

MANAGEMENT IN ECONOMIC SECTORS AND ENTERPRISES

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PERSPECTIVES OF ECONOMIC DEVELOPMENT OF RURAL AREAS OF UKRAINE

The use of effective tools for coordinating the economic development of rural areas of Ukraine will, in the long run, contribute to the maintenance of balanced development of territorial economic systems. The analysis of the current state of economic development of Ukrainian rural areas shows the potential opportunity of the main components of this development to contribute to the economic growth of the national society. The mechanisms of economic development of rural areas in the strategic perspective should include planning of local budgets; use of the advantages of local endogenous potential of a specific territory; management, which involves the transformation of influx flows aimed at coordinating the economic development of rural areas; formation of the institutional environment for managing economic development of rural territories.

Keywords: rural areas, economic development, potential economic development of rural areas, mechanisms of economic development of rural areas in strategic perspectives.

Introduction Rural areas of Ukraine are the basis of food supply of the population, preservation of agrarian and formation of the country's export potential, maintenance of balanced development of territorial economic systems, improvement of the quality of life of the rural population. Economic development of rural areas is the basis for changing the quantitative and qualitative characteristics of rural territorial systems, which must ensure the expanded reproduction of business and quality of life of the rural population. Activation of the mechanisms of economic development of rural areas will contribute to the formation of the global potential of Ukraine's economic development.

The analysis of recent research and publications. The theoretical and practical aspects of the economic development of rural areas are studied in the context of adapting their potential to the world's regional systems (Borshevskiy, 2012¹; Boiko, 2007²; Solokha, 2011³), institutional regulation and public administration (Pavlov, 2006⁴; Malinovskyi 2007⁵; Kuzmenko, 2015⁶; Slavkova, 2010⁷; Monastyrskiy, 2010⁸). The justification of the mechanisms of economic development of rural areas is carried out

¹ Борщевський, В. (2012). Розвиток сільських територій в системі євроінтеграційних пріоритетів України. Львів: НАН України. Ін-т регіональних досліджень.

² Бойко, Є. (2007). *Методи і моделі просторового розвитку територіально-виробничих систем*. Львів: НАН України, Інститут регіональних досліджень.

³ Солоха, Д., Бандура, М., Савченко, М., Морева, В. (2011). *Методологічні основи управління сталим інноваційним розвитком потенціалу соціально-економічних систем регіону*. Донецьк: Ноулідж.

⁴ Павлов, О. (2006). *Сільські території України: історична трансформація парадигми управління*. Одеса: Астропринт.

⁵ Малиновський, А. (2007). *Системне відродження сільських територій в регіоні радіаційного забруднення*. Київ: ННЦ ІАЕ.

⁶ Кузьменко, М. та ін. (2015). *Розвиток сільських територій*. Миколаїв: Іліон.

⁷ Славкова, О. (2010). *Розвиток сільських територій: теорія, методологія, практика*. Суми: Сумський НАУ.

⁸ Монастирський, Г. (2010). *Модернізаційна парадигма управління економічним розвитком територіальних спільнот базового рівня*. Тернопіль: Економ. думка.

in the area of separation of functions and tools (planning, organization, motivation, control, coordination, financial support, marketing), the use of which stimulates their economic growth (Galzalo, 2015¹, Demianenko, 2013²; Danylyshyn, 2008³, Maksymenko, 2004⁴). The innovative principles of territorial development management include the use of the principles of endogenous growth, socioeconomic development, sustainable use of nature (Soloviov, 2008⁵; Fedulova, 2013⁶; I. Irystheva, 2012⁷; Skrypnychenko, 2010⁸; Borodina, Prokopa, Yurchyshyn, 2012⁹). The main vector of economic development of rural areas of Ukraine is the formation of sustainable local economic systems (Kozlovskiy, 2014¹⁰) and stresses the need to develop a rural development strategy, taking into account regional features and endogenous potential of rural areas (Tsybuliak, 2014¹¹).

Despite the large number of scientific and applied researches on the economic development of rural areas and the development of state and sectoral strategies, programs and plans developed on their basis, the coordination mechanisms of this development are not yet sufficiently used in Ukraine. Especially this problem is urgent in the conditions of a local rural environment. The mechanism of inter-sectoral cooperation at the level of ministries has not yet been formed, which makes it impossible to allocate funds in a transparent manner to support the development of rural areas. In governmental, scientific, and expert circles, discussions on the search and use of the levers of providing economic development of rural areas in the conditions of detention of villages, absence of productions, business structures are not stopped.

Methodological approach. For a methodological basis of the research we chose dialectical method of knowledge of problems of economic development of rural areas and systematic-synergistic approach to substantiation of strategic prospects of this development (Khodakivskiy, 2009¹²). Monographic method was used for studying and spreading the experience of management of economic development of rural territories. To summarize the trends of systemic interaction of elements of economic development of rural areas of Ukraine, elements of the methodology of integrated assessment of the endogenous potential of rural areas are used (Kravchuk, 2014¹³). In order to determine the synergy effect in agribusiness networks in rural areas, an approach to assessing the network effect of synergy has been improved (Zhuleho, 2008¹⁴).

Main material. The modern system of scientific views on the economic development of rural areas was formed by identifying common signs of methodological study of processes of social development in the social, economic, environmental, geographical theories. Periodization of the evolution of scientific

¹ Гадзало, Я., І Жук, В. (2015). *Наукові основи розвитку аграрного підприємництва та сільських територій за селозберігаючою моделлю*: Наукова Доповідь. Київ: ННЦ "ІАЕ".

² Демяненко, С. (2013). *Агрохолдинги в Україні та їх вплив на розвиток сільських територій*. Київ: КНЕУ.

³ Данилишин, Б. І Микитенко, В. (2008). *Феноменологічні альтернативи економічного зростання України*. Київ: Нічлава.

⁴ Максименко, С. (2004). *Інститути та інструменти розвитку територій на шляху до європейських принципів*. Київ: Міленіум.

⁵ Соловійов, В., Кореняко, Г., Головатюк, В. (2008). *Інноваційний розвиток регіонів: питання теорії та практики*. Київ: Фенікс.

⁶ Федулова, Л. (2013). *Регіональні інноваційні системи України: стан формування та розвитку в умовах інтеграційних процесів*. Київ: НАН України.

⁷ Іртішцева, І. (2012). *Інноваційний розвиток сільських територій: адаптація міжнародного досвіду в національних реаліях*. Миколаїв.

⁸ Скрипниченко, М., Приходько, Т., Сіденко, В. та ін. (2010). *Потенціал ендегенного зростання економіки України*. Київ: НАН України.

⁹ Бородіна, О., Прокопа, І., Юрчишин, В. та ін. (2012). *Соціоекономічний розвиток сільського господарства і села: сучасний вимір*. Київ: НАН України.

¹⁰ Козловський, С. (2010). *Управління сучасними економічними системами, їх розвитком та стійкістю*. Вінниця: Меркьюрі-Поділля.

¹¹ Цибуляк, В. (2014). *Інституційні засади сільського розвитку в Україні: науково-прикладний аспект*. Київ: Ін-т економіки та прогнозування НАН України.

¹² Ходаківський, Є., Данилко, В., Цаль-Цалко, Ю. (2009). *Методологія наукових досліджень у парадигмі синергетики*. Житомир: Рута.

¹³ Кравчук, І. (2014). *Економічний розвиток сільського соціуму: проблеми управління*. Житомир: Полісся.

¹⁴ Жулего, В. (2008). Моделирование слияния и поглощения компаний. Несколько гипотез. *Экономические стратегии*, 8, 132-140.

approaches to economic development of the areas allows to determine the theoretical content, practical mechanisms and prerequisites of the modern concept of economic development of rural areas.

The period of the theories of economic development of the areas (second half of the sixteenth century – the middle of the eighteenth century).

Scientific and theoretical achievements in that direction originate from the works of L. Guicciardini, Jean Bodin, Charles Montesquieu (second half of the sixteenth century – the middle of the eighteenth century), which concentrated ideas of conditionality of social development by geographical environment and man's role in its transformation (Guicciardini, 1991¹, Bodin 1999², Montesquieu, 1955³). At the same time Lomonosov brought hypothesis of "regional production centers," which has assumed dependence of economic activity on the territory of the local population (Lomonosov, 1950⁴).

The period of study of factors influencing the economic development of areas and factors contributing to this development (the second half of the eighteenth century – beginning of the twentieth century).

The first attempts to isolate areas as the subject of economic transformation were made in the views of the Physiocrats who considered product created in agriculture, the foundation of the economic pyramid of society, and attributed relationship with nature to use a single independent factor of production – land, nature to the main role of the human (Quesnay, 2008⁵). The theories of geographical possibility, spatial organization of society and naturally territorial and economic systems outline economic factors of adaptation of local societies to existence benefits "provided by nature" (Palamarchuk, 1998⁶; Verlaine, 2001⁷; Alaev, 1983⁸; Hranberh, 2000⁹).

The period of formation of the concept of regional stability (first half of the twentieth century).

The basic tenet of the theory of spatial harmony is the allocation of common purpose of survival as an incentive for economic growth factor (Bastia, 2010). Theorists of "moral society" (holism) appeal to the need for optimal balance in the development of nature and man, and environmentalists consider economic activities for the "good of the existence" the crucial prerequisite for stability of regional systems (Habarmas, 2000¹⁰; Haldane, 1975¹¹).

The theory of spatial economy generated mechanisms to ensure economic development of territories, developed the model of economic behavior of people in the territory of existence (Eggertsson, 2001¹²). Local initiative is a causative element of welfare in the territory of human existence, which promotes the welfare of the population (Kassel, 2008¹³).

The period of integration of economic, social, environmental, spatial theories (second half of the twentieth century – beginning of the twenty-first century).

The practical aspects of structuring the territorial and economic space and reasonable economic behavior in terms of rational choice in the territory of existence were highlighted (Etzioni, 1968¹⁴). The essence of the socioeconomic role of human in interaction with the territory, environment of existence was defined in the works of N. Georgescu-Roegen, who sees the economy as a channel for converting natural resources into goods and services, people's satisfaction, waste (Georgescu-Roegen, 1971¹⁵).

¹ Гвиччардини, Л. (1991). Описание Нидерландов. Из архивов Флоренции. СПб, 18-28.

² Боден, Ж. (1999). Шесть книг о государстве. Антология мировой политической мысли, Т. 2, 689–695.

³ Монтескье, Ш. (1955). Избранные произведения. Москва: Гослитиздат

⁴ Ломоносов, М. (1950). Об экономическом лексиконе. Избранные философские произведения. Москва: Государственное издательство политической литературы.

⁵ Кассель, Г. (2008). Основные идеи теоретической экономики. Москва: Директмедиа паблишинг.

⁶ Паламарчук, М. (1998). Економічна і соціальна географія України з основами теорії. Київ: Знання.

⁷ Верлен, Б. (2001). Общество, действие, пространство. Альтернативная социальная география. Социологическое обозрение, 2, 25-46.

⁸ Алаев, Э. (1983). Социально-экономическая география: понятийно-терминологический словарь. Москва: Мысль.

⁹ Гранберг, А. (2000). Основы региональной экономики. Москва: ГУ ВШЭ.

¹⁰ Хабармас, Ю. (2000). Моральное сознание и коммуникативное действие: пер. с нем. СПб.: Наука.

¹¹ Холдейн, Д. (1975). Философские основы биологии. Москва: Дело.

¹² Эггертссон, Т. (2001). Экономическое поведение и институты. Москва: Дело.

¹³ Кассель, Г. (2008). Основные идеи теоретической экономики. Москва: Директмедиа паблишинг.

¹⁴ Etzioni, A. (1968). *The active society. A theory of societal and political processes.* New York: The Free Press.

¹⁵ Georgescu-Roegen, N. (1971). *The entropy law and the economic process.* Cambridge: Massachusetts.

Period of starting conceptual environmental, socio-economic, and territorial development, highlighting the economic development of rural areas (beginning of the twenty-first century – to date).

The interpretation of the term "rural areas" in the documents of the Organization for Economic Cooperation and Development (OECD) contains a clear separation of its components (Mantino, 2010¹). This was the impetus for the development of mechanisms for management of economic development of rural areas in central and Eastern Europe and grounds for the mechanisms of institutional support of this development in agricultural economics.

During this period much emphasis was made on finding and grounding of factors affecting the economic development of rural areas on the basis of the formation of "centers of influence", which include local (local), regional, sectoral, national control systems (Skydan, 2010²). The theory of endogenous potential began consideration of allocational features of area used in the accumulation and distribution of local public goods (Moderau, 2008³).

We carried out the periodization of the evolution of scientific approaches to economic development areas, which allows to determine the factors that influenced this development, to which we assign economic, social, environmental, territorial, administrative, institutional factors. The impact of economic factors is usually essential to social impact. This is a direct relationship between economic activity in rural areas and rural livelihoods, and between the potential public use of territorial potential. The desire of man to the fullest provide all kinds of needs in the territory of residence is an important incentive for the continuation or extension of stay in the area.

The importance of environmental factors of impact on the economic development of rural areas is determined by the ability to engage in business activity with natural, ecological potentials of living organisms, minerals. The impact of managerial and institutional factors on the economic development of rural areas is carried out by using management mechanisms at the national, regional and local levels of government formation and adequate conditions of development of institutional environment.

An important role in the impact of the aforementioned factors on the economic development of the rural environment plays a mental territory of a national system. Thus, the study of the status and trends and mechanisms of economic development of rural areas should take into account the evolution of the features of formation of national economies.

From the ideological point of view, economic development of rural areas is a system, entropy inside of which leads to changes in the collective interactions of its elements (subsystems) that become the objects of an outside (towards this system) entropy.

The scientists in Central and Eastern Europe and the USA support the current context of researches on economic development of rural areas. J. Rodríguez proves the need to integrate elements of coordination of regional (local) development. Its key aspects include: endogeneity (which provides autonomy of local authorities required to distribute a wide range of local subjects, mobilization and use of local resources); integrated nature of local development (to overcome fragmentation of sector interventions in development); many cascading nature of this development (which requires effective mechanisms for dialogue, negotiation and cooperation of subjects at different levels) (Rodríguez, J., 2015⁴).

A similar view is seen in studies of L. Romeo, who refers to the recipients of government coordination of areas of economic processes that support their spatial and integrated development (Romeo, L. 2015⁵).

The synergistic approach to the economic development of rural areas is based on the implementation of the same organizational (antientropy) processes, the result of which is driving this development system

¹ Мантино, Ф. (2010). Сельское развитие в Европе. Политика, институты и действующие лица на местах с 1970-х годов до наших дней. <http://www.eastagri.org/publications/pub_docs/>(2018, October, 21).

² Скидан, О. (2010). *Інституціональні засади формування аграрної політики України*. Житомир: Полісся.

³ Модерау, М. *Социальный регулятор следующей цивилизации*. <http://samlib.ru/m/moderau_m_j/reguljator.shtml> (2018, December, 12).

⁴ Rodríguez, J. (2015). Eu's new thinking on decentralisation and territorial development. *great insights magazine*. <<http://ecdpm.org/great-insights/territorial-development-2/eus-new-thinking-on-decentralisation-and-territorial-development/>> (2018, October, 23).

⁵ Romeo, L. (2015). What is territorial development? *Great insights magazine*. 4. <<http://ecdpm.org/great-insights/territorial-development-2/what-is-territorial-development/>> (2018, November, 11).

interaction to meet the objectives of territorial societies (Khodakivskiy, 2009¹). To summarize the trends of system elements interaction of economic development of rural areas of Ukraine, we will use the technique for comprehensive evaluation of the endogenous potential of rural areas (Kravchuk, 2014²) in particular, isolate the main components of endogenous potential economic development of rural areas and analyze their dynamics in the context of supporting this development.

The constituents of endogenous economic development of potential of rural areas include the following potentials: human, agricultural, environmental. Human potential is represented by the rural population, which is 13, 1 mln. People (30.7% of total existing population of Ukraine). Out of them 3,2 mln people is economically active rural population (19% of the economically active population of Ukraine). The share of registered unemployed in the structure of economically active rural population of working age in agriculture, forestry and fisheries and in the mining industry is 3%, indicating the problem of unregistered employment in rural areas. Average monthly nominal wages of regular workers in agriculture, forestry and fisheries is growing (by 258,8% in 2017, compared to 2013).

Assessment of agricultural potential of economic development of rural areas is made on the basis of performance evaluation of sectors of agriculture, hunting and forestry (see Table 1).

The figures given in the table indicate the positive dynamics in agricultural production per capita (growth rate was 5,5 %). Summary results of the evaluation of performance of agriculture of Ukraine indicate that the increase in efficiency affects the increase of financial results before taxation more than 5 times, and creation of gross value added – more than 2 times.

Table 1

Performance indicators of agriculture in Ukraine

Values	Years					2017 in % to 2013
	2013	2014	2015	2016	2017	
Agricultural production per capita, UAH.	5559	5847	5587	5967	5865	105,5
Agricultural production per 100 hectares of agricultural land, thousand UAH.	691,4	708,3	674,2	613,5	600,5	86,9
Financial results before taxation: – for 1 person employed in agriculture, forestry, fishery, thousand UAH / person	4,2	7,0	6,0	17,5	15,8	374,2
– on 100 hectares of agricultural land, thousand UAH.	20437,2	20548,9	20746,9	21714	18989	92,9
Produced GVA: – for 1 person employed in agriculture, forestry, fishery, thousand UAH / person	37,0	52,12	82,21	97,58	106,69	288,4
– on 100 hectares of agricultural land	6,47	7,84	11,38	6,7	7,4	94,4

Source: UkrStat³

¹ Ходаківський, Є., Данилко, В., Цаль-Цалко, Ю. (2009). *Методологія наукових досліджень у парадигмі синергетики*. Житомир: Рута.

² Кравчук, І. (2014). *Економічний розвиток сільського соціуму: проблеми управління*. Житомир: Полісся.

³ Ukrstat (2018). *Комплексні статистичні публікації*. <http://www.ukrstat.gov.ua/druk/publicat/kat_u/publ1_u.htm> (2018, October, 10).

The indicator of financial performance before taxation per 1 employee, per 1 person employed in agriculture, forestry, fishery also had positive dynamics, respectively – an increase of 6, 3, 7 times. The results of the evaluation of the efficiency of the crop production sector as a component of the agricultural potential of the economic development of the rural areas of Ukraine presented in Table 2.

Analysis of the indicators listed in Table 2 indicates the most efficient production of crops. This is confirmed by the growth of crop production for 1 person. Yields of the main crop species has positive dynamics during the analyzed period. The yield of grain increased by 6, 5%, sugar beet – by 19%, potatoes – by 5%. The yield of sunflower slightly decreased – by 6, 9%.

Table 2

Efficiency of the crop production sector

Values	Years					2017 in % to 2013
	2013	2014	2015	2016	2017	
Crop production per capita, UAH.	3867	4133	3929	6456	6274	162,2
Crop production per 100 hectares of agricultural land, thousand UAH.	483,6	500,6	474,2	445,8	432,6	89,5
Sown area, thousand hectares	28329	27239	26902	27026	27585	97,4
Productivity, centners / hectare:						
– grain	39,9	43,7	41,1	41,6	42,5	106,5
– sugar beet	399	477	436	482	475	119
– sunflower	21,7	19,4	21,6	22,4	20,2	93,1
– potatoes	160	176	161	166	168	105,0

Source: UkrStat¹

The results of this analysis may signal about the current prospects for economic development of rural areas through effective crop development. Similar to the preliminary assessment we will analyze the efficiency of the livestock industry as part of the agricultural potential of economic development of rural areas of Ukraine (see Table 3).

Analysis of indicators of efficiency of the livestock sector shows that production per capita had positive dynamics during the analyzed period (increased by 43,9%. We should note the decrease in cattle – by 22,2%, pigs – by 22,9%, sheep and goats – by 24,5%, poultry – by 12,1%. Regarding the performance of the main types of farm animals, only the average annual milk yield per cow increased – by 24,8%. Average annual wool clip on one sheep decreased by 11,1%.

The results of this analysis may give reasons to talk about the current prospects for economic development of rural areas through the effective development of the livestock industry.

To continue the consideration of the potential components of agricultural economic development of rural areas we will analyze the efficiency of hunting as part of the agricultural potential of economic development of rural areas in Ukraine (see Table 4).

Our studies allow to conclude insufficiently effective business activities in hunting industry. With increasing number of hunting by 3,3%, the area of hunting grounds decreased by 9,1% and accounting number of staff employed in the hunting sector decreased by 9,7%. The decrease in the efficiency of the industry is indicated by the rising costs of its maintaining per one employee by 81,9%, per 1 hectare of hunting grounds by 80,7%, per 1 hunting economy by 59,1%. However, reducing the area of hunting grounds and increasing costs of maintaining hunting economy is because of objective factors in the development of the agricultural sector. In general, it should be considered that there are prospects of economic development of rural areas due to the effective development of the hunting industry.

¹ Ukrstat (2018). *Комплексні статистичні публікації*. <http://www.ukrstat.gov.ua/druk/publicat/kat_u/publ1_u.htm> (2018, October, 10).

Table 3

Indicators of efficiency of the livestock sector

Values	Years					2017 in % to 2013
	2013	2014	2015	2016	2017	
Livestock production per capita, UAH	1692	1714	1658	2427	2436	143,9
Animal products per 100 hectares of agricultural land, thousand UAH.	207,8	207,7	200,0	167,7	167,9	80,8
Population (thousand)						
– large cattle	4534	3884	3750	3682,3	3530,8	77,8
– pigs	7922	7351	7079	6669,1	6109,9	77,1
– sheep, goats	1735	1371	1325	1314,8	1309,3	75,5
– poultry	230290	213336	203986	201668,0	204830,9	88,9
The average annual yield of milk per cow in agricultural enterprises, kg	4827	5027	5352	5643	6025	124,8
Average annual wool clip from a sheep, kg	1,8	1,6	1,7	1,6	1,6	88,9

Source: UkrStat¹

Table 4

Efficiency of hunting

Values	Years					2017 in % to 2013
	2013	2014	2015	2016	2017	
Number of hunting economies	1043	1021	1044	1050	1077	103,3
Area of hunting grounds, at the end of the year, million hectares	42,7	37,5	38,7	38,3	38,8	90,9
The accounting number of staff employed in hunting, at the end of the year	7055	6352	6457	6321	6371	90,3
The cost of hunting economy (in current prices), mln UAH	219,6	213,7	246,1	284	360,8	164,3
The cost of hunting economy per 1 employee, thousand UAH	31,1	33,6	38,1	44,9	56,6	181,9
The cost of hunting economy per 1 hectare of hunting grounds, UAH/ hectare	5,14	5,7	6,36	7,41	9,29	180,7
The cost of hunting economy per 1 hunting economy, thousand UAH	210,5	209,3	235,7	270,5	335	159,1

Source: UkrStat²

¹ Ukrstat (2018). *Комплексні статистичні публікації*. <http://www.ukrstat.gov.ua/druk/publicat/kat_u/publ1_u.htm> (2018, October, 10).

² Ukrstat (2018). *Комплексні статистичні публікації*. <http://www.ukrstat.gov.ua/druk/publicat/kat_u/publ1_u.htm> (2018, October, 10).

The next component of the agricultural potential of economic development of rural areas of Ukraine is forestry, results of efficiency of which are presented in Table 5.

Table 5

The effectiveness of forest management

Values	Years					2017 in % to 2013
	2013	2014	2015	2016	2017	
The volume of products, works and services of forestry (at current prices), mln UAH	6363,9	7739,9	10778,2	12838,8	13774,6	216,4
Logging area, thousand hectares	415,4	382,6	399,3	386,4	419,1	100,9
Forests' restoration, thousand hectares	67,7	58,0	60,4	63,2	64,7	95,6

Source: UkrStat¹

The analysis of the efficiency of the forestry sector (table 5) gives reason to conclude that there are problems of the industry in particular, during the period under review, the rate of reproduction of forests decreased by 4,4%. The indicator of production output and services of forestry had positive dynamics and grew by more than 2 times when logging increased by 0,9%, indicating that the main reason for this is the rise of the cost of goods and services. Thus, there are the prospects for the development of forestry as a component of the agricultural potential of economic development of rural areas.

We would like to estimate the agricultural potential of economic development of rural areas for aggregate gross value added in agriculture, forestry and fishery (Table 6).

Due to the existing agricultural potential of economic development of rural areas, there was observed the increase of gross fixed capital formation in agriculture, forestry and fishery (more than 2 times greater in 2017 compared to 2013).

Table 6

Manufacture of gross value added

Value	2013	2014	2015	2016	2017	2017 in % to 2013
Produced gross value added per 1 villager, UAH.	9320,7	11428,7	18167,1	16943,8	20665,1	221,7
Produced gross value added per area of agricultural land, UAH	3189,3	3883,0	5778,5	5598,6	6517,2	204,3

Source: UkrStat

One of the factors impact on the ecological potential of economic development of rural areas is the emission of pollutants from stationary sources that are located in these areas (Table 7).

Analysis of data from Table 7 demonstrates the growth of polluting emissions from stationary sources in rural areas. Complete avoidance of such emissions cannot be achieved (due to peculiarities of technological processes). In the future, the focus should be given to the formation of effective mechanisms for economic and ecological restoration of rural areas.

The analysis of selected components of endogenous potential economic development of rural areas (human, agricultural, environmental) indicate the presence of potential possibilities of rural areas to provide growth of the national society. However, these results do not provide an answer to the question "What are the mechanisms used to ensure reproduction of the economic development of rural areas?"

¹ Ibid.

**Of Volumes of emissions of pollutants by stationary sources in rural areas
of Ukraine (thousand tons).**

Value	2013	2014	2015	2016	2017	2017 in % to 2013
Agriculture, forestry and fishery:						
Emissions of pollutants	89,8	77,4	77,7	81,6	80,3	89,4
Emissions of carbon dioxide	974,1	788,4	1110,4	878,5	1099,8	112,9
Mining and development of quarries:						
Emissions of pollutants	921,2	537,2	490,9	465,4	479,3	52,0
Emissions of carbon dioxide	4282,4	2747,7	2519,4	2978,2	3365,2	78,6

Source: UkrStat¹

As the economic development of rural areas is a process, the justification of mechanisms of security in the strategic perspective must be provided. System approach to analysis and synthesis processes that take place in rural areas, is a tool for solving various problems of territorial (regional) administration. With the growth and complexity of economic systems, the end result is more dependent on intermediaries from intra and inter regional and connections that form the economic environment of a territory.

The disadvantages of the existing mechanism of support areas of the State Budget of Ukraine include the flawed accounting system of budget allocation: taking into account the distribution of the budget between the territories only in the form of income and expenditures of local budgets, subsidies, equalization, and the costs for the relevant budget programs that significantly adjusted estimates of state support for certain areas not specified in separate statements.

The regions also do not accumulate the information on tax benefits to certain industries, companies, organizations, creating conditions for covert support to certain regions. The above gives an objective assessment of the effectiveness of state support and the real financial condition of the regions that contribute to the deepening of disparities in their development. Own powers of local authorities are not provided with revenues of local budgets. Formation of local budgets is made on a formal basis for the norms of budgetary provision, based on the facilities of available budgets, which do not meet the objective needs of the territories.

Operating mechanism of intergovernmental relations at the level of villages, towns, cities of regional importance and the districts does not solve the problem of availability of funds of local governments. There is no mechanism for the formation of local budgets on the basis of social standards guaranteed by the state. Approval procedures and the goals and priorities of economic development of the area between the center and local governments are inadequate. The powers of local authorities and local governments for economic development of the territory are not clearly delineated and largely overlapped, which complicates the process of governance of separate subdivision.

Mechanisms for the economic development of rural areas in Ukraine at a strategic perspective are:

- Planning of local budgets in the medium term, providing specification of goals, objectives, types and formats of planning; determining the interaction between the actors; establishing the relationship and the order of medium-term financial plans and programs of socio-economic development of territories in the future; monitoring of the fulfillment of medium-term financial planning;
- Using advantages of local endogenous potential of specific areas in the formation mechanisms of institutional control (locally enhanced efficiency dependent mechanism of microeconomic factors and the level of endogenous development of potential of rural areas);

¹ Due to the existing agricultural potential of economic development of rural areas, there was observed the increase of gross fixed capital formation in agriculture, forestry and fishery (more than 2 times greater in 2017 compared to 2013).

- taking into account rural areas belonging to the higher level system, region as a complex aggregate of components: governance, targeted strategic installations, laws, principles, functions, structure, resources, methods, organizational culture, competencies, technologies and tools that are in close relationship, forming various subsystems in their integrative integrity;
- Economic evaluation of rural development from the standpoint of improving the competitiveness of businesses, width and depth of occurrence of the region in economic relations and processes that take place with regard to multilateral relations and external conditions, improvement or preservation of sustainable regional competitiveness in its various manifestations;
- Management, which involves the transformation of influence flows aimed at coordinating economic development of rural areas, improvement of the model of interaction of management on an equal footing (between regional and local authorities) taking into account their capabilities and internal resources to influence the reproduction of potential of rural areas;
- Realization of multifunctional role of economic base of rural areas in society – agriculture, which requires not only goods (food, feed, fiber, biofuel), but also food security, preservation of agricultural landscapes and cultural heritage, which is a public good;
- The development of "green" economy of rural areas, which will create new jobs in areas such as energy, agriculture, forestry, fishing, tourism and recreation and will involve members of rural society to waste disposal and consumption, environmental protection and "green" tourism;
- Forming institutional environment for management of economic development of rural areas on the basis of principles: the main level – with deunification of conditions depending on regional features and development priorities balancing; structural and institutional certainty with corporatisation of agribusiness, contractual integration, cooperation, clustering; complementarity, transparency, innovation, enforcement, maximizing the welfare of rural society;
- The usage of marketing concept in managing economic development of rural areas, in particular the development of marketing of rural areas, based on their clustering segmentation (growth of one species on site attracts related economic activities, the formation of "regional portfolio of products."

Priority management tools of economic development of rural areas should be classified as: 1) investment subsidies to firms that create branches in rural areas; 2) state insurance loans received by enterprises and local governments; 3) providing to small business use of industrial buildings and utility owned lands for free or at low rates (with simultaneous strengthening of control mechanism for their provision to prevent corruption schemes); 4) establishment of regional trust funds for the purpose of diversifying economic sector in the region; 5) a comprehensive assessment of the reproductive potential of rural areas, which results in the integral index of efficiency of their economic development. Using of this index allows directing (potentially) different types of resources in a certain time interval and ensuring the competitiveness of the region's rural areas. The advantage of these tools is that their use does not require additional financial resources on the part of management or their volume is not significant.

We believe that the management of economic development of rural areas should be focused on promoting reproductive processes and aimed at ensuring the competitiveness of these areas. In order to improve the mechanisms of economic development of rural areas on the basis of systematic approach, the assessment of their reproductive capacity shall be done by providing individual components, which influence many factors. Reproductive potential of rural areas can be considered as a system, which elements having horizontal and vertical links, are interconnected and interdependent. The control system of rural economic development has many structural elements of different functions, a large number of processes, "inputs" and "outputs" of various information resources and organizational management documentation, and dynamic set of connections and relationships that overlap each other and cause a change in the elements and parts of the system. We suggest to use the method of determining the formal system of economic development of rural areas on the basis of theory of sets in the process of assessing the reproductive potential of rural areas [Siavavko, 2004¹].

¹ Сявавко, М., Цюпко, І. (2004). Математична оптимізація в сільському господарстві на засадах теорії нечітких множин. *Держава і регіони. серія: Економіка та підприємництво*, 1, 241-251.

The control system will be modeled by oriented graph S:

$$\begin{aligned}
 S &= \{s_{ijx}\} = \{Q, F, P, R\}, \quad i = 1, \dots, n, \quad j = 1, \dots, m, \\
 S &= \{s_{ijx}\} = \{Q, F, P, R\}
 \end{aligned}
 \tag{1}$$

where $Q = \{q_1, q_2, q_3, \dots, q_n\}$ is a limited number of structural elements; n is the number of structural elements; $F = \{f_1, f_2, f_3, \dots, f_m\}$ is a limited number of functions and processes implemented by system of management of economic development of rural areas; m is the number of types of functions and processes that are controlled by the control system; $P = \{p_1, p_2, p_3, \dots, p_k\}$ is the limited set of resources; k is the number of types of resources.

The set R is a set of incidentions that is entered as a direct product of the sets Q, F, P :

$$R = Q \cdot F \cdot P \tag{2}$$

The control system will be modeled by an oriented graph S:

$$\begin{aligned}
 S &= \{s_{ijx}\} = \{Q, F, P, R\}, \quad i = 1, \dots, n, \\
 S &= \{s_{ijx}\} = \{Q, F, P, R\}
 \end{aligned}
 \tag{3}$$

Item s_{ijx} of set S reflects the implementation of the j -th function by i -th element of rural areas by using this x -th resource.

Each element (subsystem) of rural society can be described as follows:

$$(s = \{q, f_i, p_i, r_i\}) \tag{4}$$

From a practical point of view, the system management of economic development of rural areas is a system of processes, the key objectives of which include harmonization of functions, relationship status and interaction of all structural components of internal coordination in view of its contents in general. This necessitates the use of systems-integration approach, the essence of which in the context of this study determines the need to allocate in the internal environment management system, which has several major subsystems: the mental-genetic, institutional, simulation, resource, technology (procedural), cognitive, competence, creativity, cultural factors and determine their impact on the development of rural areas and aspects of their relationship in different management structures.

Financial support of mechanisms for management of economic development of rural areas should aim to support the sustainable socio-economic, environmental and spatial development. Currently, budget expenditures are directed not to development, but to achieve short-term effects (increasing acreage of certain crops, livestock production, etc.). Social sector expenditures to support the agricultural sector are only partially specific to the sector and rural areas. It is necessary to harmonize the classification of national budget expenditure with the international one to support rural and agricultural sector; significantly reduce their list; establish clear criteria for subsidies; direct agricultural tools to farmers but not to other entities; to support small and medium farmers; to allocate funds for the fulfillment of socially significant functions of a non-productive character by agricultural producers, especially in problematic and environmentally vulnerable regions;

The main directions of budget support to economic development of rural areas should include competitive producers, social and environmental approaches. This will ensure the restructuring and modernization of farms, production and market infrastructure; quality of production processes; improving marketing channels for promotion of agri-food products on the market; building human capital by promoting knowledge; the formation of integrated structures in the food chain; diversification of income and farmers; formation and management of agricultural landscapes and conservation of degraded unproductive agricultural land; implementation of agri-environmental programs; conservation of natural and cultural heritage.

The principles of "good agricultural practice" (Good Agricultural Practices – GAP) are regulated in European Union documents and are treated as standards of agriculture, which should be implemented by rationally-oriented farmer. EU Member States define national standards of "good agricultural practice". In particular, Poland on the eve of joining the EU has worked out the principles of Proper (in Polish – *Zwykla dobra*) agricultural practices (Kuibida, 2010¹).

State regulation of the economic development of rural areas should be carried out using the hard administrative regulation of essential aspects of agricultural activities (use of pesticides, nitrate pollution, the environmental impact of large livestock farms, observance of crop rotation, etc) and the participation of farmers in agri-environmental and social programs (extensification of agriculture, conservation of rural landscapes, cultural heritage sites, biodiversity, organic farming, development of agro-tourism, etc.).

The contradictions of methodological and institutional factors of economic development of rural areas are becoming deeper due to slow process of implementation of new scientific ideas into practice of agrosphere rebirth – over the past decade, vectors of agricultural policy has been changed three times; land reform, which is now in its final stages, revealed many additional risks of the regulatory, legislative and legal nature, and fiscal support of agrosphere needs improvement mechanism for its implementation; In addition, the formation of social responsibility of the regional and local levels of agrosphere is in infancy.

However, there are positive signs: the consolidation of local communities in addressing issues of their own welfare, entrepreneurial initiative in well doing of the local business, mutual assistance of community members in the implementation of diversified and multi-service activities in rural areas, participation of corporate agribusiness in the development of social infrastructure, promotion in attracting young professionals, the development of information and consultation supply of agrosphere. Thus, the revival of motivation of society to live and work in rural areas must be implemented by regional programs adapted to the conditions of a particular region, tactical plans for their implementation, as the main criterion for measuring their effectiveness should be the actual results.

Support and development of initiatives in rural society from local authorities is one of the priorities of the current stage of Agrarian Policy of Ukraine. However, the unresolved legal issues, and sometimes, a lack of understanding of the importance of these processes by representatives of local authorities reduce the motivation of people to periodically participate in micro businesses (e.g. in eco-tourism), carried out in their own households by the efforts of one family members. In this context it is necessary to use the experience of Lithuania and Poland, where in some regions the programs "Holiday with the farmer", "Green Weekend" and so on are implemented. It is also necessary to take into account the service support of products sales by households, carried out by local authorities and business and being a relatively new form of participation in society motivation to run rural micro businesses in rural areas.

Agriculture is a unique tool for economic development in rural areas, because it contributes to this development as an economic activity, a source of income and environmental services provider. Effect of economic development for rural society will produce public goods.

Conclusions. Analysis of the current state of economic development of rural areas of Ukraine shows that out of 13, 1 mln people of rural population, 3, 2 mln people comprise the economically active rural population, of which 3% are registered unemployed people of working age, indicating that the problem of unregistered employment in rural areas does exist.

It is revealed that the existing agricultural potential for the economic development of rural areas is accompanied by the growth of gross fixed capital in agriculture, forestry and fishery.

Growth in pollutant emissions from stationary sources in rural areas distort the conditions of restoration of ecological potential of economic development in rural areas.

The analysis of selected components of endogenous potential of economic development of rural areas (human, agricultural, environmental) indicate the presence of potential opportunities of rural areas to provide growth of the national society.

The mechanisms of economic development of rural areas in the strategic perspective are: planning local budgets with specifying goals, objectives, types, formats of planning; using the advantages of local endogenous potential of specific areas in the formation of mechanisms of institutional control; taking into

¹ Куйбіда, В., Ткачук, А. Толкованов, В. (2010). *Досвід впровадження стандартів доброго врядування на місцевому рівні в Україні та інших європейських країнах*. Київ: Крамар.

account the belonging of rural areas to the higher-level system – the region as a complex combination of different components; management, which involves the transformation of flows of influences aimed at coordinating economic development of rural areas; realization of multifunctional role in society as the economic base of rural areas; the development of "green" economy of rural areas; forming institutional environment management of economic development of rural areas on the basis of the principles of the main level; use of marketing concept in the management of economic development of rural areas, in particular, development of a complex of marketing of rural territory, their segmentation on the basis of clustering.

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