – the amount of innovation costs of the service cooperative in the current period; B – the amount of innovation costs of the service cooperative in the past period.

Index of the possibility of market coverage by the service cooperative (the increase of the indicator is a positive factor) (Shevchenko *et al.*, 2016: 92):

$$I_{mc} = \frac{M_{coverage}^c}{M_{coverage}^l}, \quad (8)$$

where, $M_{coverage}^c$ – the volume of sales through the channels of the service cooperative at the regional level; $M_{coverage}^l$ – the volume of sales through the channels of the service cooperative at the national level.

The proposed indicators allow for forming targeted areas of effective operation of service cooperatives and their functional potential in the operating system for optimal balancing of business processes in rural areas.

To implement an individual approach to the method of calculating an effective operating system of service cooperatives through the introduction of active business processes in rural areas that stimulate the functional capacity of economic entities of the cooperative sector, we propose to calculate an integrated indicator including resource, cost, marketing and financial component of the operating system, as well as indices of sales efficiency, innovation costs, and market reach. This allows us to more objectively diagnose the state of functional potential, which is calculated by the formula (9), (Shevchenko *et al.*, 2016: 92):

$$L_{fp} = (I_{pp}^{ef} \times I_{prp}^{ef} \times I_{mp}^{ef} \times I_{fp}^{ef} \times I_{tur} \times I_{in} \times I_{mc}) \Rightarrow max, \quad (9)$$

where, L_{fp} – an integrated indicator of the functional potential of the service cooperative, covering active business processes in rural areas

I_{pp}^{ef} – index of the effective resource component of the operating system of the service cooperative

I_{prp}^{ef} – index of the effective cost component of the operating system of the service cooperative

I_{mp}^{ef} – index of the effective marketing component of the operating system of the service cooperative

I_{fp}^{ef} – index of the effective financial component of the operating system of the service cooperative

I_{tur} – index of efficiency of sales turnover in the operating system of the service cooperative

I_{in} – index of efficiency of innovation costs in the operating system of the service cooperative

I_{mc} – index of the service cooperative opportunities to reach the market.

Thus, the systematic diagnosis of the state of functional potential and economic efficiency of the operating system of service cooperatives is possible not only with increasing progress in servicing rural areas but also by increasing the level of activity of business processes in general. The growth of the determinant relationship of active business processes in the operating system of new types of service cooperatives is aimed at increasing the number of resources for rural areas, taking into account the stimulating and disincentive factors for their development of security and social responsibility.

Results

Business processes that intensify the development of the cooperative movement and the institutional environment in Ukraine are characterized by the current conditions for the promotion of cooperative relations in rural areas. The structuring of the model of cooperative relations, with dedicated service cooperatives, is determined by the international principles of cooperation (Chupryna and Yuzovytska, 2019: 266). However, the modern model of the cooperative movement in Ukrainian realities with voluntary and open membership, participation of members in operational activities, training, and autonomy, only partially implemented the principles of democratic control by members of cooperatives, and their cooperation with society (Riabkova, 2013: 209). Priority business processes aimed at the development of service cooperation in rural areas are determined by the state agricultural policy of Ukraine, which aims at compromising the interaction of large and small-scale production in a cooperative environment. At the same time,

the state has not finalized the mechanisms for regulating a balanced system of social responsibility, which in the model of active business processes of the cooperative sector should protect the interests of the most vulnerable business entities, including farms.

In Ukraine, different types of cooperation, for example from a simple form of relationship to complex integrated formations with a closed production cycle—from raw material supply to sales, as well as works and services of various kinds form cooperative relations in rural areas. In 2015, 1.017 service cooperatives were registered in rural areas of Ukraine, of which only, 668 associations functioned, in 2020 their number increased by 26.5% (Figure 2 and Figure 3).

Figure 2. Network of service cooperation of rural areas by type of activity in Ukraine for 2015-2020, in units

Figura 2. Red de cooperación de servicios de áreas rurales por tipo de actividad en Ucrania para 2015-2020, en unidades
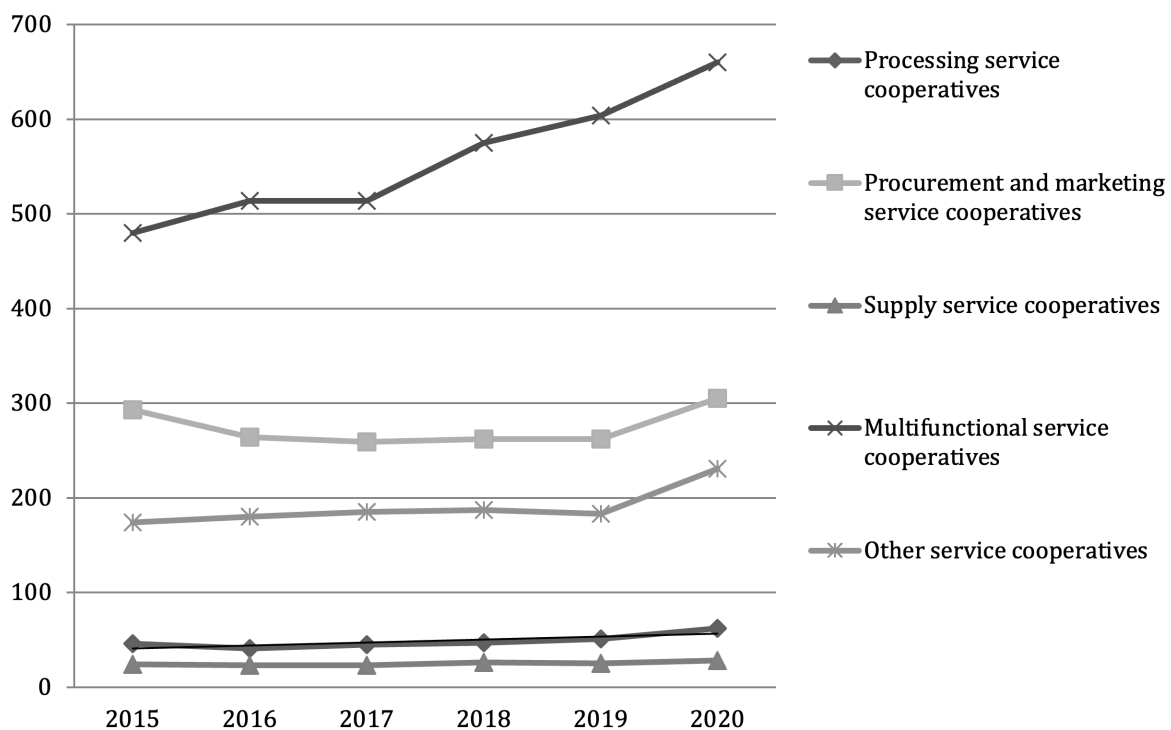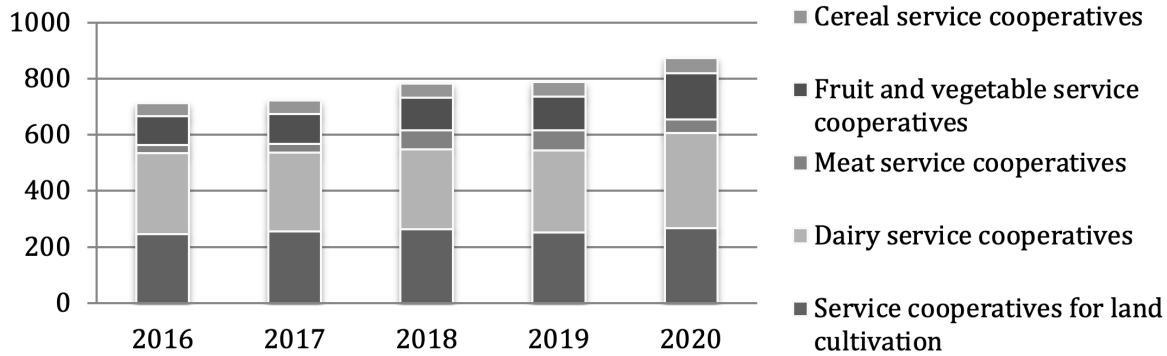

Source: own elaboration based on Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021. Fuente: elaboración propia en base a datos de Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021.

In the structural ratio of service cooperatives in rural areas of Ukraine, the most common associations are for joint harvesting (Figure 3). Thus, in 2020, the distribution by activities 735 of service cooperatives had the following structural dynamics: dairy – 186 (+44 until 2019), land cultivation and harvesting – 162 (+16 until 2019), meat – 35 (+16 until 2019), fruit and vegetables – 113 (+34 until 2019), grain – 41 (+1 until 2019) and other services – 198 (+46 until 2019). Associations for the joint cultivation of vegetables and fruits, meat cooperatives, and grain associations are also well developed. However, compared to European countries, their number is small. Multifunctional service cooperatives make up about half of the total number of cooperatives in the country.

Figure 3. Distribution of the network of service cooperation of rural areas by areas of activity
in Ukraine for 2016-2020, in units
Figura 3. Distribución de la red de cooperación de servicios de áreas rurales por áreas de actividad en Ucrania
para 2016-2020, en unidades

Source: own elaboration based on Ministry of Economic Development, Trade and
Agriculture of Ukraine, 2021. Fuente: elaboración propia en base a datos de Ministry
of Economic Development, Trade and Agriculture of Ukraine, 2021.

In developed economies, the most effective forms of association in rural areas are agricultural cooperatives. In particular, the share of cooperative products in the EU agricultural market is 40-50%, and in some countries and sectors, it reaches 70%. The annual turnover of ten of the largest farmers' cooperatives in the EU is over 82 млрд. EUR, billion EUR, which is almost equal to the annual GDP of Ukraine. The share of servicing agricultural cooperatives in the total volume of products produced in Ukraine in 2020 was less than 1%. At the same time, the role of agricultural cooperation in the employment of the rural population is minor (the subjects of the cooperative movement unite only about 30 thousand individuals) (or less tan 0.2% of the rural population).

The state and international technical assistance projects invest a large amount of financial resources in the cooperative movement in rural areas. Unfortunately, at the beginning of 2021, the strategic directions of development for service cooperation in rural areas of Ukraine for 2020 have not been implemented. According to the strategy, 10.000 associations were to be created (for example, two or three rural areas were to be served by one cooperative). For the organization and formation of the material and technical base, it was planned to attract 0.221 млрд. EUR billion EUR and provide employment for 50 thousand of the rural population to provide services in the amount of up to 1.032 billion EUR. It was planned to sell at least 20% of agricultural products on the domestic market. Of course, all the above-planned indicators would take place provided that funding is given from state and local budgets (Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021). In accordance with the Strategy for the Development of the Agrarian Sector of the Economy until 2020, the Ministry of Agrarian Policy of Ukraine provided state support to cooperatives and inter-cooperative associations of agricultural producers for technological re-equipment and modernization of industries to ensure competitiveness.

A significant role was given to the priority support of cooperatives in animal husbandry and crop production. The grant was provided for the maintenance and preservation of

young cattle in the amount of 6.43 EUR / 1 live weight (from three months of age) to 32.15 EUR / 1 live weight (up to fifteen months age), for cattle sold for slaughter (cattle, pigs). Separately, private farms had the opportunity to receive partial reimbursement of the cost of purchasing a domestic milking unit of domestic production in the amount of up to 160.77 EUR, provided that at least 3 cows are kept. All these measures stimulated the rural population to develop livestock and unite in cooperatives, which are a powerful tool for the development of small and medium enterprises (Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021). Successful implementation of the planned measures until 2020 can be considered an increase in the number of members and employees of cooperatives (in 2.0 times), their market share – by 3%, the area of agricultural land under cultivation—by 100%, implementation of at least 10 pilot projects for the creation of joint cooperatives in various areas and activities in rural areas of Ukraine (Figure 4).

Figure 4. State support of agricultural service cooperatives of Ukraine for 2015-2020, thousand EUR

Figura 4. Apoyo estatal a las cooperativas de servicios agrícolas de Ucrania para 2015-2020, miles de EUR
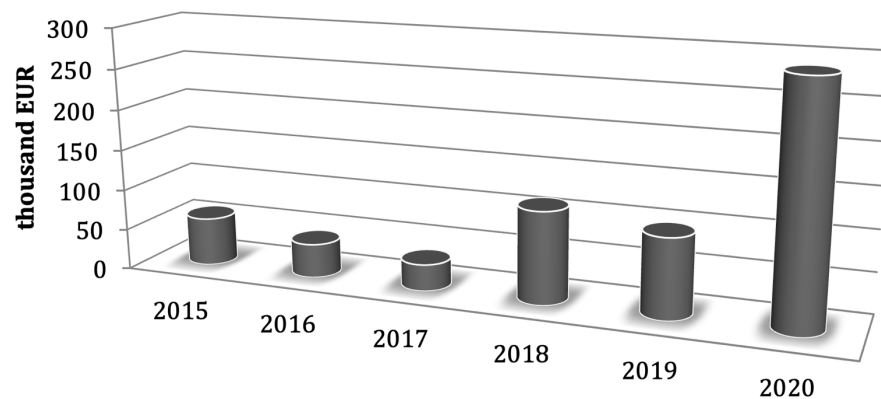
Source: own elaboration based on Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021. Fuente: elaboración propia en base a datos de Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021.

In 2021, the areas of state support for service cooperatives in rural areas are aimed at (Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021):

1. development of animal husbandry and processing of agricultural products: reimbursement of the cost of purchased breeding animals, bees, sperm, and embryos (up to 80% of the value (excluding VAT));

2. special budget subsidy for existing bee colonies (for existing from 10 to 300 bee colonies in the amount of 8.04 EUR per bee colony);

3. special budget subsidy for keeping goats, ewes, and sheep (amount of subsidy 32.79 EUR);

4. special budget subsidy for the increase in the number of cows of own reproduction (amount of the subsidy 983.61 EUR);

5. reimbursement of the value of livestock facilities (up to 50% of the value, including agricultural cooperatives up to 70% of the value);

6. compensation for the value of facilities financed by bank loans (continuation of commitments in 2020);

7. partial compensation for the cost of agricultural machinery and components of Ukrainian production;

8. financial support by reducing the cost of loans for the development of viticulture, horticulture and hop growing.

In Ukraine, agricultural service cooperatives have the status of non-profit organizations. This allowed for reducing the tax burden on only one tax—income tax. For all other objects of taxation determined by the Ukrainian tax legislation, the subjects of the service cooperative have tax liabilities in terms of VAT and other fees. Small volumes of trade turnover of agricultural service cooperatives and their activities are not significant in the administration of taxes and filling the state and local budgets (Figure 5).

Figure 5. The amount of taxes paid and income received from the sale of products by agricultural service cooperatives of Ukraine, for 2015-2020
Figura 5. La cantidad de impuestos pagados y los ingresos recibidos por la venta de productos por parte de las cooperativas de servicios agrícolas de Ucrania, para 2015-2020
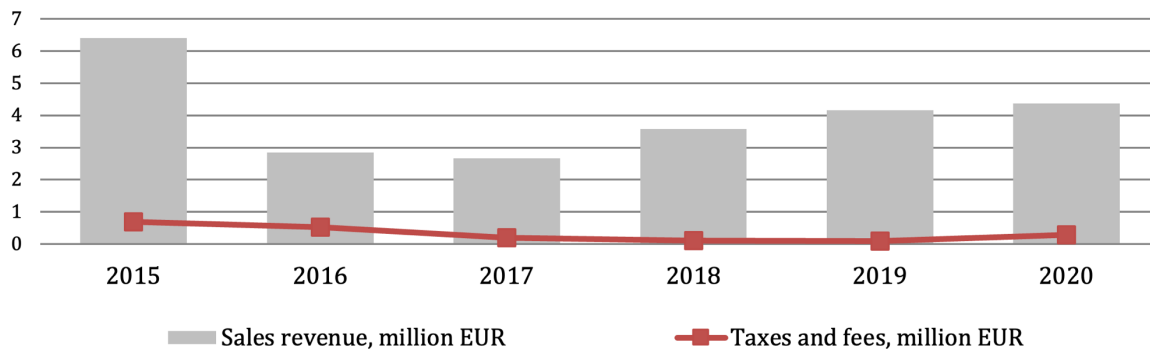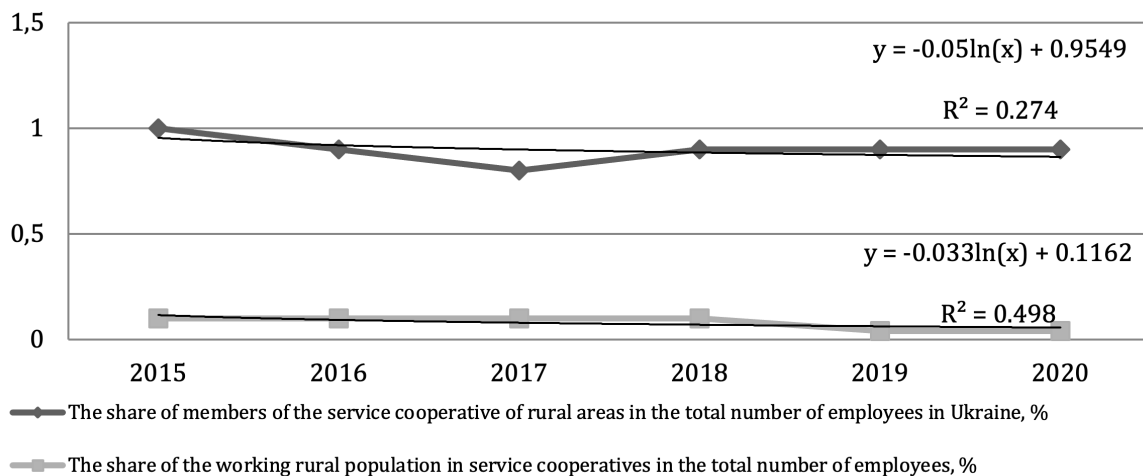

Source: own elaboration based on Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021. Fuente: elaboración propia en base a datos de Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021.

The wave-like dynamics of income from the sale of products by agricultural service cooperatives is a consequence of the unstable political situation in the country. The devaluation of the national currency and the decline in consumer demand have led to a sharp decline in the performance of this cooperative type. Thus, in 2016, compared to 2015, sales decreased by 2.3 times. Against the background of clear positive dynamics of this indicator in 2017-2020, it did not reach the level of 2015. At the same time, the existing impact of the inflation factor indicates an increase in the monetary measure while reducing the number of sold products.

Besides economic expediency and appropriate efficiency, the cooperative form of management must address social issues and ensure a sufficient level of employment for the rural population. In Ukraine, the social feature is key in the formation of employment in rural areas, as well as in the effective operation of service cooperatives in intensifying business processes, which has a stimulating effect on ensuring a sufficient level of functional capacity (Figure 6).

In Ukraine, on average, one cooperative serving rural areas has 126.4 thousand EUR of income from sales of products, works, and services. Its value in 2015-2020 increased by almost 10%. Accordingly, during the study period, there was a growing trend of expenditure policy of the subjects of cooperative relations. Thus, on average, for one service cooperative in the overall structure of operating costs, sales costs range from 45.0% to 68.0%, and marketing costs – from 19.3% to 23.0%. However, the average value of the performance indicator per one service cooperative is on average 68.58 thousand EUR.

Figure 6. The share of employees in the cooperative sector of Ukraine for 2015-2020, in percentage
Figura 6. La proporción de empleados en el sector cooperativo de Ucrania para 2015-2020, en porcentaje


Source: own elaboration based on Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021. Fuente: elaboración propia en base a datos de Ministry of Economic Development, Trade and Agriculture of Ukraine, 2021.

Given the active business processes that affect the current state of the functional potential of service cooperatives in rural areas, the authors identified its integrated level of resource, cost, marketing and financial policies and factors of indirect impact of sales, innovation costs, and market reach within the outpacing growth of the effective deviations of the studied indicators (Figure 7).

Figure 7. Integral level of the state of functional potential of service cooperatives in rural areas of Ukraine

Figura 7. Nivel integral del estado del potencial funcional de las cooperativas de servicios en las zonas rurales de Ucrania
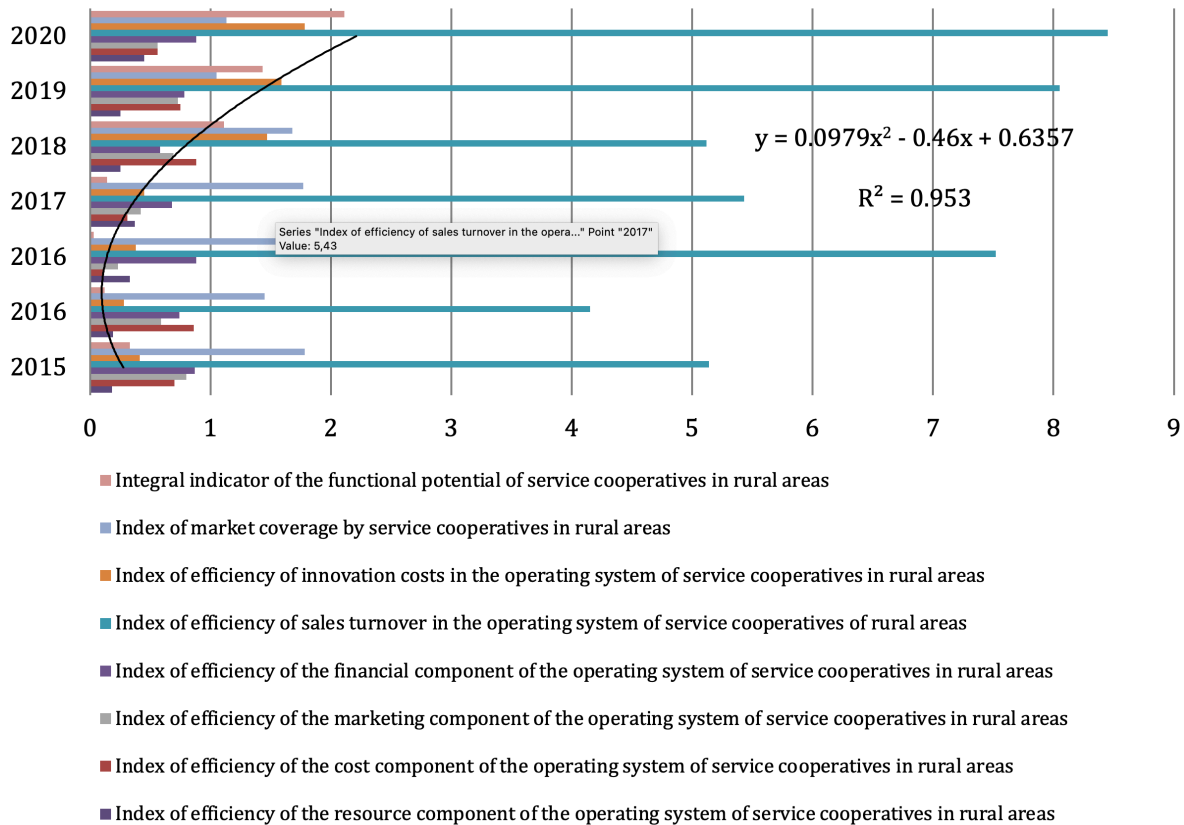
Source: own elaboration. Fuente: elaboración propia.

Despite significant (in terms of indices of sales turnover, innovation costs, and market coverage of service cooperatives) fluctuations in the studied performance indicators, the integrated indicator of the functional potential of the cooperative movement as a whole shows a positive trend. The growth of the level of the integrated indicator, on the one hand, indicates the stabilization of the surveyed cooperatives in rural areas. On the other hand, atypical trends of ancillary indicators underlying the integrated indicator require certain strategic directions in terms of marketing policy components, the target priorities of which are to increase sustainable competitive advantage in a certain segment of the market (strengthening consumer ties through advertising, exhibitions, mobilization of marketing tools to conquer new markets).

Discussion

Service cooperatives in rural areas of Ukraine are considered an open operating system, through which a set of active transformational business processes passes. These processes turn the inputs into the outputs of the functional potential of service cooperatives into a supportive and viable system with a long-term period. Such an approach involves the

partial transfer of active business processes from the micro level (enterprise, institution, organization) to the meso level, abstracting from the scale and complexity of the structure of cooperative relations at the international level. From the standpoint of the process approach, an indicative assessment of the level of the functional potential of service cooperatives in rural areas is proposed, by determining: the effective action of business processes on productive, business, investment-innovation, and foreign economic activity of operating cooperatives and efficiency of results at the "output" of functional potential. This approach will "revitalize" the cooperative environment of the micro level. From the investor's point of view, such an analysis will assess the level of business activity of cooperatives and serves as an information base for forecasting the development of regions with the definition of their competitive advantages.

For indicative assessment of the functional potential based on the intensification of business processes in the service cooperation of rural areas, four groups of sub-indicators are proposed:

1. The productive activity of the operating system of service cooperatives in rural areas, is measured by the amount of resources involved in production and services in terms of basic components: capital (investment), labor, land, and energy resources. The economic determinant of productivity will be the volume of products sold and services performed in rural areas for a certain period.

2. Business activity of the operating system of service cooperatives in rural areas determines the speed of resource turnover and the dynamics of the level of functional potential on the vector of transformational changes in business in terms of the following components: growth indices of construction works; index of growth of agricultural production, index of growth of sales, index of growth of retail trade.

3. Investment and innovation activity of service cooperatives in rural areas. The profile of the functional potential of the subjects of the cooperative movement on this basis largely characterizes the strategic advantages of rural areas.

4. The foreign economic activity of service cooperatives in rural areas characterizes the level of openness and activity of the operating system in the foreign market. This is an important advantage for investors in the formation of investment capital and additional involvement of resources in rural development, including foreign exchange earnings.

The main indicators for assessing the competitiveness of innovative business processes in service cooperatives at the regional level are given in Table 2 and in Figures 8, 9, 10 and 11.

Table 2. Indicative assessment of functional potential based on activation of business processes
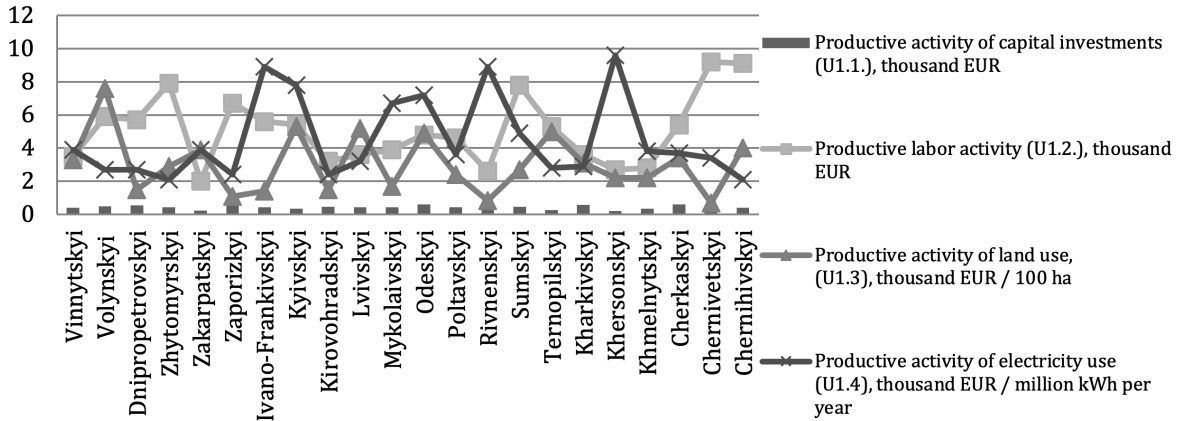in the service cooperation of rural areas
*Tabla 2. Evaluación indicativa del potencial funcional basado en la activación de procesos de negocio en la
cooperación de servicios de las zonas rurales*

Activation of business processes in the service cooperation	Indexes of the operating system of service cooperatives in rural areas
1. Productive activity of the operating system of service cooperatives in rural areas (U1)	1.1. Productive activity of capital investments (U1.1.), thousand EUR
	1.2. Productive labor activity (U1.2.), thousand EUR
	1.3. Productive activity of land use, (U1.3), thousand EUR / 100 ha
	1.4. Productive activity of electricity use (U1.4), thousand EUR / million kWh per year
2. Business activity of the operating system of service cooperatives in rural areas (U2)	2.1. Construction work growth index (U2.1)
	2.2. Agricultural production growth index (U2.2)
	2.3 Index of growth in sales of services (U2.3)
	2.4. Retail trade growth index (U2.4)
3. Investment and innovation activity of service cooperatives in rural areas (U3)	3.1. Volume of capital investments per employee in the cooperative sector of rural areas, thousand EUR (U3.1)
	3.2. Volume of foreign investments per one worker in the cooperative sector of rural areas, thousand EUR (U3.2)
	3.3. Volume of innovation expenditures per worker in the cooperative sector of rural areas, EUR (U3.3)
	3.4. Share of innovative products of service cooperatives in total sales (U3.4)
4. Foreign economic activity of service cooperatives in rural areas (Y4)	4.1. Exports of goods per worker in the cooperative sector of rural areas, thousand EUR (U4.1)
	4.2. Imports of goods per worker in the cooperative sector in rural areas, thousand EUR (U4.2)
	4.3. Share of cooperative sector in rural areas in total exports of goods and services,% (U4.3)

Source: own elaboration. Fuente: elaboración propia.

The productivity of agricultural land use depends on the specialization of service cooperatives in the studied rural areas (Figure 8). At the same time, rather large disparities in the productive activity of the use of certain resources between rural areas in a given region are evidence of underutilized reserves, which can play an important role in increasing the functional capacity of cooperatives in the strategic perspective.
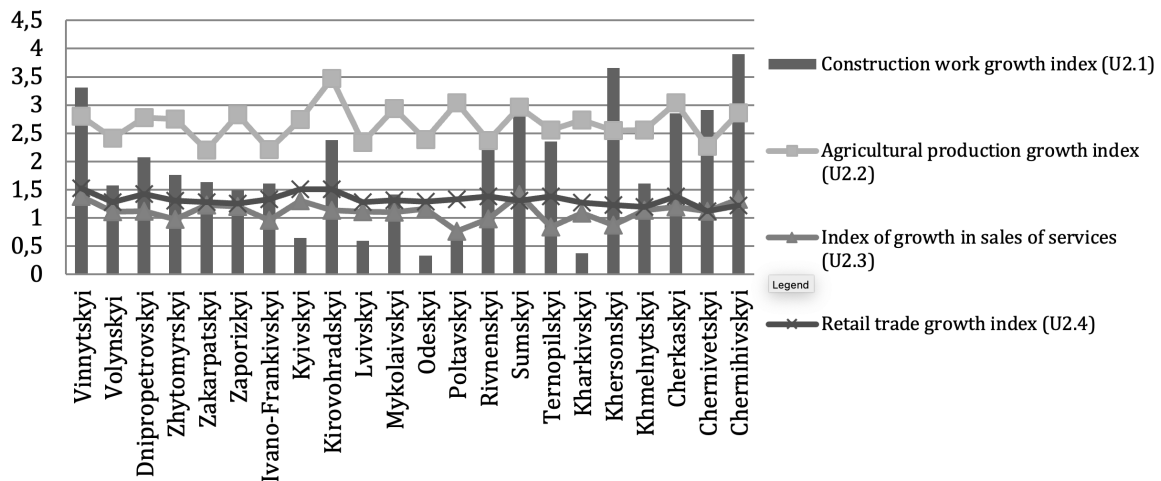
Figure 8. The level of functional potential of service cooperatives in rural areas of Ukraine
according to the indices of productive activity of the operating system
*Figura 8. El nivel de potencial funcional de las cooperativas de servicios en las zonas rurales de Ucrania según
los índices de actividad productiva del sistema operativo*

Source: own elaboration. Fuente: elaboración propia.

Significant disparities in the development of active business processes in service cooperatives in rural areas are observed in the growth rate of construction work (Figure 9). Thus, the leaders in the intensification of investment processes are the Kherson region (3.7 times) and the Chernihivskyi region (3.9 times), which indicates the growth of the indicator in these regions. On the other hand, in Kharkivskyi and Poltavskyi regions we observe a significant reduction of this indicator (-70%). Volumes of agricultural production in service cooperatives during the study period increased significantly in all regions of Ukraine. At the same time, the difference in growth rates is insignificant.

Figure 9. The level of functional potential of service cooperatives in rural areas of Ukraine
according to the indices of business activity of the operating system
*Figura 9. El nivel de potencial funcional de las cooperativas de servicios en las zonas rurales de Ucrania según
los índices de actividad empresarial del sistema operativo*

Source: own elaboration. Fuente: elaboración propia.

Among the important factors that contribute to increasing the level of the functional potential of service cooperatives in rural areas are investments and innovations (Figure 10).

Figure 10. Level of functional potential of service cooperatives in rural areas of Ukraine according to the indices of investment and innovation activity

Figura 10. Nivel de potencial funcional de las cooperativas de servicios en las zonas rurales de Ucrania según los índices de actividad de inversión e innovación
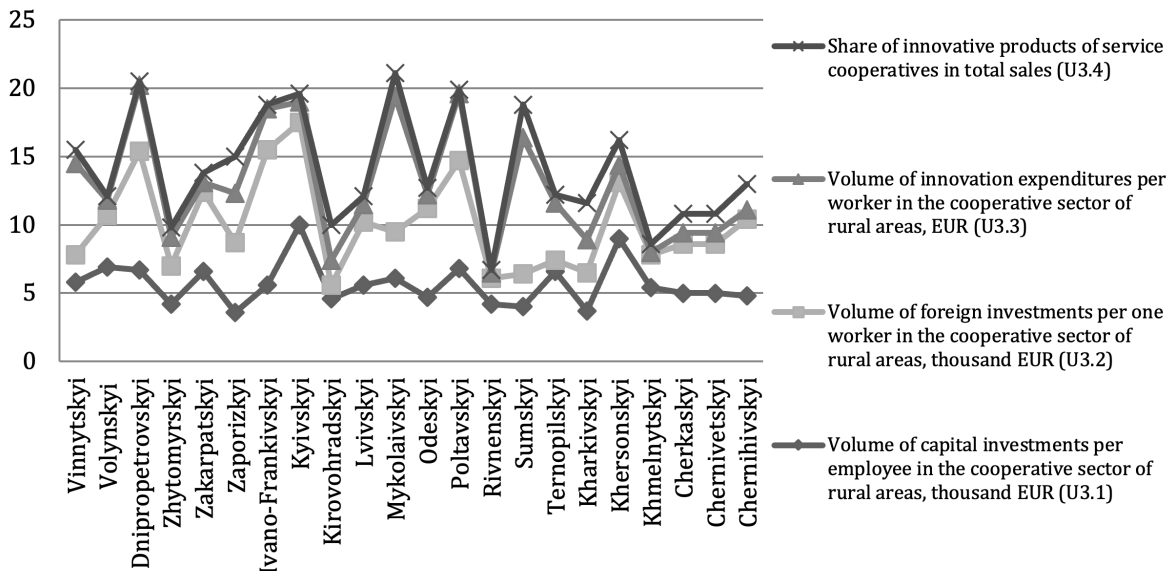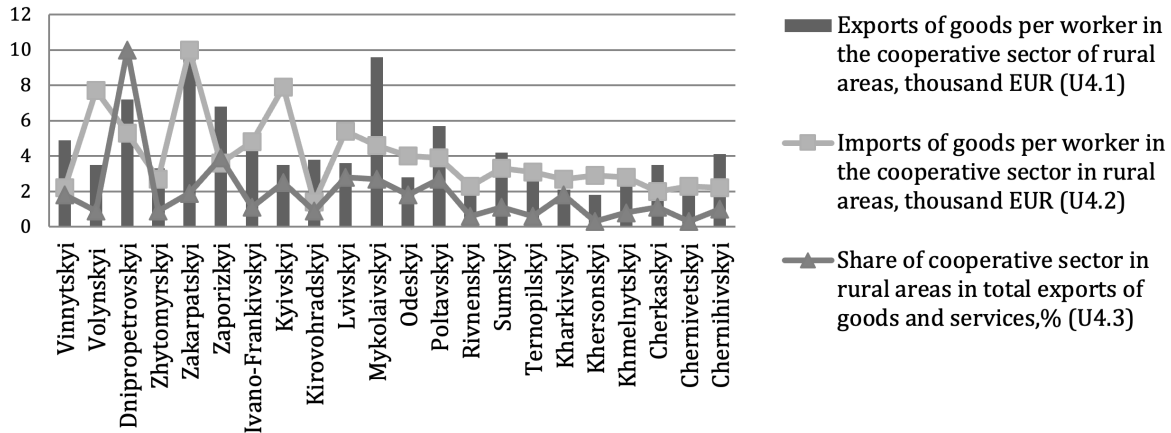

Source: own elaboration. Fuente: elaboración propia.

Thus, in 2015-2020 there is a tendency to increase capital investment in the development of the operating system of the cooperative sector of Ukraine. On average, their volumes in Ukraine have increased 2.5 times, and in some regions more than 3-6 times. The largest increase is observed in Volynskyi and Khersonskyi regions, and the lowest is in Zaporizkyi (+ 86.8%). In 2020, based on the relative stabilization of the national currency, there is a slight increase in investment in Ukraine—by 7%. In some regions, the positive trend of capital investment in rural development continues. In particular, in Volynskyi and Khersonskyi regions the growth was over 40% compared to the previous year, in Zakarpatskyi, Mykolaivskyi, and Poltavskyi—more than 20%. The reduction in investment rates in the Odeskyi region (-11%), Vinnytskyi (-6.0), and Khmelnytskyi (-6.6%) is negative. At the same time, the level of the functional potential of service cooperatives in rural areas of a certain region is provided primarily in conditions where investments have the most innovative direction.

Exports per capita in the cooperative sector of rural areas of Zakarpatskyi and Mykolaivskyi regions indicate a high share of cooperatives, which are concentrated in export-oriented production (Figure 11). The highest level of imports per one worker in the cooperative sector of rural areas is concentrated in the Zakarpatskyi region, due to the specifics of foreign economic activity of economic entities. The highest share of exports in the foreign trade turnover of Ukraine belongs to the service cooperatives of the Zaporizkyi region, which concentrate the largest export-oriented industries of agriculture.

Figure 11. The level of functional potential of service cooperatives in rural areas of Ukraine
according to indices of foreign economic activity
Figura 11. El nivel de potencial funcional de las cooperativas de servicios en las zonas rurales de Ucrania según
los índices de actividad económica extranjera

Source: own elaboration. Fuente: elaboración propia.

The results of the study can be used as an information basis for expanding and optimizing business processes in the service cooperatives of rural areas in order to increase their competitiveness among countries with developed economies of the cooperative sector.

Conclusions

Thus, the analysis of the general state of the functional potential of service cooperatives of Ukraine shows the average ability of their operating system to implement active business processes in the cooperative sector of the country. The preserved integration-spatial and socioeconomic disproportion of the development of business processes in the spheres of rural services has a formalized indicative nature of the impact on the domestic market of trade in the regions.

Slow structural changes, unstable and even threatening to the state's economic situation do not provide high-quality economic growth of priority areas of cooperation in rural areas. All the above criteria and limits of the functional potential of service cooperatives should be based on the formation and development of competitive advantages and efficient use of the available resource base of rural areas.

The development of service cooperation in Ukraine should ensure the implementation of new principles of European regional policy, which embodies the focus on endogenous assets, for example, the most efficient use of local resources to activate "soft" factors of endogenous development. They include innovative opportunities for cooperative business, competencies, networking, flexible business processes, and information technology with the expansion of the range of quality indicators, and the shift of emphasis from purely economic growth to the provision of rural areas with human capital, as well as the preservation of natural ecosystems.

Integrated service economic complexes within a certain rural area are an organizational and economic form of implementing the idea of forming a rational structure of the economy at the local, regional, and national levels. Therefore, the implementation of the cooperative principle of interaction of individual specialized business processes through members of the cooperative in the spatial economy should provide their unification around the agricultural cooperative as the core of a local agrarian cluster.

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