

ECONOMICAL SELF-SUFFICIENCY OF A TERRITORIAL COMMUNITY AS A SYSTEM CHARACTERISTIC OF ITS SELF-DEVELOPMENT

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ABSTRACT

The article is dedicated to the questions of research and methodological support regarding determination of the economical self-sufficiency of a territorial community as its system characteristic under the conditions of control decentralization on the basis of self-development.

The system of evaluation of ensuring the economic self-sufficiency of the territorial community, consisting of 5 blocks of generalized indicators, was constructed. Based on the principles of the Fishbone Diagram, the factors of ensuring the economic self-sufficiency of the territorial community are determined. It is proposed to calculate the generalized integral index of ensuring the economic self-sufficiency of the territorial community on the basis of the index model. The directions and users of the proposed evaluation system are determined.

Keywords: Territorial Community, Economic Self-Sufficiency, Integral Criterion.

JEL Classification: C13, O18, R10, R38, R58.

INTRODUCTION

To modernize the administrative-territorial structure of Ukraine, more attention should be paid to the methodological questions of formation of the self-sufficient territorial communities. It is required to ensure a new synthesis of the purposes and indicators in managing not only the regions but also the territorial communities to ensure the tendency for reducing the level of entropy regarding making decisions, in the time of joining of township (village) councils, townships and small towns. Unfortunately, the main direction of administrative-territorial reform, which is today realized in Ukraine, is a pooling of financial resources of the township councils of the certain region's district, but not an actualization of the unified innovation policy, which will allow to receive a positive multiplier effect from the use of the economic potential of the united territory. So, the concentration of efforts on searching of possibilities for providing of a territorial community's capacity, predetermines the necessity: firstly, to determine a terminology regarding territorial community's capacity in the context of the new legislative acts;

secondly, to develop an informational and analytical base of the quantitative rating of provision level of economical self-sufficiency of a territorial community in view of three groups: village (township) council, township, and small town as the basics of the capacity based on its resource potential, and thirdly, to improve the methodological developments regarding detection of its level.

REVIEW OF PREVIOUS STUDIES

The theory of self-development is highlighted in the works of Keating (2003) and Keating et al. (1996), where the diagnostics of European regionalism of our times through the territorial and social determinants has been implemented. In the context of self-development of a region, places the emphasis on the close correlation between economic growth and social factors, he introduces a concept of the social cluster as a separate formation on a region's territory, which satisfies in full the minimum needs of the population in social, educational, cultural and other domestic services (Rodriguez & Ezcurra, 2011). Theoretical and methodological principles of the regional self-development with a focus on the complete record of economical, social and territorial interests were studied in the works of the following scientists.

Analysis of foreign publications by this problematic certifies, that during consideration of the social and economical region's self-sufficiency, the scientists drew attention to the balance of resources and requirements of the social and economical system in investments (Oakley et al., 2015), a creation of conditions for its economical self-sufficiency (Bobáková, 2017), they proposed as a condition of self-sufficiency of the social and economical system construction of its relations with the central authorities on equal ground (Silva et al., 2018).

METHODS

Using the theoretical provisions of the Ishikawa concept (Ishikawa, 1976) will determine the causal relationships of indicators of economic self-sufficiency of the territorial community. The construction of the Ishikawa (Fishbone Diagram) (Ishikawa, 1985 diagram) as an analytical tool allows to use for the research of the possible effects of the factors and the separation of the most important causes, the actions of which give rise to specific consequences and manageable.

Calculation of the generalized integral index of ensuring the economic self-sufficiency of the territorial community can be calculated on the basis of the index model. The method of the geometric mean is based on the determination of the coefficients by the individual indicators, when the highest value of this indicator is taken per unit (Tetiana et al., 2018a: 2018b: 2018c). The integral estimate is calculated using the formula of the geometric mean (Nakashydz & Gil'orme, 2015).

So, to determine the level of provision of economical self-sufficiency of a territorial community it is reasonably to apply the special indexes, based on the quantity specification of the different aspects of the inner potential of a territorial community and on the efficiency of its usage. Such approach allows: to provide the validity and methodological correctness of comparisons of economic self-sufficiency of the territorial communities of a certain region; to provide scientifically systematic calculations of these indexes in view of the certain territorial communities on the universal scale, which allows to execute methodologically rigorous comparisons as by the generalizing integral index of provision of economical self-sufficiency of a territorial community, as by the sectional or partial integral indexes of markers, which characterize its certain aspects.

RESULTS AND DISCUSSIONS

The main determinant of joining of township (village) councils, townships, and small towns in to the capable territorial communities today is a population size and financial self-sufficiency, and the process occurs very slowly.

All of this witnesses, that in Ukraine all people are so combined in the problems of legal foundations of decentralization, who forgot all about the main mission of joining of the territorial communities-their self-development i.e., a self-reliant social and economical development with adaptive properties for overcoming of unfavorable social, economical and ecological tendencies and with capacity of social and economical system to balanced development, self-regulation, self-improvement with the maximal use of internal reserves, and also of the external borrowing resources for satisfaction of needs of population (Hrinevska, 2012). In support of this mission, first of all, it is necessary to define the following concepts regarding a territorial community: self-sufficiency, economical self-sufficiency, level of economical self-sufficiency and the mechanism of its provision. In future it will allow in a more substantiated way to treat an acceptance of strategically and current managerial decisions regarding a self-development of a newly formed territorial community.

Unfortunately, within the limits of the administrative and territorial reform during the process of voluntary association of the township councils in to the capable territorial communities, it is studied only a regulatory part of this process and their financial capability, which is a financial capacity of a village, township, small town as a whole to satisfy the basic social and economical needs of inhabitants of any given territorial unit and to provide finance of the countrywide functions, proportionally to the financial possibilities of a territorial community. But with the aim of unification to the statistical reporting an economical potential of a territorial community it is reasonable to classify by the functional feature, namely: immovable resources (natural resources, capital funds, social sphere); human resources; commercial infrastructure; communications infrastructure of the territory; development of a business activity and of the other form of economy management (Umanets et al., 2010).

Generalizing integral index of provision of economical self-sufficiency of a Territorial Community (TC) (Umanets & Shatalova, 2015): promotes the grounds for a decision regarding detection of the level of provision of economical self-sufficiency of a TC and of its place among other TC of the district (region); allows to detect the unbalanced processes of a socio-economic development, weak and strong sides of the components of provision of the economical self-sufficiency, and also to propose reasonably a certain strategy of the further socio-economical development of a TC and to fulfill in future a reasonable unification of the district's (regional's) TC in to the capable territorial communities. It is calculated on the basis of the sectional integral indexes of nine blocks.

The selection of the most influential factors on the level of ensuring the economical self-sufficiency of the territorial community can be done by constructing the Fishbone Diagram, which shows the correlation between the probability of gain and the force of the factor's influence.

The system of evaluation of ensuring the economic self-sufficiency of the Territorial Community (TC), consisting of 5 groups (blocks) of generalized indicators, is proposed.

Block 1-Sectional integral index of the natural resources of a TC: allows giving an objective evaluation of the state of the land, water, forest and raw-material resources. In future it will allow making more reasonable decisions regarding determination of the development of the

priority types of economical activity (branches of the certain type of activity) according to the raw material base of a TC (Table 1).

Table 1 INDICATORS OF SECTIONAL INTEGRAL INDEX OF THE NATURAL RESOURCES OF A TC (K_1)		
Number of the Indicator	Name of the Indicator	Unit of measurement
X1.1	Agricultural lands.	ha
X1.2	Forest lands.	ha
X1.3	Built-up lands.	ha
X1.4	Water reserve lands.	ha

Block 2-Sectional integral index of the material and technical support of a TC: reflects the level of the material and technical support of a TC and its potential possibilities (Table 2). These indicators reflect the state of the basic means of agro-industrial production. Fixed assets determine the current level of production, since the rational use of fixed assets is one of the main factors in improving the efficiency of production, which leads to an increase in production without additional investment.

Table 2 INDICATORS OF SECTIONAL INTEGRAL INDEX OF THE MATERIAL AND TECHNICAL SUPPORT OF A TC (K_2)		
Number of the Indicator	Name of the Indicator	Unit of measurement
X2.1	The quantity of tractors at the end of the year in the agricultural undertakings.	one
X2.2	The quantity of trucks at the end of the year in the agricultural undertakings.	one
X2.3	Actual capacity of a water supply in the agricultural undertakings.	m^3
X2.4	Actual capacity of a heat supply in the agricultural undertakings.	m^3
X2.5	A cultivated area of the cereal crops of a TC.	ha
X2.6	Cattle population of a TC.	heads
X2.7	Sheep and goat population of a TC.	heads
X2.8	Poultry population of a TC.	heads

Block 3-Sectional integral index of development of the social sphere of a TC: provides the grounds for the decisions regarding estimation of the development level of a social sphere in administrative-territorial boundaries of a TC (Table 3).

Table 3 INDICATORS OF SECTIONAL INTEGRAL INDEX OF DEVELOPMENT OF THE SOCIAL SPHERE OF A TC (K_3)		
Number of the Indicator	Name of the Indicator	Unit of measurement
X3.1	The number of doctors per 100 persons of the population of a TC.	persons
X3.2	The number of the regular schools in a TC.	one
X3.3	The number of preschool institutions in a TC.	one
X3.4	The number of books and magazines in the mass libraries, with the exemplars per 100 persons of the population of a TC.	one
X3.5	The number of places in the clubs per 100 persons of the population of a TC.	one

Block 4-Sectional integral index of human resources of a TC: provides the grounds for decisions regarding economical provision of a TC with human resources (Table 4).

Table 4 INDICATORS OF SECTIONAL INTEGRAL INDEX OF HUMAN RESOURCES OF A TC (K_4)		
Number of the Indicator	Name of the Indicator	Unit of measurement
X4.1	The number of working population.	persons
X4.2	Average monthly salary per one worker, who is employed in agriculture.	currency units
X4.3	Average monthly salary per one worker, who is employed in a social sphere.	currency units
X4.4	Coefficient of differentiation of the health index (longevity).	fraction
X4.5	Coefficient of differentiation of the education index.	fraction
X4.6	Coefficient of income differentiation.	fraction
X4.7	Coefficient of differentiation of the mortality index.	fraction
X4.8	Coefficient of differentiation of the level of vocational education.	fraction

Block 5-Sectional integral index of the infrastructure of a TC: provides the grounds for the decisions regarding assistance in the formation of commercial infrastructure of a TC (Table 5).

Table 5 INDICATORS OF SECTIONAL INTEGRAL INDEX OF THE INFRASTRUCTURE OF A TC (K_5)		
Number of the Indicator	Name of the Indicator	Unit of measurement
X5.1	The number of retail facilities.	one
X5.2	The number of objects of the restaurant business (bars, cafes).	one
X5.3	A length of the general-purpose highways with the hard surface.	km
X5.4	The number of tours of the public transport with the stop on the territory of a TC.	one
X5.5	Number of mobile numbers per 100 persons of the population of a TC.	one
X5.6	Number of subscribers of broadband Internet access services.	persons

Block 6-Sectional integral index of the financial support of a TC: it provides information regarding revenues formation which are assigned to the budgets of the local government and it takes into account in indication if the volumes of inter-branch transfers, and proper revenues, and also expenses of the local budgets, which are counted and not counted at determining of the inter-branch transfers (Table 6).

Table 6 INDICATORS OF SECTIONAL INTEGRAL INDEX OF THE FINANCIAL SUPPORT OF A TC (K_6)		
Number of the Indicator	Name of the Indicator	Unit of measurement
X6.1	Income tax from the citizens.	currency units
X6.2	A single tax for small business entities.	currency units
X6.3	A fee for licenses and certificates.	currency units
X6.7	A state fee in the part that belongs to relevant budgets.	currency units

X6.8	A fee for the trade patent.	currency units
X6.9	Receipt of administrative fines.	currency units
X6.10	A fee for the state registration of the commercial entities.	currency units

We construct the Fishbone Diagram of the system of evaluation of ensuring the economic self-sufficiency of the Territorial Community (TC), which allows determining the most influential relationships between factors and consequences in the investigated situation (Figure 1).

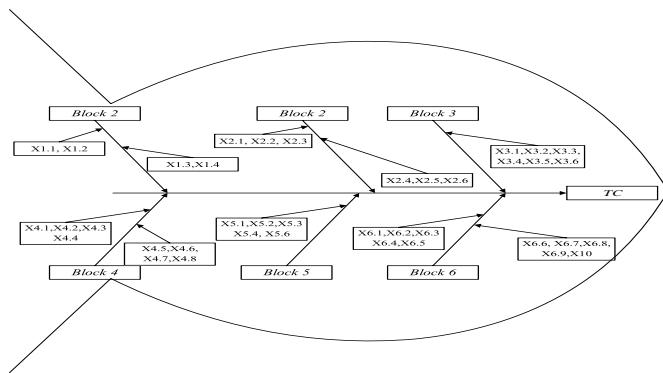


FIGURE 1
**FISHBONE DIAGRAM OF THE SYSTEM OF EVALUATION OF ENSURING THE
ECONOMIC SELF-SUFFICIENCY OF THE TERRITORIAL COMMUNITY (TC)**

The calculation of the generalized integral index of ensuring the economic self-sufficiency of the territorial community based on the formula of the geometric mean in accordance with the Ishikawa concept is determined by six group integral indices that characterize certain aspects of the internal potential and financial security of the territorial community:

$$K = \sqrt[6]{K_1 \times K_2 \times K_3 \times K_4 \times K_5 \times K_6} \quad (1)$$

Where K -generalized integral index of ensuring the economic self-sufficiency of the territorial community, fraction;

$K_1, K_2, K_3, K_4, K_5, K_6$ -group integral indices for ensuring the economic self-sufficiency of the territorial community, fraction.

The sources of information for calculating the generalized integral index of ensuring the economic self-sufficiency of the territorial community are statistical information from the State Statistics Service of Ukraine (<http://www.ukrstat.gov.ua/>).

The class of the level of ensuring the economic self-sufficiency of the territorial community is determined on the Harrington scale, which is conventionally divided into five levels: 1.00-0.80-very well; 0.80-0.63-good; 0.63-0.37-satisfactory; 0.37-0.20-bad; 0.20-0.00-very bad. A point with coordinates (0.00; 0.37) is a critical point of curvature overlap, which divides the value into satisfactory and unsatisfactory values of the indicator. (Class of the level of ensuring the economical self-sufficiency of the territorial community).

The potential customers of the results of evaluation of provision of economic self-sufficiency of a territorial community according to this methodology can be:

1. Structures of the state and regional level of management: research findings are useful in grounding and making decisions regarding voluntary association of the territorial communities with the purpose to increase their capacity.
2. Investors: with the purpose of implementation of various compares, comparisons, related to the choice of an optimum alternative deposition of funds available for investment in to the development of enterprise of the certain territorial community.
3. Natural and legal persons: for determination of the tendencies in creation of supply and demand for products in different territorial communities and their determining factors, business research of the regional markets.

In considering of the suggested methodological approach for detection of the level of economical self-sufficiency of a territorial community based on the integral indexes with geometric average it arises a set of questions:

1. Why particular a geometric average, rather than, for example, a simple or measured arithmetical average is recommended in the construction of algorithm of level detection of provision of the economical self-sufficiency of a territorial community.
2. It would be wiser to consider the weight of each block in construction of the index model of the level of economical self-sufficiency of a territorial community.
3. It is not clear whether this methodological approach for measuring of the level of economical self-sufficiency is universal as for township (village) council, as for township and a small town.

CONCLUSIONS

For its practical application it is necessary a connection of the relevant subdivisions of the local authorities, including the statistical department, management of labour and of the social and labour relations, of the central financial administration, etc., which form and analyze the relevant directions for the development of the above listed life processes of a territorial community and have a certain experience in planning and recording of indicators of development of the relevant spheres of activity. After the final specification it can be created a constant activity measurement system of separate divisions of the state services within the boundaries of their responsibility for the development processes in each territorial community and in each direction. The possibilities of the latest technologies make it possible to make a qualitative, systematic and operational evaluating process and to turn it in the efficient management lever to increase the effectiveness of management of a territorial community and hence its capacities. Regarding the use of the evaluation system in general, it should be pointed out that the processes of a small town shouldn't be compared with the townships or township councils, as its economical potential and basic city's possibilities are far more, than in all comparative townships or township councils. In order to make more sufficient full assessment of the level of the economical self-sufficiency of a territorial community, which is based on the economical potential of a studied territory, it is reasonable to define the weight coefficients of the I group of the basic and socially conditioned resources (blocks according to the suggested methodology), which are measured by the meanings from 0 to 1 and are determined by an expert method. It will allow a construction. This will allow a construction of the hydride model of the level of economic self-sufficiency of a territorial community.

Prospects for further research are adjusting the strategy of development of the territorial community on the basis of the concept of ensuring economic self-sufficiency. The results of the calculation of the generalized integral index of ensuring the economic self-sufficiency of the territorial community will determine the strengths and weaknesses of the economic potential of the region, determine the direction of positive changes in the relevant information blocks.

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