Economic socialization of entrepreneurship of rural territories to ensure the well-being of the population of Ukraine

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Abstract

The article considers the conditions for the sustainability of economic socialization of the entrepreneurship of rural areas of Ukraine. The main methods used in the study were clustering method, structural analysis, methods of economic evaluation of economic activity, financial condition of entrepreneurs taking into account industry specifics and classification of business entities as large, medium and small enterprises. It is proved that the social mission of entrepreneurship of rural areas in the economic plane of estimates should be considered according to the concept of determining benefits and costs. The method of estimating the social price of production, which is a motivating factor for increasing wages in rural areas, is determined. The trend of development of social and economic efficiency of enterprises in the formation of entrepreneurship of rural areas on average for one region of Ukraine and in the country as a whole is analyzed. It is proven that the realization of the entrepreneurship of rural areas within one region of Steppe, Forest-Steppe, Polissya and Western zones of Ukraine has a significant impact on people's well-being, quality and security of life, the amount of obligations to the subjects of interest and system of relations between entrepreneurs in agriculture.

Key words: economy; enterprises; agriculture; social expenses; social price of production.

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1. Introduction

Entrepreneurship as a mechanism for ensuring socio-economic systems plays a leading role in shaping social welfare. In the process of formation, development of entrepreneurship, supply to the market of economic and social goods is its economic socialization. In countries with promising agriculture, there is currently a paradoxical situation regarding the socio-economic effects of the business system: on the one hand, the agricultural sector demonstrates high global competitiveness (Sigidov et al., 2021; Akzholova and Osmonova, 2019; Suleimenov et al., 2021), and on the other – rural areas face significant development problems due to demonetization of economic support communities, with minimal display of culture of socially responsible business (Kravchuk et al., 2021; Tanklevska et al., 2021; Polukarov et al., 2021; Kim et al., 2020).

At the same time, the preservation of agricultural potential in rural areas contributes to the development of territorial socio-economic systems, improving the well-being of the rural population while taking advantage of the multifunctionality of the rural economy and economic activity. Multi-vector orientation of economic interests taking into account local social and environmental components of raw material reproduction, with export orientation of the structure of agricultural production allows implementing economic socialization of rural entrepreneurship in the dynamic transformation of rural society (Al-Ababneh et al., 2021; Derevyanko et al., 2018; Dymytrov et al., 2021; Tonkha et al., 2018; Batsmanova et al., 2020; Nikolaenko et al., 2020; Kolesnikov et al., 2021).

Scientific-methodological and analytical-practical development of business problems, qualification of its socio-economic bases were carried out by Z.I. Halushka (2009; 2013), N.M. Sirenko and T.I. Lunkina (2016). Theoretical and methodological aspects of improvement and adaptive disclosure of the content of entrepreneurship, taking into account national characteristics of management, as well as the specifics of rural development, agricultural sector, agriculture, were developed by scientists, including: V.V. Nahornyi and O.V. Chetveryk (2018), N.M. Sirenko and T.I. Lunkina (2016), M.V. Volkova and V.S. Shevchenko (2016). Economic socialization of entrepreneurship is

represented by the work of such scientists as: A.V. Artemenko (2016), Yu.O. Lupenko, M.I. Malik and V.M. Zaiats (2016), H.O. Polishchuk (2017) which systematized the potential of rural areas in the process of radical changes in political, economic, social systems and their activity of rural infrastructure, increasing differences between actual achievements and potential economic growth of rural society.

The priority of this study is to substantiate the criteria for ensuring economic socialization of entrepreneurship of rural areas, which allows systematic assessment of the interaction of its social, economic and environmental components to determine the impact of this interaction on socially oriented production costs.

2. Materials and methods

Creating a favorable environment for economic socialization of entrepreneurship of rural areas involves ensuring effective integration of entrepreneurs (who are characterized by business activity) in the process of combining their different types of objects of institutional regulation of rural development programs. To justify the economic socialization of entrepreneurship in rural areas at the regional level, it is proposed to use a set of different assessment methods, the most common of which are: clustering of socio-economic indicators with a clear fixation to multidimensional statistical analysis and artificial neural networks. Their use at the regional and local levels needs to be adapted, which necessitates the development of special assessment methods (Lupenko, 2016; Berikbaeva et al., 2020; Mustafin and Kantarbayeva, 2021).

The methodological basis for clustering indicators of economic socialization of entrepreneurship of rural areas, in the context of their identification, is a universal approach, which in the evaluation process distinguishes budgeting, structural elements and rationing of tangible current assets, as well as object identification assessments by structural-functional and institutional areas (Kuzmynchuk and Kutsenko, 2016; Makhnitskaya et al., 2012; Suleimenov et al., 2022). This allows forming the criteria for evaluation indicators in the basic algorithm for forecasting development. In this sense, the rating ranking of indicators of economic socialization of entrepreneurship of rural areas should use evaluation criteria, which is considered the most adaptable to the choice of

model of phased combination of indicators depending on the purpose of clustering (Zinoviev, 2009; Kudabayev et al., 2022; Mustafin and Volkov, 1982). The resulting indicator that reflects the place (rating) of the district (or group of districts) in the region for the development of economic socialization of entrepreneurship of rural areas is determined by equation (1) (Zinoviev, 2009):

$$R_i = \frac{\sum_{j=1}^{n} r_{ij}}{n}, \ i = 1,2,\ldots n, \tag{1}$$

where, R_i – place (rating) of the i-th district in the region for the development of economic socialization of entrepreneurship of rural areas; r_{ij} – place (rating) of the i-th district according to the j-th factor of development of economic socialization of entrepreneurship of rural areas; n – the number of districts (entities) that are part of the territorial group (or group in terms of endogenous potential) of economic socialization of entrepreneurship of rural areas.

The use of the integrated criterion of development of economic socialization of entrepreneurship of rural areas through the method of data processing requires the use of special indicative indicators, which are integrated into a combined indicator calculated by equation (5) (Zinoviev, 2009):

$$U = \sum_{i=1}^{n} K_i \frac{P_i}{Np_i} / n, \tag{2}$$

where, U – an integral criterion for the development of economic socialization of entrepreneurship of rural areas; i – index of special indicator; n – the number of special indicators; K_i – the coefficient of significance of the i-th special indicator; P_i – the actual value of the i-th special indicator; Np_i – the normative value of the i-th special indicator.

In institutional theory, the social price is interpreted as the result of political, structural and regulatory actions carried out by the ruling community, i.e., in fact the social price is the price paid by society as a result of a particular policy (Halushka, 2014; Mishchenko et al., 2016). The social price (value) of production for agricultural entrepreneurs consists of costs that have a social nature of direction (characterize the quality of meeting human needs) – this includes labor costs; contributions to social events; rent for land shares; rent for property shares (Naida and Naida, 2017; Ignatyuk et al., 2021). These components

occupy a certain share in the structure of production costs, which are determined by all activities, by agriculture, by industry (crop and livestock), by individual products. This structural analysis is aimed at identifying the dynamics of changes in indicators that shape the social price of production, which must be analyzed to characterize trends in the extent to which agricultural enterprises perform social functions.

To obtain relevant information in the process of assessing the state of economic socialization of entrepreneurship of rural areas, monitoring models are formed, which lay down algorithms for selecting assessment methods used as "source" data for regional (local) plans, programs, strategies.

Clustering of indicators of development of economic socialization of entrepreneurship of rural areas should be carried out using generally accepted methods of economic evaluation of economic activity, financial condition of entrepreneurs taking into account industry specifics and classification of business entities as large, medium and small enterprises (Ivanov et al., 2021; Aimbetova et al., 2020). To do this, an integrated indicator of resource potential of the entrepreneurship of rural areas (region) is calculated, which provides the rationing of indicators that characterize the potential of entrepreneurship. The integrated indicator of entrepreneurship of rural areas is calculated by equation (3) (Schumpeter, 2011; Tarasovych, 2015):

$$IP = \frac{1}{n}\sum_{i=1}^{n} K_{ni}\omega_i, \tag{3}$$

where, K_{ni} – normalized coefficient of the i-th indicator; ω_i – weight estimation of the i-th indicator; n the number of indicators that characterize the entrepreneurship of rural areas in the region.

Normative coefficients of indicators are determined by equation (4) (Schumpeter, 2011; Tarasovych, 2015):

$$Kni = \frac{P_i^+}{P_{max\ i}}, \text{ or } Kni = \frac{P_i^-}{P_{min\ i}}, \tag{4}$$

where, P_i^+ – the i-th indicator, the increase of which causes an increase in the level of entrepreneurship; P_i^- – the i-th indicator, the increase of which causes a decrease in its

level; $P_{max\ i}$ and $P_{min\ i}$ – the maximum and minimum, within the studied set of business entities, the value of the i-th indicator, respectively.

Authors believe that the use of this methodology will allow, at the regional level, to evaluate and develop regional (local) strategies, based on the available potential resource opportunities of all involved business participants in rural areas.

3. Results and Discussion

Functional characteristics of social entrepreneurship correspond to its importance as a way of organizing the process and directly activities on organizational forms of "business with a human face" (Yarova, 2015); way of forming social capital (Shpykuliak, 2007); performing the functions of social activity (Sava, 2018); mission "to make the world better" (Baimuratov, 2010; Syrmanova et al., 2021); tool for solving social problems (Kolot and Hrishnova, 2012; Fallahi Gilan et al., 2021). Social entrepreneurial function, in the classical sense, means the focus of the business entity on the implementation of measures of social mission, but on an entrepreneurial basis, and activities are specific actions, practices for the implementation of social entrepreneurial initiatives. Social entrepreneurship is treated as a non-profit, altruistic activity, but profitability is not excluded (Zhuikov et al., 2018). Conditionally, a social enterprise is a fact of reinvesting profits in the social activities of the entrepreneur.

Meanwhile, there is a very fine line between the social subjects, entrepreneurship and, for example, the social function, the activities of the entrepreneur. Therefore, usually the criteria of sociality must be determined for society, the social orientation of management. Social type is rightly considered an innovative type of entrepreneurship, because due to its recent emergence it is at the stage of direct formation, establishment in the economic, socio-economic system, market mechanism. This type of entrepreneurship requires new ideas, intellectual growth factors, because the implementation of the principles of meeting social needs on a non-profit basis requires creative solutions, high motivation (Ilchenko, 2010; Hrynko et al., 2021).

The key to macroeconomic stability is the economic efficiency of the rural sector, which is achieved through a special competitive environment, as the market is represented

by many rural enterprises in Ukraine, which produce the same and irreplaceable priority for consumption products (Table 1).

Table 1. Socio-economic performance of business entities in rural areas of Ukraine

Indicators	2017	2018	2019	2020	2021
Subjective composition, % available					
Enterprises, %	59.0	60.3	65.4	66.2	66.6
Individuals - entrepreneurs, %	41.0	39.7	34.6	33.8	33.4
Employees - on average, people					
per 1 company	12.8	13.7	11.8	11.5	11.3
per 1 individual entrepreneur	1.4	1.5	1.6	1.7	1.7
Enterprise costs for staff					
In total, billion USD	1.04	1.20	1.59	2.00	2.29
Wage, %	74.6	82.1	82.3	82.2	82.4
Deductions for social events, %	25.4	17.9	17.7	17.8	17.6
Production					
Volume of industry, by value, by economy, %	12.1	11.3	9.8	9.9	9.1
The share of economic entities in the volume of production of the industry					
Enterprises, %	98.2	97.9	97.5	97.5	97.5
Individuals - entrepreneurs, %	1.8	2.1	2.5	2.5	2.5
Realization					
Volume of industry, by value, by economy, %	6.5	6.0	5.5	5.3	5.3
The share of economic entities in the volume of sales of the industry					
Enterprises, %	97.4	97.3	97.2	97.1	97.1
Individuals - entrepreneurs, %	2.6	2.7	2.8	2.9	2.9
Structural distribution of value added					
Volume of value added, by share, by economy, %	13.3	10.5	8.9	8.3	7.1
The share of economic entities in the volume of production of the industry					
Enterprises, %	98.9	98.3	97.6	97.3	97.2
Individuals - entrepreneurs, %	1.2	1.7	2.4	2.7	2.8
Enterprises that received profit before tax	88.5	87.5	86.2	86.3	83.1
Net income companies	88.4	87.7	86.2	86.2	83
The level of profitability (loss) of operating activities of enterprises	41.7	32.4	22.4	18.3	19.2
The level of profitability (loss) of all activities	29.5	24.7	19.0	13.7	16.1

Source: compiled according to data (Kuznietsova, 2020; State Statistics Service of Ukraine, 2022).

In accordance with the structural composition of economic entities, they ensure the performance of the function of job creation, which is one of the criteria for economic socialization of entrepreneurship. Due to the factor of employment, creation or reduction of jobs, a socially oriented or capitalist model of organizing the development of entrepreneurship is introduced. This characterizes the state, prospects for functioning, economic, social and other interests that are realized. From the analysis of data on the availability and distribution of employees, it follows that entrepreneurs are implementing

models of capitalist orientation – reducing the number of employees, optimizing staff costs. This trend or motivation is typical for both enterprises and individual entrepreneurs. For example, where it is not possible to organizationally influence the natural process (agriculture), entrepreneurs move to the production of less labor-intensive products. In this case, the labor force is attracted seasonally and, accordingly, the average annual staff costs are reduced. This is a feature of modern domestic agriculture, which is associated not only with its innovation, but also with a focus on the situation (Artemenko, 2016; Mazurenko et al., 2020; Bulgakov et al., 2020).

Objectively, the situation regarding the dynamics of employment is developing – companies are implementing a policy of reducing the number of staff. This trend is stable according to the trend of changing the number of employees in agricultural enterprises, but their absolute staff costs increased in terms of the share of wages, contributions to social activities decreased. In the agricultural sectors during 2017-2021, there is a direct correlation in the subsystem "number of employees – staff costs". Accordingly, there is a feature that in the rural sector (it is the basis for research to assess the development of economic socialization of rural entrepreneurship) there is a reformatting of the production structure to achieve maximum innovation as a factor in reducing employment (Zhidebayeva et al., 2020; Kalenska et al., 2021). Thus, authors observe divergent trends in the economic socialization of entrepreneurial activity between enterprises and individual entrepreneurs, in connection with employment, participation in providing opportunities for the rural population to earn a living. The main sector in the formation of value added at the level of the national economy of Ukraine is agriculture, which together reaches about 50% of total production and demonstrates a jump in performance in terms of profitability and viability (Tonkha et al., 2020; Kharytonov et al., 2019).

Estimates of macroeconomic trends in business development in the national economy of Ukraine and in rural areas show that this system of economic relations still remains transitive, unstable in the formation of sustainable trends in socio-economic growth; economic efficiency is mainly formed by simple minimization of costs without strategic investment programs in business (especially in small and medium segments of agricultural business); limited rationality of management is formed due to the impossibility of

attracting highly qualified personnel and structural modernization of enterprises; the existing business model mostly does not meet the principles of production savings; the obtained business effects are qualified by the direction as those aimed at accumulating wealth of entrepreneurs without taking into account the priority of improving living standards (Tkachuk et al., 2021; Zhantasov et al., 2022; Shcherbak et al., 2007). This is the main conclusion about the current macroeconomic trends of socialization of entrepreneurship.

Exploring the peculiarities of economic socialization of agricultural enterprises and individual entrepreneurs of Ukraine, authors focus on assessing the dynamics of their participation in the formation of entrepreneurship of rural areas based on identifying factors promoting rural conservation (their participation in solving rural problems, promoting the well-being of the population) (Fig. 1-3).
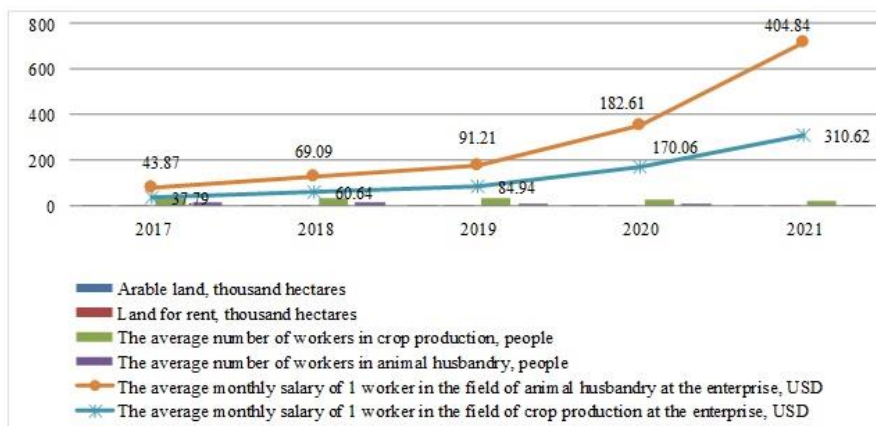

Figure 1. The trend of indicators of development of social performance of enterprises in the formation of entrepreneurship of rural areas on average in Ukraine for 2017-2021

Source: calculated by the authors according to data (Kuznietsova, 2020; State Statistics Service of Ukraine, 2022).
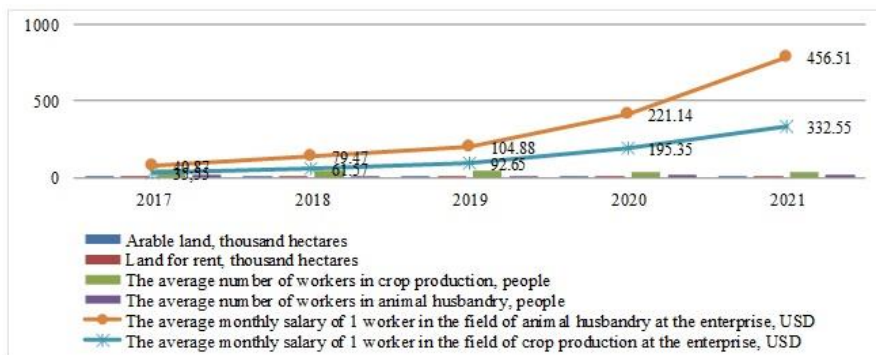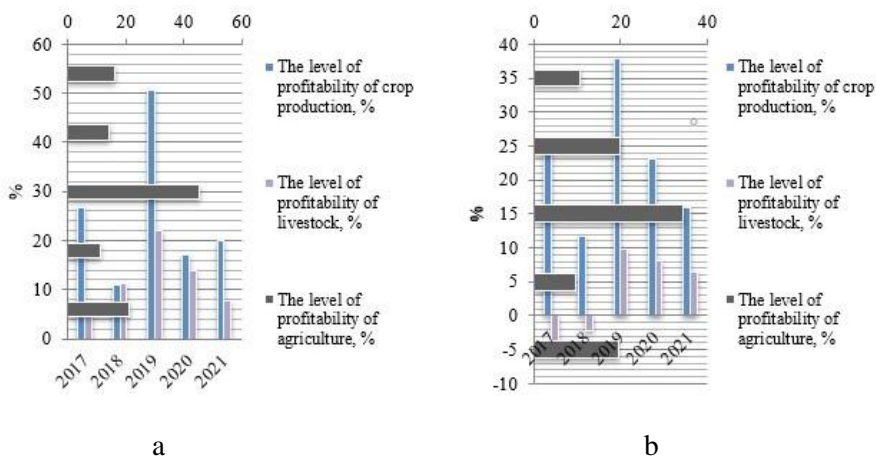
Figure 2. The trend of indicators of development of social performance of enterprises in the formation of entrepreneurship of rural areas on average per region of Ukraine for 2017-2021

Source: calculated by the authors according to data (Kuznietsova, 2020; State Statistics Service of Ukraine, 2022).

a   b

Figure 3. The trend of indicators of development of economic performance of enterprises in the formation of entrepreneurship of rural areas on average a) in Ukraine and b) per region of Ukraine for 2017-2021

Source: calculated by the authors according to data (Kuznietsova, 2020; State Statistics Service of Ukraine, 2022).

For the period 2017-2021, the area of arable land characterizes the resource base of enterprises in rural areas as the main means of production (on average, one enterprise has 2-3 thousand hectares). Therefore, workers employed in production, as well as property owners directly receive the socio-economic benefits of land use. According to

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employment indicators, the average number of employees in 2017-2021 is declining due to changes in the structure and specialization of production, as well as due to technical and technological innovations that reduce the need of economic entities for labor. In addition, the social effect that solves the problem of rural employment through the mechanism of creating additional jobs has a negative trend.

Dominant in terms of the number of employees (on average per one enterprise) is the crop industry, despite the technological difference from animal husbandry as an industry with more labor-intensive products. The priority of animal husbandry over crop production is manifested only in the higher average monthly wage (Hryschenko et al., 2011; Mel'nychuk and Hryshchenko, 2014). The aspect of wages in the trend of economic socialization of entrepreneurship of rural areas determines the social price of production, which directly affects the level of material well-being of workers employed in production (there is a significant increase in average monthly wages). Economic efficiency, as a source of economic socialization of entrepreneurship of rural areas, provides a high level of profitability of enterprises in the formation of entrepreneurial potential of rural areas, both on average in the country and in one region of Ukraine.

The main quantitative criterion of economic socialization of entrepreneurship of rural areas is socially oriented costs that affect the value of the social price of production (Fig. 4-5).
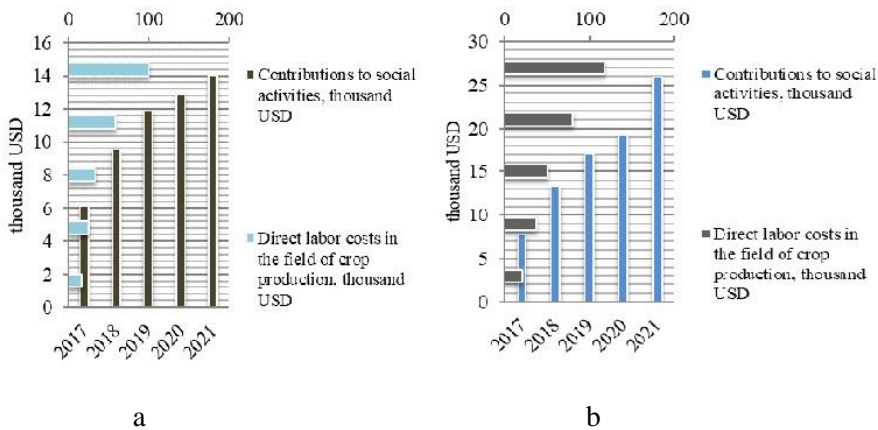

a   b

Figure 4. The trend of socially oriented costs for the production of crop products (works, services) on average per one enterprise in the formation of entrepreneurship of rural areas on average a) in Ukraine and b) per region of Ukraine for 2017-2021
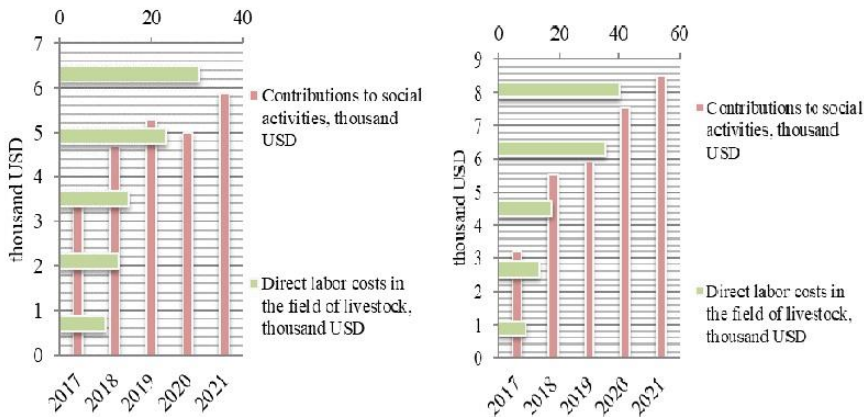
Figure 5. The trend of socially oriented costs for the production of livestock on average per one enterprise in the formation of entrepreneurship of rural areas on average a) in Ukraine and b) per region for 2017-2021

As part of the costs that are components of the social price of production, there are direct costs of wages, social security contributions, as well as indirect – rent (it should be attributed to costs in the case of employment of the property owner). As socially oriented costs are growing dynamically, especially an additional factor – rents, so there is a clear link between economic and social efficiency (i.e., with increasing profitability, nominally increases the profitability of staff).

Direct assessment of the dynamics of socially oriented costs in the production component of the entrepreneurship of rural enterprises (Fig. 6) (i.e., labor costs) and contributions to social activities (Fig. 7) shows an ambiguous or divergent trend.
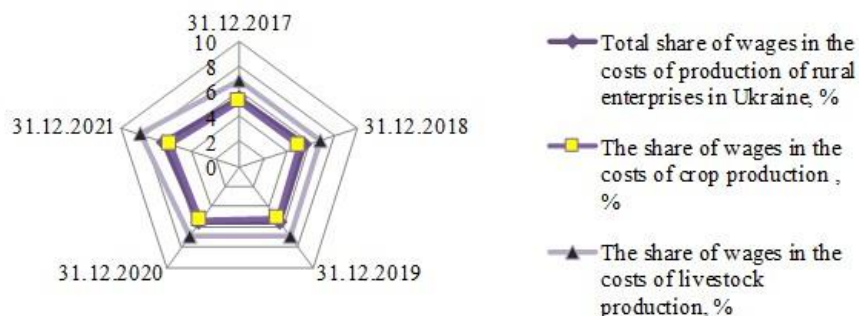
Figure 6. Dynamics of the share of wages in the production costs of enterprises in rural areas of Ukraine for 2017-2021, %

Source: calculated by the authors according to data (Kuznietsova, 2020; State Statistics Service of Ukraine, 2022).
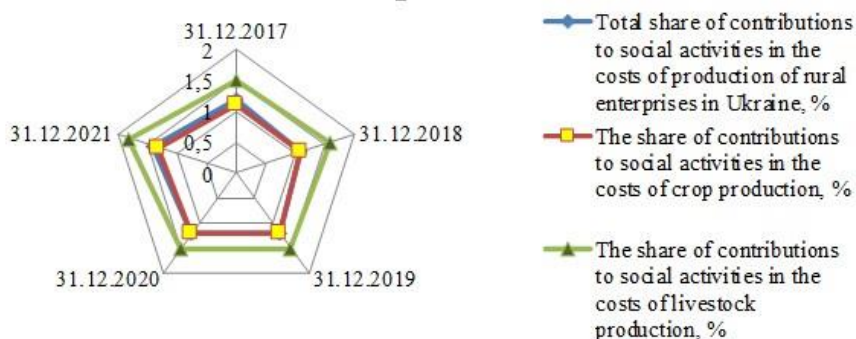

Figure 7. Dynamics of the share of contributions to social activities in the production costs of enterprises in rural areas of Ukraine for 2017-2021, %

Source: calculated by the authors according to data (Kuznietsova, 2020; State Statistics Service of Ukraine, 2022).

Starting in 2017, labor costs and social security contributions in rural enterprises in Ukraine have a dynamic upward trend. This is due to the increase in the minimum wage, and in particular in animal husbandry, which is almost 1.5 times higher than in crop production.

The current structure of costs of agricultural production in Ukraine confirms that producers make social expenditures on a residual basis – mainly within the norm of the minimum wage, deductions for social activities, rent. The reason is that rural entrepreneurs have the opportunity to meet their labor needs. Only in the last three years (2019-2021)

due to the mass exodus of the best workers abroad, rural entrepreneurs have slightly changed the social policy to increase financial resources for staff, which, accordingly, accelerated the growth of wages in agriculture. In addition, with the decrease in the number of able-bodied skilled workers, the problem of efficient production has become more acute, forcing entrepreneurs to increase wages for employees (Bilyk and Koretska, 2020; Shcherban et al., 2021).

For a more thorough assessment of the economic socialization of the entrepreneurship of rural areas, comprehensive indicators are presented (Fig. 8), which indicate the general criteria for the effectiveness of this process.
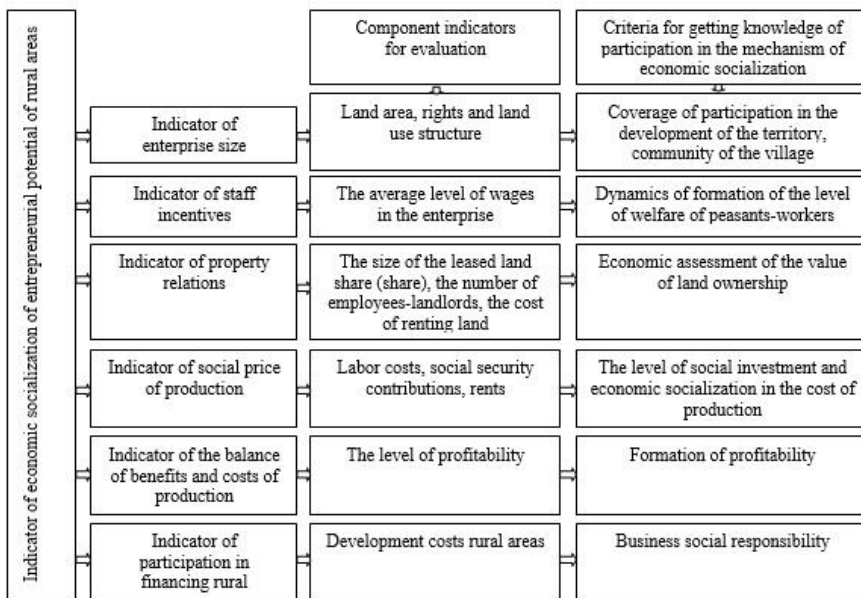

Figure 8. Comprehensive indicators of economic socialization of entrepreneurship of rural areas

Source: generated by the authors according to data (Lunkina and Vlasyuk, 2017; Levkivska and Shvets, 2018; Shulyak, 2018; Lupenko et al., 2020).

Comprehensive indicators of economic socialization of entrepreneurial potential of rural areas are calculated for enterprises within one region of Steppe zone, Forest-Steppe zone, Polissya zone and Western zone of Ukraine (Gumentyk et al., 2020; Novytska et al., 2020; Bobos et al., 2019). At the same time, socialization as a process is aimed at ensuring

the social development of entrepreneurship in rural areas through the organizational, environmental, intellectual, economic component.

The coefficient of the level of socialization of entrepreneurship of rural areas will be determined by the criteria of quality of life, level of security of life, level of relations, and level of fulfillment of obligations to the subjects of interest and is calculated by equation (5) (Lunkina and Vlasyuk, 2017; Levkivska and Shvets, 2018; Shulyak, 2018; Lupenko et al., 2020):

$$K_{vs} = \sum_{i=1}^{4} K_i \frac{k_i}{4}, \tag{5}$$

where, K_{vs} – the level of socialization of entrepreneurship of rural areas; k_1 – the coefficient of quality of life of people; k_2 – the level of safety of human life; k_3 – the level of the system of relations; k_4 – the level of fulfillment of obligations to the subjects of interest.

According to the clustering of enterprises within one region of Steppe zone, Forest-Steppe zone, Polissya zone and Western zone of Ukraine, it is established that the level of socialization is increasing, which is presented in Fig. 9.
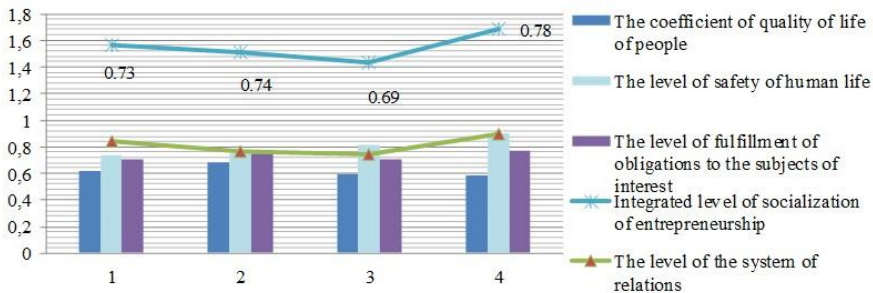

Figure 9. Clustering of enterprises within one region of Steppe, Forest-Steppe, Polissya and Western zones of Ukraine according to the level of socialization of entrepreneurship of rural areas

Note: 1 – enterprises within one region of Steppe zone; 2 – enterprises within one region of Forest-Steppe zone; 3 – enterprises within one region of Polissya zone; 4 – enterprises within one region of Western zone.

A multifactor model has been developed, the effective feature of which is the level of socialization of entrepreneurship of enterprises within one region of Steppe zone, Forest-Steppe zone, Polissya zone and Western zone of Ukraine.

The model has the form:

$$Y = -0.23 + 0.35k_1 + 0.53k_2 + 0.17k_3 + 0.28k_4. \tag{6}$$

As a result of the calculation, this equation shows that all 4 factors have a significant impact on performance, i.e. with increasing the quality of life of people by 0.1 the level of socialization of entrepreneurship of enterprises within one region of Steppe zone, Forest-Steppe zone, Polissya zone and Western zone of Ukraine increases by 0.35; with the increase of the coefficient of the level of security of human life by 0.1 the level of socialization increases by 0.53; with the increase of the coefficient of the level of the system of relations by 0.1 the level of socialization increases by 0.17; with the increase of the coefficient of the level of fulfillment of obligations to the subjects of interest by 0.1 the level of socialization increases by 0.28.

The multiple correlation coefficient of 0.89 characterizes the high density of the influence of these factors on the result.

Given the fact that the social responsibility of enterprises to achieve entrepreneurship of rural areas is formed from the desire of entrepreneurs to support the implementation of social projects, authors have identified components of social responsibility, namely: organizational and managerial, social, environmental and economic.

The level of social responsibility of enterprises to achieve the development of entrepreneurship of rural areas will be determined by equation (7) (Lunkina and Vlasyuk, 2017; Levkivska and Shvets, 2018; Shulyak, 2018; Lupenko et al., 2020):

$$K_{vsr} = \sum_{i=1}^{4} K_i \frac{k_i}{4}, \tag{7}$$

where, K_{vsr} – the level of social responsibility of enterprises to achieve the development of entrepreneurship of rural areas; k_1 – the level of organizational and managerial potential; k_2 – the level of social potential; k_3 – the level of economic potential; k_4 – the level of ecological potential.

According to the clustering of enterprises within one region of Steppe zone, Forest-Steppe zone, Polissya zone and Western zone of Ukraine, it is established that the level of socialization is 0.68, which is presented in Fig. 10.
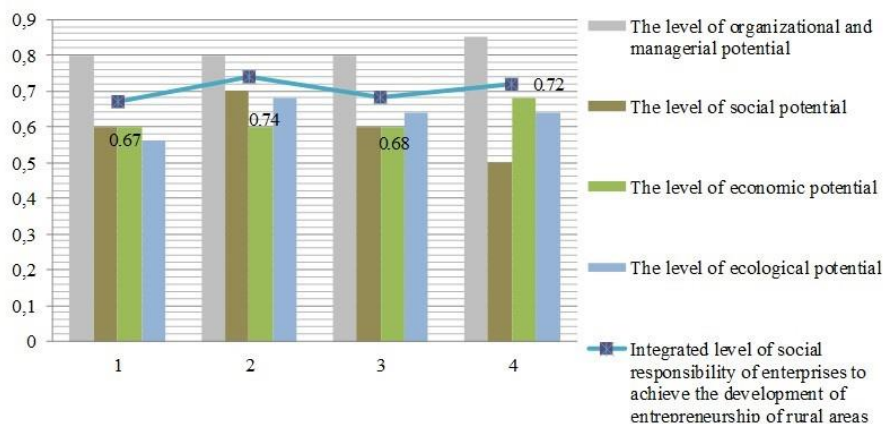
Figure 10. Clustering of enterprises within one region of Steppe, Forest-Steppe, Polissya and Western zones of Ukraine according to the level of social responsibility in the realization of the entrepreneurial potential of rural areas

Note: 1 – enterprises within one region of Steppe zone; 2 – enterprises within one region of Forest-Steppe zone; 3 – enterprises within one region of Polissya zone; 4 – enterprises within one region of Western zone.

The equation of the multifactor model of the level of social responsibility is presented as follows:

$$Y = -0.01 + 0.15k_1 + 0.30k_2 + 0.42k_3 + 0.17k_4. \qquad (8)$$

Thus, all four factors have a significant impact on the performance trait. Thus, increasing the level of organizational and managerial potential by 0.1 increases the level of social responsibility of enterprises to achieve the development of entrepreneurship of rural areas by 0.15; with the increase of the level of social potential on 0.1 the level of social responsibility increases by 0.30; increasing the level of economic potential by 0.1 accelerates the level of social responsibility by 0.42; increasing the level of environmental potential by 0.1 allows to realize the level of social responsibility by 0.17. The coefficient of multiple correlation which is equal to 0.98 characterizes the high density of the influence of these factors on the result.

Accordingly, the level of socialization of entrepreneurial of rural areas within one region in Steppe, Forest-Steppe, Polissya and Western zones of Ukraine and the level of social responsibility of enterprises is directly dependent on the quality of life (characterized by labor costs and job satisfaction at enterprises), the level of security of

human life and the level of relations (economic behavior of economic entities, production of material and spiritual goods to ensure human life), the level of fulfillment of obligations to subjects of interest (rent for land, property shares).

4. Conclusions

Thus, the level of economic socialization of entrepreneurial of rural areas and the well-being of the population of the country and regions, in particular, depends on the actions of entrepreneurs – economic agents who organize economic activities in agriculture using creative tools of agribusiness and optimal combination of resources. This ensures the effectiveness of business entities and their ability to effectively transform existing social, economic, environmental, spatial and territorial resources in the sustainable "life cycle" of agribusiness, contributing to employment and socio-economic development of rural areas in the regions.

The potential for effective interaction of different types of territorial resources between businesses is identified with the entrepreneurial potential of territories, the study of which, especially in the perspective of sustainable agricultural development on an innovative basis, allows social responsibility of agribusiness to stop rural migration, improve competencies ensuring the reproduction of intellectual capital of rural entrepreneurship. Due to the effective implementation of organizational, motivational, control functions and the use of non-standard, innovative approaches in internal and external management of the business process allows economic socialization of business activities to maintain food security and export food potential, recovery of rural economy growth of the production process.

References

Aimbetova I.O., Suleimenov U.S., Kostikov A.O., Ristavletov R.A. (2020), "Development of heat storage materials based on commodity paraffins", *News of the National Academy of Sciences of the Republic of Kazakhstan, Series of Geology and Technical Sciences*, 6(444), 6-13.

Akzholova M., Osmonova A. (2019), "Digitization of marketing activities of agricultural entrepreneurship in the conditions of the Kyrgyz Republic", *IOP Conference Series: Earth and Environmental Science*, 395(1), 012114.

Al-Ababneh H.A., Osmonova A., Dumanska I., Matkovskyi P., Kalynovskyy A. (2021), "Analysis of export of agricultural products in the context of the global food crisis", *Agricultural and Resource Economics*, 7(4), 5-26.

Artemenko A.V. (2016), "Socialization of economic relations in Ukraine and its impact on economic efficiency". In *Proceedings of the International Scientific-Practical Conference: From Baltic to Black Sea: National Models of Economic Systems* (pp. 40-44), Baltija Publishing, Riga.

Baimuratov U.B. (2010), "New social economy: paradigm and prospects", *Scientific Bulletin of Poltava University of Consumer Cooperation of Ukraine*, 2(41), 54-59.

Batsmanova L., Taran N., Konotop Y., Kalenska S., Novytska N. (2020), "Use of a colloidal solution of metal and metal oxide-containing nanoparticles as fertilizer for increasing soybean productivity", *Journal of Central European Agriculture*, 21(2), 311-319.

Berikbaeva M.A., Khairullin B.T., Mukhamadeyeva R.M. (2020), "The study of methods for combined processing of deep holes of hydraulic cylinders", *International Journal of Mechanics*, 14, 177-184.

Bilyk O.I., Koretska T.M. (2020), "The possibilities of development of social entrepreneurship in Ukraine", *Efektyvna ekonomika*, 1. Available at: http://www.economy.nayka.com.ua/?op=1&z=7587

Bobos I., Fedosy I., Zavadska O., Tonha O., Olt J. (2019), "Optimization of plant densities of dolichos (Dolichos lablab l. var. lignosus) bean in the right-bank of forest-steppe of Ukraine", *Agronomy Research*, 17(6), 2195-2202.

Bulgakov V., Nikolaenko S., Holovach I., Adamchuk V., Kiurchev S., Ivanovs S., Olt J. (2020), "Theory of grain mixture particle motion during aspiration separation", *Agronomy Research*, 18(1), 18-37.

Derevyanko B., Nikolenko L., Syrmamiik I., Mykytenko Y., Gasparevich I. (2018), "Assessment of financial and economic security of the region (based on the relevant statistics of the Donetsk region)", *Investment Management and Financial Innovations*, 15(4), 283-295.

Dymytrov S., Sabluk V., Tanchyk S., Gumentyk M., Balagura O. (2021), "Increasing maize productivity by presowing usage of biologies Mycofriend, Mikovital and Florobacillin", *E3S Web of Conferences*, 255, 01006.

Fallahi Gilan R., Parvin S., Kaldi A. (2021), "Quality of Life of the Disabled in Tehran", *Iranian Journal of War and Public Health*, 13(3), 209-219.

Gumentyk M.Y., Chernysky V.V., Gumentyk V.M., Kharytonov M.M. (2020), "Technology for two switchgrass morphotypes growing in the conditions of Ukraine's forest Steppe zone", *INMATEH - Agricultural Engineering*, 61(2), 71-76.

Halushka Z.I. (2009), *Socialization of transformational economy: features, problems, priorities*, Chernivtsi National University, Chernivtsi.

Halushka Z.I. (2014), "Institutionalization of social responsibility of business: mechanisms of formation", *Scientific Works of Donetsk National Technical University. Series: Economic*, 1, 90-98.

Halushka, Z.I. (2013), "The phenomenon of social entrepreneurship: the concept and prospects of development in Ukraine", *Bulletin of Taras Shevchenko National Univerisity of Kyiv. Economy*, 148, 15-17.

Hrynko P., Grinko A., Shtal T., Radchenko H., Pokolodna M. (2021), "Formation of an Innovative Business Model of a Trade Organization in the Context of Economic Globalization", *Scientific Horizons*, 24(6), 92-98.

Hryschenko V.A., Tomchuk V.A., Lytvynenko O.M., Chernyshenko V.O., Gryschuk V.I., Platonova T.M. (2011), "An estimate of protein synthesis in liver under induced hepatitis", *Ukrain'skyi Biokhimichnyi Zhurnal*, 83(1), 63-68.

Ignatyuk A., Dikiy A., Shevtsiv L., Petlenko Y., Klymash N., Zaitsev O. (2021), "Determination of the company's value under the influence of various factors", *Journal of Optimization in Industrial Engineering*, 14(1), 151-157.

Ilchenko, N.V. (2010), "Social entrepreneurship as an instrument of economic and social development of the territorial community", *Ekonomika ta Derzhava*, 12, 127-129.

Ivanov V., Lvova N., Pokrovskaia N., Andrianov A., Naumenkova S. (2021), "Testing the Hypothesis of Corporate Investment Life Cycle: The Case of Russia", *Springer Proceedings in Business and Economics*, 169-180.

Kalenska S., Novytska N., Stolyarchuk T., Kalenskyi V., Garbar L., Sadko M., Shutiy O., Sonko R. (2021), "Nanopreparations in technologies of plants growing", *Agronomy Research*, 19(Special Issue 1), 795-808.

Kharytonov M., Martynova N., Babenko M., Rula I., Gumentyk M., Bagorka M., Pashova V. (2019), "The production of biofuel feedstock on reclaimed land based on sweet sorghum biomass", *Agriculture and Forestry*, 65(4), 233-240.

Kim I.S., Kenzhibayeva G.S., Janpaizova V.M., Kupenova A.A., Dairabaeva G.I., Esenbaeva K.A., Torebaev B.P. (2020), "Features of developing a concept of industrial copyright collections as a way of creative self-realization for designers", *Izvestiya Vysshikh Uchebnykh Zavedenii, Seriya Teknologiya Tekstil'noi Promyshlennosti*, 388(4), 148-152.

Kolesnikov A.S., Serikbaev B.E., Zolkin A.L., Kenzhibaeva G.S., Isaev G.I., Botabaev N.E., Shapalov Sh.K., Kolesnikova O.G., Iztleuov G.M., Suigenbayeva A. Zh., Kutzhanova A.N., Asylbekova D.D., Ashirbaev Kh.A., Alchinbaeva O.Z., Kolesnikova V.A. (2021), "Processing of Non-Ferrous Metallurgy Waste Slag for its Complex Recovery as a Secondary Mineral Raw Material", *Refractories and Industrial Ceramics*, 62(4), 375-380.

Kolot A.M., Hrishnova O.A. (2012), *Social responsibility: theory and practice of development*, KNEU, Kyiv.

Kravchuk N., Kilnitska O., Lavrynenko S., Yaremova M. (2021), "Infrastructural Support of Socio-Economic Development of Rural Territories of Ukraine", *Scientific Horizons*, 24(10), 58-71.

Kudabayev R., Suleimenov U., Ristavletov R., Kasimov I., Kambarov M., Zhangabay N., Abshenov K. (2022), "Modeling the Thermal Regime of a Room in a Building with a Thermal Energy Storage Envelope", *Mathematical Modelling of Engineering Problems*, 9(2), 351-358.

Kuzmynchuk N.V., Kutsenko T.M. (2016), "Approaches to the diagnosis of socio-economic potential of the region as a basis for effective management strategy", *Marketing and Management of Innovations*, 4, 269-284.

Kuznietsova M.S. (2020), *Activities of large, medium, small and micro enterprises in 2019*, State Statistics Service of Ukraine, Kyiv.

Levkivska L.M., Shvets T.V. (2018), "Social responsibility in context of forming of strategic development of the modern agricultural business", *Economics of Agro-Industrial Complex*, 7, 74-82.

Lunkina T.I., Vlasyuk I.M. (2017), "Corporate social responsibility business in Ukraine: current state and areas of improvement", *Modern Economics*, 1, 24-29.

Lupenko Yu.O. (2016), *Methodical approaches to the assessment of entrepreneurial activity in the agricultural sector of economics*, NNTs "IAE", Kyiv.

Lupenko Yu.O., Malik M.I., Bulavka O.H. (2020), *Strategic directions of sustainable development of rural areas for the period up to 2030*, NNTs "IAE", Kyiv.

Makhnitskaya E.I., Shalbolova U.Z. (2012), "Regional model of investment innovative processes development", *Actual Problems of Economics*, 133(7), 414-426.

Mazurenko B., Kalenska S., Honchar L., Novytska N. (2020), "Grain yield response of facultative and winter triticale for late autumn sowing in different weather conditions", *Agronomy Research*, 18(1), 183-193.

Mel'nychuk D.O., Hryshchenko V.A. (2014), "Exchange of bile pigments under the action of ecopathogenic factors on organism", *Ukrainskiĭ biokhimicheskiĭ zhurnal*, 86(5), 156.

Mishchenko V.I., Naumenkova S.V., Shapoval O.A. (2016), "Consumer loans securitization", *Actual Problems of Economics*, 186(12), 311-321.

Mustafin A., Kantarbayeva A. (2021), "Resource competition and technological diversity", *PLoS ONE*, 16(11 November), e0259875.

Mustafin A.T., Volkov E.I. (1982), "On the distribution of cell cycle generation times", *BioSystems*, 15(2), 111-126.

Nahornyi V.V., Chetveryk O.V. (2018), "The role of social responsibility in the development of agribusiness", *Scientific Bulletin of NULES of Ukraine. Series "Economics, Agricultural Management, Business"*, 290, 209-219.

Naida I.S., Naida A.V. (2017), "Methodical approaches to assessing the level of socio-economic development of agricultural enterprises", *Financial and Credit Activities: Problems of Theory and Practice*, 1, 396-405.

Nikolaenko S., Bondar M., Bulgakova O., Vartukapteinis K. (2020), "Possibilities to control students' knowledge while trained for their future occupation in field of agricultural engineering", *Engineering for Rural Development*, 19, 1355-1363.

Novytska N., Gadzovskiy G., Mazurenko B., Kalenska S., Svistunova I., Martynov O. (2020), "Effect of seed inoculation and foliar fertilizing on structure of soybean yield and yield structure in western polissya of Ukraine", *Agronomy Research*, 18(4), 2512-2519.

Polishchuk H.O. (2017), "State support for small business development: domestic and foreign experience", *Pressing Problems of Public Administration*, 1(51), 1-9.

Polukarov O.I., Prakhovnik N.A., Polukarov Y.O., Mitiuk L.O., Demchuk H.V. (2021), "Assessment of occupational risks: New approaches, improvement, and methodology", *International Journal of Advanced and Applied Sciences*, 8(11), 79-86.

Sava A.P. (2018), *Regulation of rural development*, Krok, Ternopil.

Schumpeter J.A. (2011), *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*, Publishing House "Kyiv-Mohyla Academy", Kyiv.

Shcherbak V.I., Yakushin V.M., Pligin Yu.V., Korneychuk N.N. (2007), "Biotic components in the fouling of various substrata in the regulated and non-regulated sections of the river", *Hydrobiological Journal*, 43(6), 23-39.

Shcherban T., Hoblyk V., Bretsko I., Yamchuk T., Voronova O. (2021), "Psychological features of aggression of service sector workers in the conditions of a pandemic", *Health Education and Health Promotion*, 9(4), 325-333.

Shpykuliak O.H. (2007), "The Formation of Social Capital in the Agrarian Sphere of Transformational Economy", *Management Theory and Studies for Rural Business and Infrastructure Development*, 8, 28-34.

Shulyak B.V. (2018), "Development of rural entrepreneurship on ecological basis: authentication of factors and determination of strategic imperatives", *Modern Issues of Economics and Law*, 2(8), 60-68.

Sigidov Y.I., Petrov A.M., Osmonova A.A., Zhukova G.S., Kostenko Y.O. (2021), "Financial Risks in the Financial and Economic Security Management System of the Enterprise", *Estudios de Economia Aplicada*, 39(6). Available at: https://ojs.ual.es/ojs/index.php/eea/article/view/5325

Sirenko N.M., Lunkina T.I. (2016), "Social entrepreneurship in Ukraine: main aspects", *Sustainable Economic Development*, 1, 5-10.

State Statistics Service of Ukraine (2022). Available at: http://www.ukrstat.gov.ua/operativ/menu/menu_u/zed.htm

Suleimenov L., Zhangabay N., Utelbayeva A., Murad M.A.A., Dosmakanbetova A., Abshenov K., Buganova S., Moldagaliyev A., Imanaliyev K., Duissenbekov B. (2022), "Estimation of the strength of vertical cylindrical liquidstorage tanks with dents in the wall", *Eastern-European Journal of Enterprise Technologies*, 1(7-115), 6-20.

Suleimenov U., Zhangabay N., Utelbayeva A., Ibrahim M.N.M., Moldagaliyev A., Abshenov K., Buganova S., Daurbekova S., Ibragimova Z., Dosmakanbetova A. (2021), "Determining the features of oscillations in prestressed pipelines", *Eastern-European Journal of Enterprise Technologies*, 6(7(114)), 85-92.

Syrmanova K.K., Alipbekova Z.K., Suleimenov U.S., Kaldybekova Z.B., Kovaleva A.Y., Botashev Y.T. (2021), "Bitumen and asphalt concrete qualitative properties improvement depending on rubber crumb using", *Rasayan Journal of Chemistry*, 14(2), 778-784.

Tanklevska N., Petrenko V., Karnaushenko A., Yarmolenko V., Kostiuk T. (2021), "Improving the process of the financial potential management of tourism enterprises", *Lecture Notes in Networks and Systems*, 194 LNNS, 679-701.

Tarasovych L.V. (2015), "Paradigmatic concept of rural economy", *Bulletin of Zhytomyr National Agroecological University*, 1(48), 3-10.

Tkachuk V., Skrypnyk A., Baidala V., Klymenko N., Namiasenko Y. (2021), "Optimization and diversification of natural gas supply in Ukraine", *E3S Web of Conferences*, 250, 02003.

Tonkha O., Butenko A., Bykova O., Kravchenko Y., Pikovska O., Kovalenko V., Evpak I., Masyk I., Zakharchenko E. (2020), "Spatial heterogeneity of soil silicon in Ukrainian phaozems and chernozems", *Journal of Ecological Engineering*, 22(2), 111-119.

Tonkha O.L., Sychevskyi S.O., Pikovskaya O.V., Kovalenko V.P. (2018), "Modern approach in farming based on estimation of soil properties variability". In *Proceedings of the 12th International Scientific Conference "Monitoring of Geological Processes and Ecological Condition of the Environment"*, European Association of Geoscientists and Engineers, Kyiv.

Volkova M.V., Shevchenko V.S. (2016), "The role of social entrepreneurship in ensuring sustainable development of Ukraine", *Social Economy*, 1(51), 25-29.

Yarova Yu.M. (2015), "Entrepreneurial potential of rural areas and factors of its realization in modern conditions of Ukraine", *Economy. Finances. Management: Topical Issues of Science and Practice*, 3, 64-71.

Zhantasov K., Ziyat A., Sarypbekova N., Kirgizbayeva K., Iztleuov G., Zhantasov M., Sagitova G., Aryn A. (2022), "Ecologically Friendly, Slow-Release Granular Fertilizers with Phosphogypsum", *Polish Journal of Environmental Studies*, 31(3), 2935-2942.

Zhidebayeva A.N., Kenzhibayeva G.S., Jussupbekova G.T., Belessova D.T., Mombekova S.S., Almenova F.B. (2020), "Application of computer information technologies in the food industry in Kazakhstan", *Izvestiya Vysshikh Uchebnykh Zavedenii, Seriya Teknologiya Tekstil'noi Promyshlennosti*, 386(2), 170-173.

Zhuikov H.Ie., Bilousova S.V., Imshenytska I.H. (2018), "Entrepreneurship as a mechanism of socialization of the national economy", *Modern Issues of Economics and Law*, 1, 209-224.

Zinoviev F.V. (2009), *Methods of research of economic processes*, PE "Enterprise Phoenix", Simferopol.