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## Theoretical foundations of the concept of stimulating sustainable development of regions in the context of financial security

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The theoretical aspects of concept-category vehicle of policy of stimulation of sustainable development of region in the context of financial security are considered in the paper. Basic interpretations of sustainable development of region are considered. The approaches to stimulate regional socio-ecological-economic systems through the prism of theories of motivation are discussed. The methods of estimation of stimulation of sustainable development of region and the methods of estimation of sustainable development of region are offered. The policies to stimulate sustainable development of region are proposed.

**Keywords:** stimulation of sustainable development of the region, financial incentives for sustainable regional development, innovative stimulation of regional development, investment stimulation regional development, tax incentives for development of the region, transfer stimulation regional development, institutional stimulation of regional development.

Поліщук В.Г. ТЕОРЕТИЧНІ ОСНОВИ КОНЦЕПЦІЇ СТИМУЛЮВАННЯ СТАЛОГО РОЗВИТКУ РЕГІОНІВ В КОНТЕКСТІ ФІНАНСОВОЇ БЕЗПЕКИ

У роботі розглянуто теоретичні аспекти поняття категорії політики стимулювання сталого розвитку регіону в контексті фінансової безпеки. Розглянуто основні тлумачення сталого розвитку регіону. Обговорюються підходи до стимулювання регіональних соціально-еколого-економічних систем через призму теорій мотивації. Запропоновано методіку оцінки стимулювання сталого розвитку регіону та методи оцінки сталого розвитку регіону. Запропонована політика стимулювання сталого розвитку регіону.

**Ключові слова:** стимулювання сталого розвитку регіону, фінансові стимули для сталого регіонального розвитку, інноваційне стимулювання регіонального розвитку, стимулювання інвестицій регіональним розвитком, податкові стимули для розвитку регіону, стимулювання розвитку регіонального розвитку, інституційне стимулювання регіонального розвитку.

Полищук В.Г. ТЕОРЕТИЧЕСКИЕ ОСНОВЫ КОНЦЕПЦИИ СТИМУЛИРОВАНИЕ УСТОЙЧИВОГО РАЗВИТИЯ РЕГИОНОВ В КОНТЕКСТЕ ФИНАНСОВОЙ БЕЗОПАСНОСТИ

В работе рассмотрены теоретические аспекты понятия категории политики стимулирования устойчивого развития региона в контексте финансовой безопасности. Рассмотрены основные толкования устойчивого развития региона. Обсуждаются подходы к стимулированию региональных социально-эколого-экономических систем через призму теорий мотивации. Предложена методика оценки стимулирования устойчивого развития региона и методы оценки устойчивого развития региона. Предложенная политика стимулирования устойчивого развития региона.

**Ключевые слова:** стимулирование устойчивого развития региона, финансовые стимулы для устойчивого регионального развития, инновационное стимулирование регионального развития, стимулирование инвестиций региональным развитием, налоговые стимулы для развития региона, стимулирование развития регионального развития, институциональное стимулирование регионального развития.

**The problem is presented in general terms and its connection with important scientific or practical tasks.** Today, almost all countries, regardless of their socio-economic development have to make a decision, designed to overcome the socio-economic and environmental problems. The complexity of the situation, which is manifested in the social, economic and environmental relations, threatens to become lasting character. Economic downturn reduces employ-

ment, wealth and consumption. At the same time, almost all countries, including Ukraine, are faced with very serious environmental challenges. In particular, climate change is an unprecedented environmental and economic threat that affects the security of society. Everything with greater frequency increasing conflicts in the «society – economy – environment.» In particular, these differences affect the whole of society on various levels of natural systems: global, national,

regional and local. Among all levels of society, the greatest threats are integral territorial entities with unique geographical and natural-resource potential, including emerging countries – regions. Under the influence of dangerous phenomena and processes regions lose internal resistance, disturbed their relatively sustained development.

Exit compound of the situation can be in only one case – the awareness of their responsibility for all processes in the region, as well as conscious impact on the region as a system to enhance regional capacity. Today, there is a need to stimulate sustainable development of the region by state and regional governments. Permanent systemic and systematic invigoration effect of various institutions (government ministries, agencies) on the situation in the regions can make the transition to sustainable regional development.

**An analysis of recent researches and publications on which the author relies, which considers this problem and approaches to its solution.** The theoretical basis for the development of the theoretical foundations of the concept of incentives for sustainable development of the regions are: the idea of scientists involved in the development of the theory of sustainable development; the idea of scientists who were involved in the theory of motivation.

Above the challenges to achieve sustainable development of the region Ukrainian scientists worked as I.K. Bystryakov [2], B.V. Burkyns'kyi [1], B.M. Danylyshyn [4], Z.V. Gerasymchuk [6], L.G. Mel'nyk [9], V.Ya. Shevchuk [10], I.M. Vahovyh [11] and others.

Along with significant findings in this area should expand this issue, taking into account a comprehensive approach to promote sustainable development.

Articles prevention of environmental disasters and resource depletion devoted a number of works of leading scientists of several countries since the 1970s. In 1977-1980 it was the release of works by H.E. Daly, which shows the inability of neoclassical economic theory, at least partially solve environmental problems. Author proposes that the goal of economic activity that aims to increase revenue and provides follow up to steady state, where population and economic capital of the state will be a constant. This, in his opinion, will lead to balance environmental and economic well-being [3].

However, the study appeared American scientist N. Georgescu-Roegen, which links economic development with natural constraints and attempts to combine thermodynamics

with environmental economics. Research N. Georgescu-Roegen conducted independently of K. Boulding, which in 1966 was recognized for grounding problems principle balance of substance and of H. Ayres and L. Kohrsen who used material balance approach and input and output systems [5].

Further theoretical research on the concept of finding sustainable social development intensified. Various aspects of the problem are the subject of scientific debate. Economists who focus on sustainability are primarily meant prosperity, profit, capital accumulation (Next Pezzi al.). Researchers geographers were interested in the study of consequences creates sustainability for land use planning areas (Naess, Owens, Reed, etc.). At present, the contribution to the development of sustainable development made by foreign scholars such as A.A. Leiserowitz, R.W. Kates, T.M. Parris, J.H. Hulse [7; 8].

In the 1980s, started talking about eco-development, development without destruction, the need for sustainable ecosystems. «World Conservation Strategy» (WCS), adopted in 1980 at the initiative of UNEP, the International Union for Conservation of Nature (IUCN) and the World Wildlife Fund in the first international document containing mention of sustainable development. «Caring for the Earth – Strategy for Sustainable Life» was the second edition WCS and dated October 1991.

Characteristics of approaches to the interpretation of the definition «sustainable development» presented in Table 1.

Sustainable development – the process is extremely complex in nature. Coordination of activities in the following related and combines different spheres of life of the population as a society, economy and ecology – it is extremely difficult. It is designed to solve this problem promote regional socio-ecological and economic (SEE) system or region in terms of achieving sustainable development.

#### **Formulating the goals of the article.**

The main objectives of the article are to consider the theoretical aspects of the concept of the category of policy to stimulate sustainable development of the region in the context of financial security, to consider the main interpretations of sustainable development of the region, discuss approaches to stimulation of regional socio-ecological and economic systems through the prism of theories of motivation; definition of the methodology for assessing the stimulation of sustainable development of the region and methods for assessing the sustainable development

of the region; development of policies to stimulate sustainable development of the region.

**Presentation of the main research material with full justification of the scientific results**

Table 1

**Characteristics of approaches to the interpretation of the definition «sustainable development»**

Researches	Interpretation of the definition «sustainable development»
Burkynsky B.V., Stepanov V.N., Kharichkov S.K. [1]	The ability of ecological systems to withstand economic changes created by external and internal influences in the economic and ecological subsystems, as well as the ability to save a certain dynamic equilibrium
Gerasymchuk, Polishchuk [6]	Process of continuous transformation of the quantitative and qualitative characteristics of regional socio-ecological and economic (SEE) system, aimed at achieving a dynamic balance between society, economy and environment, while ensuring the welfare of present and future generations in compliance equilibrium, balance, harmony, stability, competitiveness and security of the region
Melnik L.G. [9]	Permanent reproduction the so-called condition homeostasis (dynamic equilibrium) with periodic change in its level at which there was a permanent solution to the contradictions between the internal components of the system and change the parameters of the biosphere does not extend beyond catastrophic (fatal) for system transformation
Vahovych I.M. [11]	The harmonious coexistence of human civilization with the natural environment on a sustainable long-term basis by providing a balance and equilibrium between economic benefits, social interests and environmental costs

Table 2

**Characteristic signs of sustainable regional CEE system**

Sign sustainability of regional CEE	Content signs	Feature attributes
Equilibrium	achieve a state of dynamic equilibrium CEE regional system	Consistency (to overcome the inner and external threats by enhancing internal potential)
Balancing	achieve an optimal balance of qualitative and quantitative characteristics of regional CEE	Ratio (proportion, balance between the elements of the system that determines the preservation of its quality characteristics)
Harmoniousness	interconnectedness between social, economic and ecological areas of the region	Relationship (goals and methods of achieving them are interrelated and have a goal to achieve sustainable development of the region)
Stability	support for possible longer term positive parameters of regional CEE system	Duration (long term living, social justice, minimizing dependence on adverse environmental conditions, the satisfaction of future generations to natural resources)
Competitiveness	activation potential of the region and increase the efficient use of competitive advantages in each subsystem region to ensure sustainable development of the region, as well as the introduction of new scientific and technical progress in industry, environment and social sphere of the region	Self-development (the ability to provide competitive advantages productive use of resources and benefits to enhance human development, economic security without disrupting other regions)
Security	use of the potential of regional CEE system, the ability to reproduce and prevention of destabilizing factors	Reproduction (strength of relationships between elements of a regional system, which helps to satisfy the interests of the region's population in the key national interests)

**Characteristics of some theories of motivation in the context of the promotion of sustainable development in the region**

Access	Theory of motivation	Content theories of motivation	Content theory of motivation (at the regional level in the context of the promotion of sustainable development)
Theories that reflect the process of reward (procession theories)	Vroom's Expectancy Theory	Man directs its efforts on achieving any goal in the extent to which estimates the probability of reward for it.	Implementation of the scheme «incentives-sustainable development» x «sustainable development, obtain benefits for the region» x «satisfying benefits in regional CEE system» = motivation (the desire for sustainable development).
	Equity theory on job motivation	Workers have compared their rewards to the effort and reward other employees who perform similar work.	Terms of achieving sustainable development for all regions should be equal. However, to achieve sustainable development of the region need to use different approaches, methods and tools, but their use should be fair for everyone.
	The theory of participatory management	Active participation of employees in the organization's life, communicating with colleagues, enhances job satisfaction, thus increasing the quality of their work.	Involvement of regional management and implementation of policies to stimulate sustainable development of the region business community, financial institutions, public asset territorial unions, research institutions.
	Theory of motivation material incentives	The system of material incentives works complement each other, and connected only the process of creating a material interest in the implementation of employment.	Creating a system of incentives and motives of the region in terms of sustainable development (economic, organizational and psychological forms and tools).
Theories that reflect the needs of content (content theories)	Theory needs	A separation requirement for primary and secondary behavior is determined by the needs of lower order, and after meeting the needs of their motivating effect stops.	For regional economic structures CEE system is characterized by three basic group's needs – environmental, social and economic. Each of these groups can be considered a new hierarchical stage.
	Alderfer's Existence/ Relatedness/ Growth (ERG) Theory of Needs	Basic needs that motivate human behavior: existence, relationship growth. If you need a higher level is not met, increasing efforts to meet the needs of a lower level.	It is essential that the regional CEE system there were multiple groups needs (environmental needs, social needs, economic needs), and on them was carried out active work to their satisfaction. It is necessary to promote sustainable development in the region, to all levels of needs in the region were very satisfied.
	Theory needs by McGregor D.	Theory «X»: workers tend to avoid work, so they should be encouraged through control and threats. Theory «Y»: workers tend to accountability and performance, autonomy and self-expression.	Theory «X» (stimulatory mechanism): CEE regional economic structure system will be strongly avoided independently satisfy certain needs, so you need to encourage them to implement these requirements in different ways – from supporting to punishment; avoid the specific needs (social, economic or social) due to their contradiction between them. Theory «Y» (motivational mechanism): CEE regional economic structure system tend to take responsibility for specific needs (social, economic and environmental content) in order to achieve future sustainable development of the region.

**obtained.** The object of study is the regional socio-ecological-economic system (RSEES) in modern transformational terms of its functioning.

The subject of research is the socio-economic, socio-environmental and ecological and economic relationships that affect the regional dynamics and their potential can affect the sustainable development in the socio-ecological-economic dynamic equilibrium. Also worth special attention to theoretical developments in the field of promotion of sustainable regional development based on developments of the theory of sustainable development, motivation theories, theories of regional development and the theory of institutionalism.

Sustainable development of the region with our position can be understood as a process of continuous transformation of the quantitative and qualitative characteristics of regional socio-ecological-economic system in order to achieve a dynamic balance between society, economy and environment, while ensuring the welfare of present and future generations.

Define the basic features of sustainable development of regional CEE system, namely, the characteristics of the region, indicating the achievement of regional CEE system of sustainable development. The results are presented in Table 2.

Sustainable development in the region cannot be achieved without the use of activating measures. Today is uncertain stimulate regional socio-ecological-economic system through

the mechanism of self-motivation to in regional self-organization system in order to achieve sustainable development. Therefore, the only way out of the situation is, is the formation of a mechanism to stimulate sustainable development. To do this, analyze the main theories of motivation and correlation them out to supporting sustainable development in the region, find out more common conditions that underlie the theory promote sustainable development. The results are presented in Table 3.

Result is the last link in the chain, but it is extremely difficult to achieve. An active entity (state and regional authorities) aims to fulfill its functions and duties related to providing social, economic and environmental development at present and in the future – sustainable development. It is safe to say that the activities of the subjects are behavioral in nature. The activity of all subjects to stimulate the region provides a synergistic effect, since all efforts to improve the situation in the region, according to the theory of participatory management, provide even greater results (see Figure 1).

It should be emphasized that the impact on the region in the implementation of regional needs can occur under certain conditions: 1) the need to act so that all objects sustainable development of the regions were equal, but it should be used just for all the different approaches, methods and tools (according to the theory of justice), that effective regional policies promote sustainable development, 2) during stimulation of the region

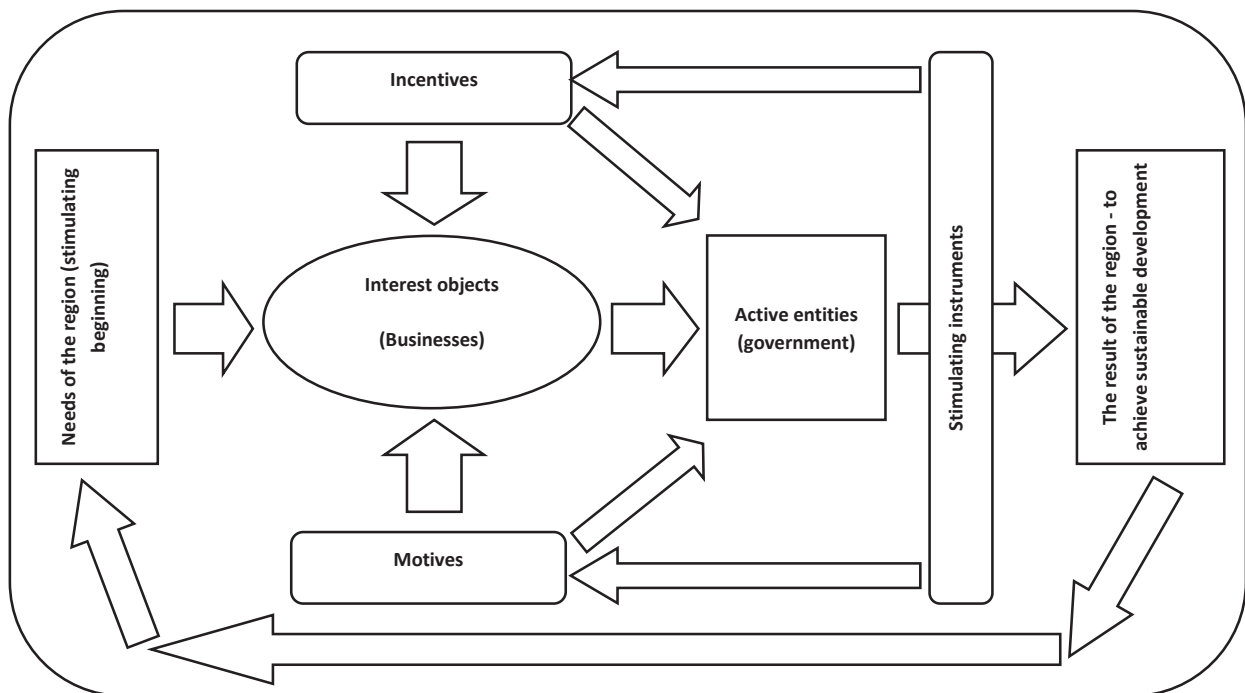


Figure 1. Scheme chain «needs of the region – the result of the region»

have used various forms of incentives (according to the theory of motivation financial incentives), and 3) in the region, there are three basic groups of needs – social, economic, environmental, and each of these levels should be as satisfied (in accordance with the conclusions of the theory of needs Maslow and theory of existence, relationships and growth of C. Alderfer).

However, this scheme is general, and reflects the basic positions of the theory. Consider it in more detail in terms of each element of sustainable regional development – economic, social and social (see Figure 2).

We can say that the mechanism of stimulation of sustainable regional development should be

understood primarily through the prism of theories of motivation. Successful transformation leading theories of motivation theory to create incentives for sustainable regional development whereby each regional system is characterized by a set of requirements that must be achieved. Meeting these needs is possible only when the system affect incentives to create the motivation to enhance the internal potential and achieve a system of dynamic equilibrium on the principles of equilibrium, harmoniousness, balance, stability, competitiveness and security [6].

The level of sustainable development of the region describes an integrated index of sustainable development. This indicator is

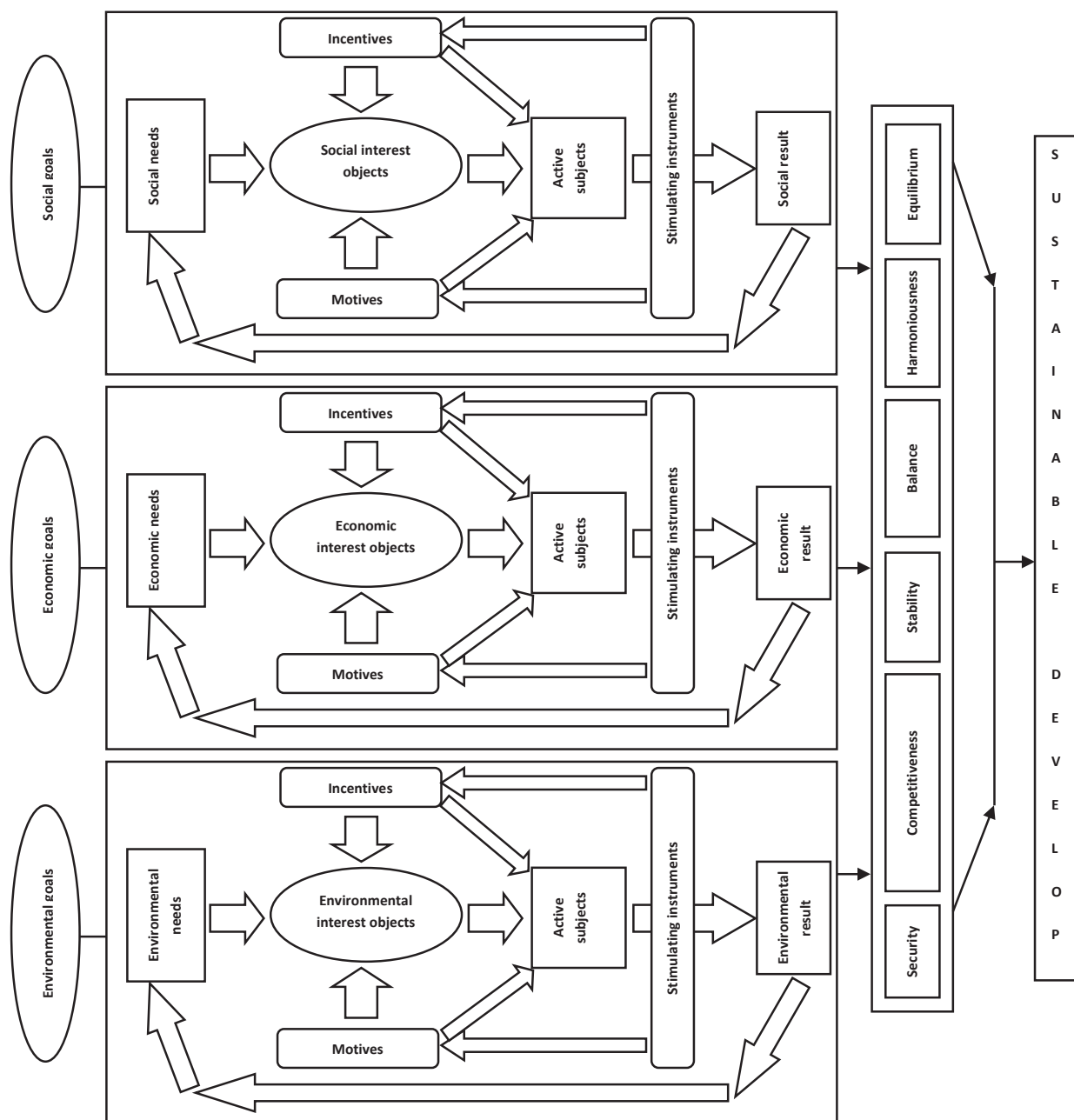


Figure 2. The theoretical approach to stimulation of sustainable development in the region

based on a complex set of indices of sustainable development in the region:

$$ISDR_j = \{I_{v,j} | v = \overline{1, p_j}\} \quad (1)$$

$ISDR_j$  – Level of sustainable development of the  $j$ -th region (CEE regional system);

$I_{v,j}$  – Set  $v$ -s composite indices of sustainable development of the  $j$ -th region;

$p_j$  – Number of integrated sustainable development indices of the  $j$ -th region;

$j$  – Total number of regions studied ( $j = 1, 27$ ).

Algorithm of finding the index of sustainable development of the region is presented in Figure 3.

The study was proposed approach to classification tools promote sustainable development in the region, which include the following: investment and innovation (activation measures influence, based on investing in the development and implementation of new technologies, processes and innovative proposals to achieve sustainable development of the region), tax (tools promote sustainable development of the region that the basis used leverage tax system – taxes, fees, charges, fines, tax breaks and loans), transfer (incentives aimed at improving the socio-ecological-economic situation in the region and achieving sustainable development through the use of budget allocations),

institutional (incentive measures undertaken by regional governments to improve the socio-ecological-economic situation in the region – permits, restrictions, agreements, programs).

Indices of stimulation social ( $I^{SR}_{st,j}$ ), economic ( $I^{ER}_{st,j}$ ) and environmental ( $I^{ECR}_{st,j}$ ) of the region, which are complex indexes stimulation of sustainable development of the region calculated by the formulas (2-4):

$$I^{SR}_{st,j} = \sum I^{soc}_{st,j} = I^{soc}_{inv-st,j} + I^{soc}_{pod-st,j} + I^{soc}_{ins-st,j} + I^{soc}_{trans-st,j}, \quad (2)$$

$$I^{ER}_{st,j} = \sum I^{econ}_{st,j} = I^{econ}_{inv-st,j} + I^{econ}_{pod-st,j} + I^{econ}_{ins-st,j} + I^{econ}_{trans-st,j}, \quad (3)$$

$$I^{ECR}_{st,j} = \sum I^{ecol}_{st,j} = I^{ecol}_{inv-st,j} + I^{ecol}_{pod-st,j} + I^{ecol}_{ins-st,j} + I^{ecol}_{trans-st,j}. \quad (4)$$

The integral index of stimulating sustainable development of the region ( $I^{SDR}_{st,j}$ ) is calculated by the formula (5):

$$I^{SDR}_{st,j} = \frac{I^{SR}_{st,j} + I^{ER}_{st,j} + I^{ECR}_{st,j}}{3}, \quad (5)$$

The integral index of stimulation of sustainable development varies within [0, 1], where 0 is the value that indicates the absolute lack of stimulating sustainable development in the region, 1 – a value that indicates the maximum possible incentives for sustainable development. This indicator shows the various boundary level was the stimulation of sustainable development: low (varies 0-0,333), medium (0,333-0,667), high (0,667-1).

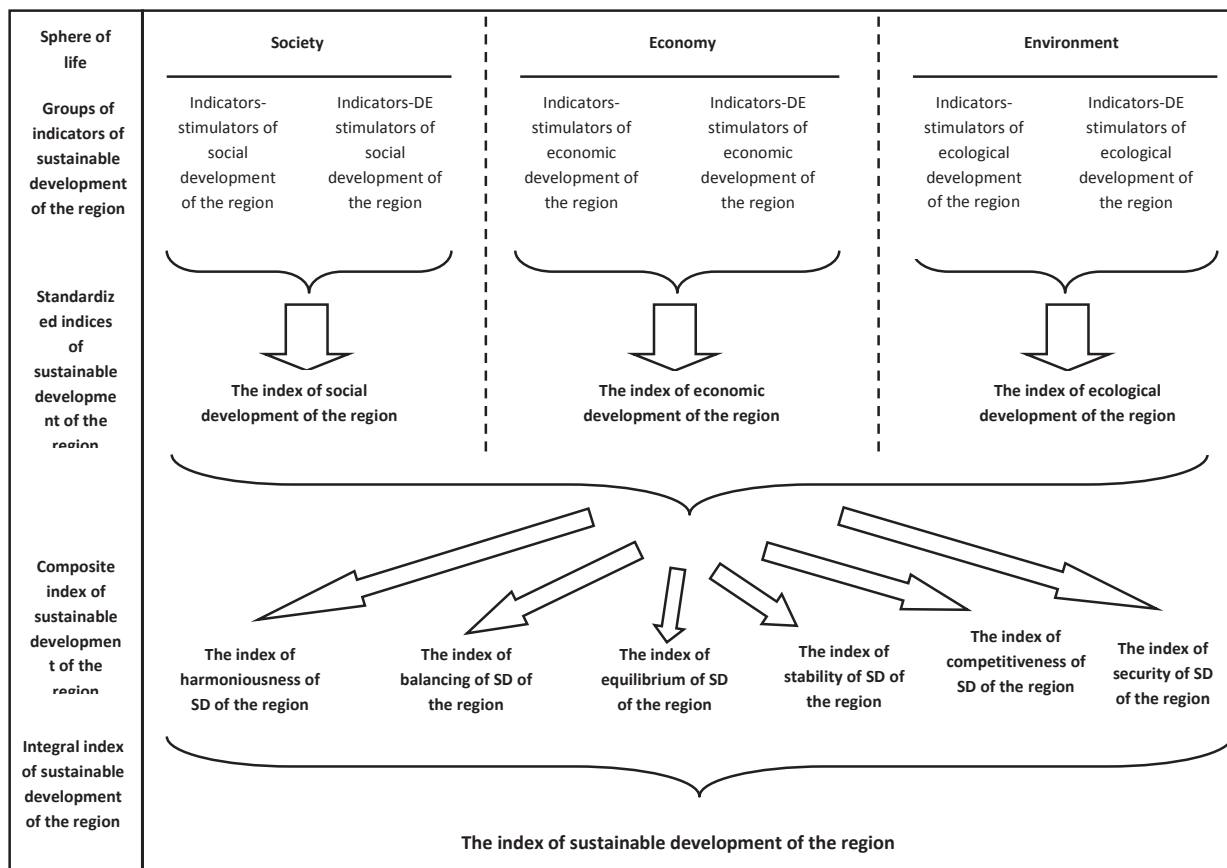


Figure 3. Algorithm of finding the index of sustainable development of the region



The main stages of the implementation of the mechanism promoting sustainable development in the region are: the diagnosis level of sustainable regional development, diagnostics level promote sustainable development of the region, setting goals promote sustainable regional development, selection and implementation of the policy of promoting sustainable development in the region, the choice of methods and tools for policy to stimulate the region's sustainable development, promotion of sustainable control regional development, suggestions for improvement of incentives for sustainable regional development.

The notion of policy incentives for sustainable development of the region as a purposeful activity of the authorities at various levels, aimed at enhancing sustainable development of the region depending on the level of sustainable development in the region through adequate tools stimulation.

The criteria of selection policy incentives, which include: the level of sustainable development in the region, the level of promotion of sustainable development.

Selection policy of stimulation of sustainable development of the region consists in taking into account the level of stimulation sustainable

development in the region and the level of sustainable development in the region and allows to distinguish nine types of policy of stimulating.

**Conclusions from this study** and further perspectives in this direction. This study allows substantiating and refining the theoretical framework to provide incentives for sustainable development of the region that achieves the appropriate level of sustainable regional development in terms of reaching the equilibrium, harmony, balance, stability, competitiveness, security, social, environmental, and social spheres of life of the population. As a result, it can be argued that at present time in Ukraine, despite some attempts to establish a unified system of incentives for sustainable development of the regions, there is a balanced comprehensive policy of promoting sustainable development of regions. There are no clear unambiguous views of scientists in the field of regional studies on the application of complex method of stimulating measures for the regions. Moreover – there is no clear theoretical justification of this concept. Therefore, our study is extremely important, which features novelty theoretical vision of this problem. In addition, the problems raised in stimulating sustainable development in Ukraine have practical value.

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