Social-economic development of the United Territorial Communities and development of a strategy for sustainable development (case of Ukraine)

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Abstract: - The unification of territorial communities allows forming an effective and convenient system of management of the territory in which they live. However, the unification of territorial communities in Ukraine is uneven, which raises the question of why this is happening. The purpose of the study is to analyze the level of social-economic development of united territorial communities in Ukraine and the choice of sustainable development strategies (adaptation, innovation, anti-crisis) for UTCs of different levels, identify problems of social-economic development and outline areas to address them. Research methods: generalization and scientific abstraction; system-structural and comparative analysis; economic and mathematical modeling; clustering. It has been established that the unification of different territories in Ukraine took place unevenly (with different levels of social-economic development). The study found that the unification of different territories in Ukraine took place unevenly due to different levels of their socio-economic development. It has been established that throughout Ukraine, communities with a low and high level of development predominate and to a lesser extent with a medium level of development. According to the results of the analysis, territorial communities were grouped into 3 regional clusters: cluster 1 – UTCs and territories with a high level of social-economic development (Kyiv and 9 regions); cluster 2 – UTCs and territories with an average level of social-economic development (6 regions); cluster 3 – UTCs and territories with a low level of social-economic development (10 regions). It has been proved that the social-economic development of UTCs is ensured by the improvement of financial, innovative, and investment activities of enterprises operating in communities. It has been proposed to apply an adaptation strategy of sustainable development for the territories of cluster 1; for cluster 2 - innovative strategy of sustainable development; for cluster 3 - anti-crisis strategy of sustainable development. Continuation of research in terms of determining the impact of enterprises on the socio-economic development of UTCs is promising not only in scientific terms but also to address the applied problems of developing a strategy for sustainable development at the level of individual UTCs in Ukraine. The studied methodology for the unification of territorial communities can be used to predict the further formation of UTCs in Ukraine and can be applied for territorial and administrative reforms in countries with uneven regional development.

Key-Words: - Territorial Community (Commune, Community), United Territorial Communities (UTCs), Indicators of Social-economic Development, Welfare, Sustainable Development Strategy

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1 Introduction

Satisfaction of social needs is an important condition for ensuring the livelihood of everyone. As noted by Lieberman [1], "socially connected will be a lifelong need, like food and warmth". To meet the most important individual and social needs, social institutions are created and formed, which are regulatory mechanisms in all major spheres of human life. Institutions ensure the stability and predictability of human relations and behavior, protect the rights and freedoms of citizens, protect society from disorganization, and form a social system and more. Forasmuch as the vast majority of their social needs are met in the place where they live (villages, settlements, cities), a territorial community is such important institution.

The community is a vital dimension in modern society and a key element of social organization. The creation of a united territorial community (UTC) is the formation of an effective and convenient system of territory management for its residents. Such a system is based primarily on the transfer of resources, powers and responsibilities from the central government to the local level. The association of individual communities enables their residents to receive educational, medical and administrative services, roads, lighting, water supply, garbage, landscaping, construction, etc. in their territories. Residents of united communities have the right to elect the government and have the leverage to influence it, which creates conditions for improving the quality of services, creating favorable living conditions.

The united territorial community is a prerequisite for their social-economic development, but does not automatically make their activities effective. First of all, it is necessary to increase revenues and develop the economic potential of communities, which requires the development of strategies for their development. The association of territorial communities makes it possible to form an effective and convenient system of management for residents of the territory in which they live. However, the unification of territorial communities in Ukraine is carried out unevenly, which raises the question of why this is happening.

The purpose of the study is to analyze the level of social-economic development of united territorial communities in Ukraine and the choice of sustainable development strategies (adaptation, innovation, anti-crisis) for UTCs of different levels, identify problems of social-economic development and outline areas to address them.

Research objectives of the scientific article are as follows:
- to carry out analysis of the distribution of UTCs in Ukraine and determination of the factors of such distribution;
- to carry analysis of social-economic indicators of the regions that include UTCs;
- to determine the interconnection between social and economic development of UTCs and the results of enterprises' activities in the territories in which they are located;
- to form regional clusters with different levels of social-economic development of territories, namely: the first cluster – UTCs and territories with a high level of social-economic development; the second cluster – UTCs and territories with an average level of social-economic development; the third cluster – UTCs and territories with a low level of social-economic development;
- substantiate proposals for choosing a sustainable development strategy for regional clusters.

2 Literature Review

There is no agreed definition of the territorial community concept among scientists and researchers. Consequently, some scientists in their works raise debatable issues regarding the formation of the conceptual and categorical apparatus of this definition [2-5]. This concept is often used as a substitute term for locality; however, "community", according to Douglas, exists outside of physical places [2]. Brint suggests that community members are connected primarily through common personal interests. He has defined communities as a group of people who share common activities and who are connected mainly by common values and concerns [3].

However, the territory still forms the basis of communities. Thus, Hillery has identified elements that characterize the community as, first of all, a geographical area, and then kinship, self-sufficiency (separation), general lifestyle and type of social interactions [4]. Brown, Perkins & Brown believe that joining the community brings benefits and improves well-being [5].

The above mentioned necessitates the assessment of social-economic development of communities. Zyzda, Bilous, Pronko et al. made assessment of the functioning of territorial communities according to various indicators [6-9]. Consequently, Bilous notes that "in the process of selecting indicators for

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assessing the social-economic development of UTC, one should pay attention on those indicators that reflect the focus on ensuring equal opportunities and accessibility of technological progress, not only within different social segments of the population, but also in different geographical regions". In the scholar's viewpoint, these criteria are most consistent with indicators of an inclusive nature [7]. Popova & Demchenko have proven that the main indicators of social-economic development of UTCs are as follows: their area, demographic structure of the population, income and expenditure, funding structure, structure of economic entities by types of activity and income level, number of social infrastructure facilities, employment and unemployment in communities [10].

Tymochenko & Simakhova have investigated the theoretical and methodological foundations of regional social-economic development. According to their viewpoint, development is not a simple change, but only the one that presupposes a new quality. Scientists emphasize that "in the context of the processes that outline the category of "development", two permanent directions of movement to a qualitatively new state can be outlined, namely: social and economic ones". By the way, in order to assess the social-economic development of individual regions, not just data on communities' social-economic development is required, but only that part of the information that is isolated from the general array, according to certain criteria of suitability and content saturation [11].

The issues of the process of unification of territorial communities deserve special attention. Some researchers believe that the possibility of voluntary unification of communities poses a new problem - the emergence of "rich" and "poor" communities - that is, high-income communities will not show a desire to unite with the less prosperous ones. Donchenko has predicted three possible scenarios for the development of UTCs in Ukraine after 2020: inertial, voluntary and centralized. In the first and second cases, only communities with natural resource sites will benefit from centralization [12]. The unevenness of UTCs is also caused by the problem of establishing boundaries in the process of unification of territorial communities. Consequently, Dorosh, Kupriyanchyk & Dorosh have found significant differences between the area of village councils, which are part of the Ukrainian UTCs and settlements [13].

However, as it has been noted by Evtushenko & Lushahina, the area of UTC and the number of communities that are part of it do not determine the effective social-economic development of UTC.

According to the results of the study, scientists have identified indicators of successful social-economic development of UTC. These indicators are as follows: human resources; strategic planning, that is, vision of specific ways of development of the territorial community; local identity; ability to attract "donor" funds; the ability of the community to rationally use available resources [14]. Some relevant studies can be found in [15] and [16].

Taking into consideration the potential and availability of resources at the disposal of the community, as it has been emphasized by Palchuk, a strategic plan for the development of UTC should be drawn up, which, in turn, should meet the wishes and needs of the community [17]. Tolubyak & Kostetskyy believe, that providing territorial communities, on the one hand, with the maximum number of resources and powers, and on the other – increased responsibility, will allow UTC to become new points of social-economic growth in the country. The positive results of the activities of more UTCs, in their opinion, are a confirmation of the correctness of such a development strategy [18].

The issues of the interrelationship between the investment activity of enterprises and the social-economic development of territorial communities deserve special attention in the works of Buleev et al. [19]. According to the results of the rating assessment of Ukrainian enterprises, scientists have identified the regions that are characterized by the highest, medium and low investment activities, for each of which a sustainable development strategy has been proposed. Herewith, Kvon et al., assign an important role to investment policy at the regional level for the effective implementation of such a strategy [20].

A review of literature sources has made it possible to identify the problems of UTCs of Ukraine at two levels: at the general level –the unevenness of UTC unifications; at the level of individual UTCs – a low level of their social-economic development.

3 Materials and methods of the research

In the process of research, both general scientific and specific methods are applied: logical generalization and comparison – to substantiate the theoretical basis and research and formulation of basic hypotheses on the development of territorial communities in terms of sustainable development; induction and deduction, generalization and scientific abstraction – to determine the essence of the concept of "community" and "territorial

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community" and justify their consideration from the viewpoint of the theory of collective actions; system-functional – in the generalization, analysis and synthesis of theoretical aspects of UTC`s crowdfunding; analysis and synthesis, system-structural and comparative analysis – in comparing UTC indicators of different regions of Ukraine; system and situational approach – for interpreting the results of the analysis.

In order to determine the relationship between the number of formed UTC, population density of communities and the number of united councils, regression analysis has been used, the results of which will predict the process of UTC formation taking into account the selected variables.

Correlation and matrix analysis have been used to determine the interrelationship between social and economic indicators of regional development. The obtained data have been investigated by applying rating analysis, the results of which have been used in order to build clusters of regional development of UTC.

The analysis was conducted in terms of 24 regions of Ukraine and the city of Kyiv. In the direction of allocation of the UTCs in Ukraine the indicators of 2020 have been used, in the direction of the analysis of social and economic indicators of the regions which include UTCs – indicators of 2019 have been applied.

The academic paper has analyzed:

- social-economic indicators reflected in Ukrstat (2019): Incomes of the population, UAH million; Expenditures of the population, UAH million; Disposable income of the population, UAH million; Disposable income per capita, UAH; Average salary, UAH; Employed population aged 15-70 years, thousand people; Number of migrants (arrivals); Capital investments, UAH million; Gross regional product, UAH million; Volume of sold products (goods, services) of enterprises, UAH million; Number of enterprises; Financial result prior taxation of large and medium-sized enterprises

that made a profit, UAH million; Personnel costs of enterprises, UAH million;

- indicators of allocation of united territorial communities in Ukraine, reflected in Decentralization (2020): Number of UTCs, units; Number of local councils merged; Number of populations living on the territory of UTC; UTC territory, km^2.

4 Results

The term "community" (commune, etc.) implies, first of all, the connection of certain people in one place according to their common interests. In this case, such a common interest is the territory in which they live. The question arises, how to implement different goals and interests of people in the same direction? The answer to this question can be found in the theory of collective action or the economic theory of clubs, the main essence of which boils down to the fact that people unite in teams when they cannot implement their interests alone [21; 22]. The essence of the "club economy" model is that it is easier for an individual to meet their social and economic needs and implement their interests in a group than individually. The creation of "clubs" (interest groups, associations, and communities) and the entry of individual economic entities are appropriate if the benefits they receive from the collective consumption of goods per member are higher than if the good has been consumed individually. By the same principle, not only people unite in separate communities, but also communities with other communities - when the resources at their disposal are not enough to get results, in this case - to ensure life and improve their quality of life of people living in the common area.

One of the problems that exists in Ukraine today is the uneven unification of territorial communities. Thus, as of September 2020, there are 982 united territorial communities in Ukraine in 24 regions, which are located in 476 areas (Table 1).

Table 1. United territorial communities in Ukraine: list and basic data

Regions	District*	The number of local councils that have merged	Number of communities	Square, km^2	Population
Cherkasy oblast	20	222	57	8527,59	337088
Chernihiv oblast	22	372	50	20570,16	502223
Chernivtsi oblast	11	132	37	3879,71	359796
Dnipropetrovsk oblast	22	229	71	21258,65	905157
Donetsk oblast	18	74	13	5233,89	239356
Ivano-Frankivsk oblast	14	176	39	4039,99	712658
Kharkiv oblast	27	114	23	7588,37	375753
Kherson oblast	18	115	33	9665,54	275216
Khmelnytsky oblast	20	370	51	12645,85	570433

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Kirovohrad oblast	21	81	27	6050,35	161543
Kyiv oblast	25	142	24	5236,87	329803
Luhansk oblast	18	75	18	7037,72	115084
Lviv oblast	20	174	41	5082,88	352165
Mykolaiv oblast	19	146	42	12600,01	318142
Odessa oblast	26	158	37	11556	370960
Poltava oblast	25	195	53	10051,4	405878
Rivne oblast	16	148	45	7874,42	354599
Sumy oblast	18	187	38	10376,2	757042
Ternopil oblast	17	314	54	6800,94	671976
Vinnytsia oblast	27	156	46	5570,2	752594
Volyn oblast	16	235	54	11802,08	604561
Zakarpattia oblast	13	61	17	1687,65	278194
Zaporizhzhia oblast	20	199	56	18707,34	510738
Zhytomyr oblast	23	412	56	19570,01	812814
Total in the Ukraine	**476**	**4487**	**982**	**233413,8**	**11073773**

* - without taking into account the areas of the temporarily occupied territories.

However, if we analyze the united territorial communities in more detail, we can see the unevenness of their formation – in some areas the number of UTCs exceeds fifty (Dnipropetrovsk, Cherkasy, Zhytomyr, Zaporizhia, Ternopil, Volyn, Poltava, Khmelnytsky), and in others it fluctuates at the level of ten to thirty (Donetsk, Zakarpattia, Lugansk, Kharkiv, Kyiv, Kirovograd).

The basic challenges faced by the world community are caused by: the lack of clear regulations and algorithms for overcoming the effects of viral infection in the context of combating corruption; lack of interaction, mutual control and mutual restraint between authorities and management, anti-corruption bodies, local authorities; disregarding the interests of the civil society, reducing the level of trust and understanding; imperfection of reporting mechanisms and transparency in the actions of anti-corruption bodies and other authorities of national or local level; lack of integrity, openness and legality in the actions of higher authorities and some public officials [23].

Moreover, such a distribution is not always related to the area of the territories where the UTCs are located or the number of districts. Some of the UTCs created in some regions can be explained by the number of people living there. For example, in the UTCs' territories located in Donetsk, Kirovohrad and Luhansk oblasts, the population is 239 thousand, 162 thousand and 115 thousand people, respectively (Table 1), which is 4-8 times less than in Dnipropetrovsk oblast, on the territory of which there are 71 UTCs. However, how to explain the small number of united territorial communities in Kharkiv region, where 376 thousand people live, which is almost equal to Poltava region, where 406 thousand people live, however, the number of UTCs of Poltava region exceeds the number of UTCs of Kharkiv region in 2,4 times?

In order to determine the factors that affect the number of UTCs within one area, we will use the tools of correlation and regression analysis. The study was conducted using the MS Excel software package.

Taking into account the stages of mathematical modeling in economics [24], three structural elements will take part in the process of modeling the influence of factors on the number of UTCs within one region: object of research (UTC in Ukraine), subject (researcher); a model that mediates the interrelationship between a subject and an object. An indicator that characterizes the number of UTCs within one region (number of communities) was chosen as an endogenous (dependent) variable (Y). Factors influencing the number of UTCs within one area are selected based on data presented in official statistics (Decentralization, 2020).

Based on the results of the preliminary analysis on the presence of correlation and lack of multicollinearity between variables, the following exogenous (independent) variables have been selected, namely: x1 - the number of local councils that have merged regions (units); x2 - population density (number of persons per 1 km^2 of the territory). The number of districts in the region was removed from the model due to the lack of correlation between the number of districts and the number of UTCs within one oblast (R = 0,14) (Table 2). The indicators in Table 2 for further analysis were ranked in descending of the number of local councils that have merged.

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Table 2. Parameters of the regression equation*

	Number of communities	Number of local councils that have merged	Population density
	Y_1	x_1	x_2
Zhytomyr oblast	56	412	41,53
Chernihiv oblast	50	372	24,42
Khmelnytsky oblast	51	370	45,11
Ternopil oblast	54	314	98,81
Volyn oblast	54	235	51,22
Dnipropetrovsk oblast	71	229	42,58
Cherkasy oblast	57	222	39,53
Zaporizhzhia oblast	56	199	27,30
Poltava oblast	53	195	40,38
Sumy oblast	38	187	72,96
Ivano-Frankivsk oblast	39	176	176,40
Lviv oblast	41	174	69,28
Odessa oblast	37	158	32,10
Vinnytsia oblast	46	156	135,11
Rivne oblast	45	148	45,03
Mykolaiv oblast	42	146	25,25
Kyiv oblast	24	142	62,98
Chernivtsi oblast	37	132	92,74
Kherson oblast	33	115	28,47
Kharkiv oblast	23	114	49,52
Kirovohrad oblast	27	81	26,70
Luhansk oblast	18	75	16,35
Donetsk oblast	13	74	45,73
Zakarpattia oblast	17	61	164,84

The multiple regression equation takes the following form:

$$Y = b_1 x_1 + b_2 x_2 + c, \qquad (1)$$

where Y – endogenous (dependent) variable, resulting indicator; $b_1 - b_2$ – coefficient that determines the degree of influence of the variable X on the variable Y (regression parameters); $x_1 - x_2$ – exogenous (independent) variables.

Analysis of the model showed the following results. The variation of factor variables explains the variation of the dependent variable by at least 91% (multiple coefficient of determination R2 = 0,91, which according to the Chaddock scale characterizes the interrelationship between performance and model factors as very high (close)); reliability level - 95% (Table 3).

Table 3. Regression analysis result

Regression statistics		Coefficients	
Multiple R	0,958452151	Y-intersection	0
R-square	0,918630527	Variable X_1	0,174632023
Normalized R-square	0,869477369	Variable X_2	0,093064923
Standard error	12,94371452	-	-
Observations	24	-	-

As a result of modeling, a multiple regression equation is obtained, the economic content of which is as follows:
- joining one council to UTC leads to an increase in the number of UTCs within one oblast by 0,2 units, that is, an average of five councils is required to create one UTC within one oblast;
- increasing the population density in the united communities by 1 unit leads to an increase in the number of UTCs in this area by 0,1 units (in other words, to create 1 community it is necessary that the population per 1 km^2 increased by 10 people).

$$Y = 0{,}174 x_1 + 0{,}093 x_2 \qquad (2)$$

Regression analysis was used to establish the interrelationship between the variable and

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independent variables. This regression equation allows predicting the value of the number of UTC depending on the studied parameters.

The simulation results showed the following pattern: the lower the population density within one district is, the fewer councils are combined into one UTC. We can assume that the population density in these areas is determined by the level of social-economic development. Therefore, it is necessary to study the indicators of social-economic development of the territories where UTCs are located and to identify the level of their development.

Consequently, in Dnipropetrovsk, Kyiv, Lviv, Kharkiv, Donetsk, Odesa and Zaporizhia oblasts, incomes can be defined as high (UAH 353-167 billion per year), in Poltava, Vinnytsia, Cherkasy, Mykolaiv, Ivano-Frankivsk, Khmelnytsky and Zhytomyr regions – average incomes (UAH 130-92 billion per year), and Sumy, Kherson, Volyn, Chernihiv, Zakarpattia, Rivne, Kirovohrad, Ternopil, Chernivtsi and Luhansk regions are among the group of regions with the lowest incomes in Ukraine (UAH 91-58 billion per year).

The largest income gap is observed in the city of Kyiv. This indicator amounted to UAH 625 billion in 2019, which is on average three times higher than the revenues of the high-income regions' group, six times higher than the middle-income regions' group, and compared to the revenues of the low-income regions' group, the city of Kyiv is almost an order of magnitude higher (nine times higher) (Table 4).

Table 4. Social and economic indicators in the regions of Ukraine (in absolute terms)

Regions ** / Indicators	Revenues, UAH million	Disposable income, UAH million	Expenditures, UAH million	Employed population aged 15-70 years, thousand people	Capital investments, UAH million	Gross regional product, UAH million
Vinnytsia oblast	129787	100518	125432	660,7	15724,9	111498
Volyn oblast	71537	54645	76494	380,0	12664,0	60448
Dnipropetrovsk oblast	352532	278074	317005	1413,7	66951,1	369468
Donetsk oblast	197830	162394	134396	747,2	30594,5	192256
Zhytomyr oblast	96583	75233	102487	521,2	8466,9	77110
Zakarpattia oblast	77568	59621	90351	508,9	9330,3	52445
Zaporizhzhia oblast	166508	127935	168087	741,6	14876,7	147076
Ivano-Frankivsk oblast	97919	76124	100991	575,1	9305,5	78443
Kyiv oblast	171660	133347	209707	771,4	50295,7	198160
Kirovohrad oblast	71726	54752	78358	384,5	7794,3	64436
Luhansk oblast	65859	52477	48296	303,7	3357,5	35206
Lviv oblast	216966	165350	238936	1075,2	31061,5	177243
Mykolaiv oblast	91709	71678	91369	499,6	12549,3	79916
Odesa oblast	221965	173188	256619	1020,1	21080,1	173241
Poltava oblast	129922	99827	128788	591,2	23005,3	174147
Rivne oblast	81307	62587	81924	486,0	6729,2	56842
Sumy oblast	90518	70195	87771	490,9	7734,2	68489
Ternopil oblast	68968	51951	73393	417,7	9210,3	49133
Kharkiv oblast	246086	174779	316361	1263,9	22874,6	233321
Kherson oblast	75701	58983	92494	455,3	12368,3	55161
Khmelnytsk oblast	96886	73073	108661	528,8	10534,1	75646
Cherkasy oblast	92974	70523	105042	531,8	11385,5	93315
Chernivtsi oblast	57755	43574	76299	394,1	4096,8	33903
Chernihiv oblast	76985	58816	82520	435,8	8740,5	70624
Kyiv	652095	488412	623730	1379,9	213247,8	833069

*Source: Ukrstat (2019).

** - without taking into account the areas of the temporarily occupied territories.

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The social-economic development of united communities is characterized by the interrelationship between social and economic indicators in the regions in which the respective UTCs are located. The results of the analysis have revealed the following pattern: social indicators are higher in the regions of Ukraine where economic indicators are better (Table 4-5, Fig. 1).

For instance, Dnipropetrovsk region, which ranks the 1st and the 2nd in the ranking of social-economic indicators (Table 5, Figure 1), has a gross

regional product in 2019 of UAH 369 billion, capital investment of UAH 67 billion (18% of GRP) (Table 4), and the disposable income per employee aged 15-70 years - 197 thousand UAH per a year. During the same period in the Chernivtsi region (rating 22-25 on various social-economic indicators) gross regional product amounted to UAH 33 billion, which is 10 times less than the Dnipropetrovsk region, capital investment - UAH 4 billion (12% of GRP), and disposable income per employee aged 15-70 years - 111 thousand UAH per a year.
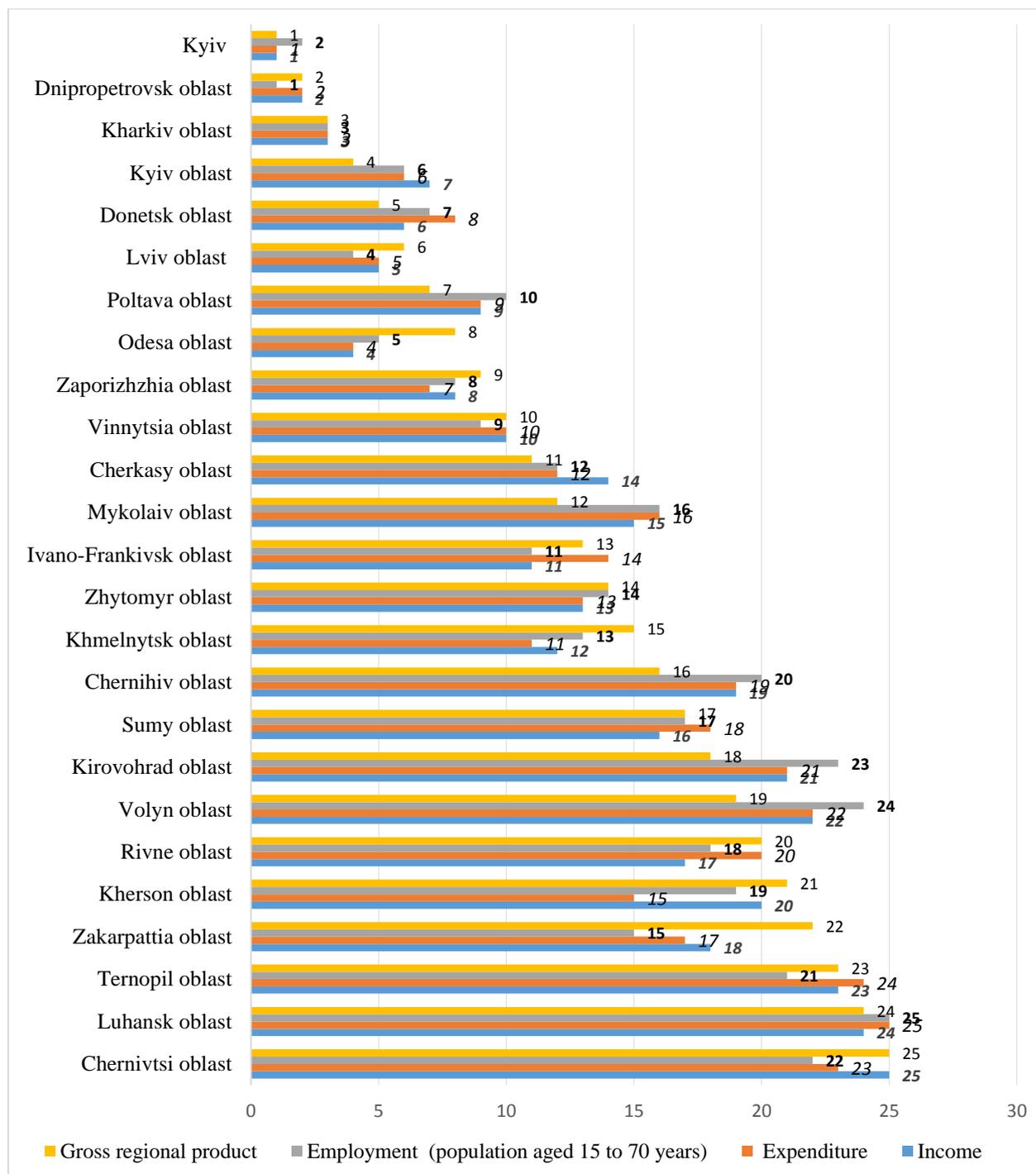
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Fig. 1 Comparison of the rating of regions of Ukraine by social and economic indicators ***
* Source: Ukrstat, 2019. URL: http://www.ukrstat.gov.ua/.
**rating 1 corresponds to high social-economic indicators, respectively, rating 25 - low.

Table 5. Social and economic indicators in the regions of Ukraine*

Region ** / Rank	Income	Disposable income	Expenditures	Employed population aged 15-70 years	Capital investments	Gross regional product
Vinnytsia oblast	10	9	10	9	9	10
Volyn oblast	22	22	22	24	11	19
Dnipropetrovsk oblast	2	2	2	1	2	2
Donetsk oblast	6	6	8	7	5	5
Zhytomyr oblast	13	12	13	14	20	14
Zakarpattia oblast	18	18	17	15	16	22
Zaporizhzhia oblast	8	8	7	8	10	9
Ivano-Frankivsk oblast	11	11	14	11	17	13
Kyiv oblast	7	7	6	6	3	4
Kirovohrad oblast	21	21	21	23	21	18
Luhansk oblast	24	23	25	25	25	24
Lviv oblast	5	5	5	4	4	6
Mykolaiv oblast	15	14	16	16	12	12
Odesa oblast	4	4	4	5	8	8
Poltava oblast	9	10	9	10	6	7
Rivne oblast	17	17	20	18	23	20
Sumy oblast	16	16	18	17	22	17
Ternopil oblast	23	24	24	21	18	23
Kharkiv oblast	3	3	3	3	7	3
Kherson oblast	20	19	15	19	13	21
Khmelnytsk oblast	12	13	11	13	15	15
Cherkasy oblast	14	15	12	12	14	11
Chernivtsi oblast	25	25	23	22	24	25
Chernihiv oblast	19	20	19	20	19	16
Kyiv	1	1	1	2	1	1

*Source: Ukrstat (2019)

** - without taking into account the areas of the temporarily occupied territories.

The results of the analysis by using economic and statistical methods also confirm the hypothesis of the interrelationship between social and economic indicators in some regions of Ukraine (Table 6).

Table 6. Correlation matrix of social-economic indicators by regions in Ukraine *

	Income	Disposable income	Expenditures	Average salary	Capital investments	Gross regional product
Income	1					
Disposable income	0,998955	1				
Expenditures	0,980336	0,973146	1			
Average salary	0,828431	0,832035	0,776897	1		
Capital investments	0,942298	0,938928	0,908704	0,87729	1	
Gross regional product	0,986463	0,983733	0,959985	0,856712	0,97617	1

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High indicators of gross regional product and capital investment in the regions are provided by the results of enterprises. That is, the social-economic development of the united communities is ensured by the innovation and investment activity of the enterprises on the territory of which they are located. Thus, the results of correlation analysis have identified a close interrelationship between social indicators and performance indicators of enterprises in the regions (Table 7).

Given the above mentioned, the strategy of sustainable development of UTC should include mechanisms, methods and tools to increase innovation and investment activity and improve the financial performance of its member enterprises. The UTC Sustainable Development Strategy is a long-term plan for five to ten years, which includes strategic and operational goals and mechanisms for their implementation, as well as identifies the community's development priorities in all areas of its activities. It is not a mandatory document for the operation of UTC, however, in order to attract funding for social and economic projects of the community, this document provides benefits and creates opportunities to assess areas of community development, risks and prospects for potential investors.

Table 7. Correlation interconnection between social development of UTC and performance of enterprises*

Social-economic indicators	Number of migrants (arrivals), persons	Revenues, UAH million	Disposable income per capita, UAH	Expenditures, UAH million	Average salary, UAH	Employed population aged 15-70 years, thousand people
Volume of sold products (goods, services) of enterprises, UAH million	0,67	0,95	0,92	0,91	0,87	0,68
Number of enterprises, units	0,75	0,96	0,94	0,96	0,85	0,75
Financial result before tax of large and medium-sized enterprises that made a profit, UAH million	0,57	0,88	0,89	0,84	0,83	0,55
Personnel expenses of enterprises, UAH million	0,68	0,96	0,91	0,92	0,87	0,70

*Calculated according to Ukrstat (2019)

Taking into account the social-economic indicators and performance indicators of enterprises in some regions of Ukraine, the appropriate rank for each region has been calculated and the corresponding clusters have been formed. The region with the highest social-economic indicators and performance of enterprises is assigned the highest rank 1, the next - rank 2, etc. (Table 8).

Table 8. Ranking of regions of Ukraine by indicators of social-economic development *

Region ** / Rank	Income	Employed population aged 15-70 years	Capital Investments	The volume of sold products (goods, services) of enterprises	Financial result before tax of large and medium-sized enterprises that made a profit, UAH million	Rank, average value
Kyiv	1	2	1	1	1	1
Dnipropetrovsk oblast	2	1	2	2	2	2
Kyiv oblast	7	6	3	3	4	5
Lviv oblast	5	4	4	5	9	5
Kharkiv oblast	3	3	7	6	8	5
Donetsk oblast	6	7	5	4	7	6
Odesa oblast	4	5	8	7	5	6

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Region ** / Rank	Income	Employed population aged 15-70 years	Capital Investments	The volume of sold products (goods, services) of enterprises	Financial result before tax of large and medium-sized enterprises that made a profit, UAH million	Rank, average value
Poltava oblast	9	10	6	9	3	7
Zaporizhzhia oblast	8	8	10	8	6	8
Vinnytsia oblast	10	9	9	11	11	10
Cherkasy oblast	14	12	14	10	14	13
Mykolaiv oblast	15	16	12	13	10	13
Ivano-Frankivsk oblast	11	11	17	14	15	14
Khmelnytsk oblast	12	13	15	16	19	15
Zhytomyr oblast	13	14	20	15	18	16
Sumy oblast	16	17	22	18	13	17
Kherson oblast	20	19	13	20	16	18
Volyn oblast	22	24	11	12	20	18
Chernihiv oblast	19	20	19	19	12	18
Zakarpattia oblast	18	15	16	23	22	19
Rivne oblast	17	18	23	21	17	19
Kirovohrad oblast	21	23	21	17	21	21
Ternopil oblast	23	21	18	22	23	21
Chernivtsi oblast	25	22	24	25	25	24
Luhansk oblast	24	25	25	24	24	24

*Source: Ukrstat (2019)

** - without taking into account the areas of the temporarily occupied territories.

The averaging of ranks by individual indicators of social-economic development has made it possible to determine the "threshold" values for each cluster: regions with a rating from 1 to 8 - have a high level of social-economic development, from 9 to 16 - medium level, 17 and less – characterized by a low level of social-economic development.

For UTCs included in the regions of the first cluster (in the city of Kyiv, Dnipropetrovsk, Kyiv, Lviv, Kharkiv, Donetsk, Odesa, Poltava and Zaporizhia regions), it is advisable to apply *the adaptation strategy of sustainable development* to improve innovation, investment and financial performance of enterprises. The essence of this strategy centers around achieving the optimal level of productivity, concentration of available resources in the direction of the areas that provide the greatest return. The main strategic goals in the implementation of this strategy should be aimed at the use of new forms and methods of attracting investment, development of intensive technologies, reduction of material-intensive production, etc.

For UTCs included in the regions of the second cluster (Vinnytsia, Cherkasy, Mykolayiv, Ivano-Frankivsk, Khmelnytsky, Zhytomyr regions), it is advisable to apply *an innovative strategy of sustainable development* aimed at ensuring high competitiveness of enterprises located in the UTCs. The essence of the innovative strategy of sustainable development lies in supporting the positive dynamics of all existing indicators of enterprise activity.

For UTCs included in the regions of the third cluster (Sumy, Kherson, Volyn, Chernihiv, Zakarpattia, Rivne, Kirovohrad, Ternopil, Chernivtsi and Luhansk regions), it makes sense to follow *the anti-crisis strategy of sustainable development,* which is aimed at the output of enterprises located in the territory UTCs from the crisis. The implementation of the anti-crisis strategy includes strategic and operational goals, which should be aimed at optimizing costs and reducing the risks connected with instability of production, as well as the efficient use of available resources.

5 Discussion

The essence of the concept of "community" is based primarily on the sense of belonging, connection, communication, and interaction of people who are part of it. According to Calhoun, a community is not just a place or a population, but a large number of relationships between them [25]. These relationships involve acquaintance, social and emotional cohesion, and devotion [2]. The typology of Brint is

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one of the few that allows classifying different types of modern communities according to the following qualifications: physical interaction between members; the frequency and priorities which are given for the interaction between members; motivation to interact [3]. However, communities are recognized as not being homogeneous in social or economic indicators, because they differ in specific practices and different patterns of behavior [26].

This heterogeneity in Ukraine is caused by the unevenness of UTC associations, which is connected with a low level of their social-economic development. The obtained results confirm the development of an inertial scenario of unification of territorial communities in Ukraine, proposed by Donchenko, according to which the researcher predicts the division of communities into rich and poor, and poor communities are forced to save resources, reduce social infrastructure and rely on state support - grants and subventions [12].

In order to stimulate the capacity of UTC, it is necessary to develop its economic potential. Therefore, UTCs should develop sustainable development strategies, the main emphasis of which should be placed on stimulating investment activity, developing entrepreneurship and tourism, creating new jobs, improving infrastructure and the social sphere, which will help encourage young people and reduce the outflow of young people from UTCs. According to viewpoint of Palchuk, in Europe, for example in Poland, no institution will work with the existing Polish gmina, if it does not have a strategy for sustainable development [17].

Businesses play an important role in ensuring the social-economic development of UTCs, as they are a source of budget revenue in the form of tax payments, create new jobs, promote social development and attract investment in UTCs. The results of the analysis revealed a close interrelationship between social indicators and performance indicators of enterprises in the regions. Social-economic indicators are higher in those regions where the best performance of enterprises is observed. Therefore, the UTC development strategy should include mechanisms in order to improve the financial, innovation and investment activities of its member enterprises. The works of Buleev et al., have proven the connection between the investment activity of enterprises and the investment attractiveness of the regions that include these enterprises. It was noted that in 2017 the highest level of investment attractiveness was observed in Dnipropetrovsk, Donetsk, Kyiv, Kharkiv regions and the city of Kyiv [19]. The above mentioned

correlates with the results of this study. In 2010, the top five investment-active leaders in the regions of Ukraine included the city of Kyiv, Kyiv, Dnipropetrovsk, Donetsk and Zakarpattia regions. However, the leaders in innovation in industrial enterprises are Lviv region, Zaporizhia region and Kyiv region.

The obtained results also confirm the theoretical and practical results, from which it can be concluded that the sustainable development of the territorial community is to a great extent determined by the efficiency of financial and credit relations. It depends on the level of economic development, because the main part of the community's income is formed from the tax revenues. According to viewpoints of some researchers, this can be achieved by intensifying regional investment policy [19].

6 Conclusions

According to the results of the conducted research, several generalized conclusions can be made:

1. It has been found that the unification of territorial communities in Ukraine was uneven. Regions with a very high level of social-economic development and a low level of social-economic development predominate. The city of Kyiv and Kyiv region significantly (several times) exceed the development of other regions and territories of Ukraine in terms of income.

2. It has been established that the uneven distribution of UTCs by income is caused by the fact that residents of territorial communities are encouraged to join more "powerful" regions, which led to uneven distribution of communities into "rich" and "poor" ones.

3. It has been substantiated that the high level of social-economic development of individual territories and communities is determined by the results of enterprises registered in their territories. Social-economic development of UTC is ensured by high performance of enterprises in which they are located.

4. The results of the analysis of the unification of territorial communities in Ukraine have been obtained, which allowed establishing the relationship between population density within one region and the number of councils united in one UTC. It has been determined that the uneven distribution of communities is due to different social-economic development of the territories, which provokes the outflow of young people to more powerful communities. The reduction of this risk is achieved by the social-economic

development of the territories, which is provided by the strategy of sustainable development of UTC.

5. 3 regional clusters have been grouped and formed with division into: cluster 1. UTCs and territories with a high level of social-economic development; cluster 2. UTCs and territories with an average level of social-economic development; cluster 3. UTCs and territories with a low level of social-economic development.

6. It has been substantiated that the UTC development strategy should include mechanisms to improve the financial, innovation and investment activities of its member enterprises. For UTCs that are part of the *first cluster*, it is advisable to use *an adaptation strategy for sustainable development*; for UTCs of *the second cluster - innovative strategy of sustainable development*; for UTCs of *the third cluster - anti-crisis strategy of sustainable development* in the direction of improving innovation, investment and financial activities of enterprises.

Continuation of research concerning determining the impact of enterprises on the social-economic development of UTC is promising not only in scientific terms, but also in order to solve applied problems of developing a strategy for sustainable development at the level of individual UTCs in Ukraine.

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