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МЕТОДОЛОГІЯ РЕАЛІЗАЦІЇ ІННОВАЦІЙНОГО ВЕКТОРУ ЕКОНОМІЧНОГО РОЗВИТКУ І СПІВРОБІТНИЦТВА ТЕРИТОРІАЛЬНО-ГОСПОДАРСЬКИХ СИСТЕМ УКРАЇНИ

Актуальність. В умовах реформи децентралізації в Україні співробітництво громад стає одним із інструментів їх соціально-економічного розвитку. В той же час, даний інструмент недостатньо використовується в Україні в сфері інноваційної діяльності. Як показує світовий та європейський досвід, співробітництво територіально-господарських систем є ефективним в інноваційній сфері і активно використовується регіонами як всередині країни, так і в транскордонному співробітництві.

Мета та завдання. Розробка методологічних і прикладних засад реалізації інноваційного вектору економічного розвитку і співробітництва територіально-господарських систем України, а також розробка класифікації моделей співробітництва територіально-господарських систем в сфері інноваційної діяльності.

Результати. В статті запропоновано методологічні, класифікаційні, інституціональні засади співробітництва територіально-господарських систем, практичне впровадження яких сприятиме реалізації їх інноваційного потенціалу. Застосування територіально-господарських систем в якості об'єкту дослідження дозволяє підійти до досліджуваної проблеми не з позиції адміністративно-територіального поділу, яка передбачає дослідження міжмуниципального співробітництва, формування субрегіонів, агломерацій, конурбацій тощо, а з функціональної позиції, яка дозволяє дослідити міжтериторіальні інноваційні процеси крізь призму співробітництва в рамках інноваційних систем, виробничих кластерів тощо. І якщо питання формування регіональних інноваційних систем та кластерів є доволі дослідженим, то їх формування в міжтериторіальному аспекті є актуальним в теоретичному та прикладному аспектах для вітчизняної економіки.

Висновки. Запропонована в дослідженні методологія реалізації інноваційного вектору економічного розвитку і співробітництва територіально-господарських систем України забезпечує системний підхід та визначає ключові орієнтири політики активізації міжтериторіального співробітництва в інноваційній сфері.

Ключові слова: інноваційний розвиток, співробітництво, територіально-господарські системи, інноваційна система.

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METHODOLOGY OF REALIZATION OF THE INNOVATION VECTOR OF ECONOMIC DEVELOPMENT AND COOPERATION AMONG TERRITORIAL AND ECONOMIC SYSTEMS OF UKRAINE

Topicality. Under the conditions of the decentralization reforms in Ukraine the communities' cooperation becomes one of the key tools of their socio-economic development. At the same time, this tool was underused in Ukraine in the sphere of innovation activity. The experience of world in general and Europe in particular showed that the cooperation among territorial and economic systems is efficient in the sphere of innovations and is actively applied by the regions both in the national and cross-border cooperation.

Aim and tasks. The elaboration of methodological and applied bases of the realization of innovation vector of economic development and cooperation among territorial and economic systems of Ukraine and elaboration of the classification models of such cooperation in innovation sphere.

Research results. *The article suggests the methodological, classification, institutional bases of cooperation among territorial and economic systems, implementation of which will facilitate the realization of their innovation potential. The application of the territorial and economic systems as an object of the research allows to approach the studied problem not from the standpoint of administrative-territorial division, that involves the study of inter-municipal cooperation, formation of subregions, agglomerations, conurbations, etc., but from the functional standpoint to explore the inter-territorial innovation process in the context of cooperation within the innovation systems, production clusters, etc. While the issue of the regional innovation systems and clusters formation is well-studied, their formation in the interregional aspect remains topical both in the theoretical and applied aspects for the Ukrainian economy.*

Conclusion. *The methodology of the realization of innovation vector of economic development and cooperation among territorial and economic systems of Ukraine, that is suggested in the research, provides the system approach and determines key orientations of the politics of inter-territorial cooperation activation in the innovation sphere.*

Key words: *innovation development, cooperation, territorial and economic systems, innovation system.*

Problem statement and its connection with important scientific and practical tasks. According to the previous analysis, the regions and communities of Ukraine should be oriented on formation the favorable innovation environment that is a key factor of their competitiveness and basis of development in terms of decentralization. The world and European experience of the regional innovation development shows that the inter-territorial cooperation and formation of the territorial and economic systems on its bases gives the new impulses to the development [1, 2].

The regions of Ukraine are characterized by the substantial imbalance of the socio-economic development, in particular, in the sphere of innovations. Thus, the Index of innovation development for regions of Ukraine in 2017 (Figure 1), that was calculated on the basis of author's method [3], showed the substantial divergence between the leaders of rating - Kyiv and Kharkiv regions and other regions of Ukraine. Index of innovation development for Kyiv, that leads the rating, exceeded the same index for the Rivne region, which is the last in the rating, by more than 50 times.

The problem of divergence of the socio-economic and innovation development is typical also for the regions of the European Union. The practice of the EU cohesion policy implementation has revealed contradictions between the convergence, growth and increase of global competitiveness of the EU regions. The inter-territorial cooperation and strengthening the quality of institutions and administrative potential at the local level are considered as tools to reduce these contradictions [2].

Analysis of recent publications on the problem. The issue of the inter-territorial cooperation was considered from different standpoints in the works of the following scientists: E.J. Blakely [4], V.M. Osyrov, I.L. Parasiuk [5], V.V. Tolkovanov [6] and others. This issue was elaborated within the conceptual studies of the European Union dedicated to the regional development and cohesion policy, and within the USAID project "Local Investments and National Competitiveness".

The inter-territorial cooperation in the innovation sphere in the EU is supported by different programs. The European Innovation Partnerships is one of such programs. The innovations in agriculture are one of the topics of this program. As an example let us take one of the projects realized within the program dedicated to the elaboration of technology of the computer-assisted determination of the fruit damaging level in the process of harvesting, processing and transportation. In the Portugal region Montejunto, known by its fruit growing, one of farmer has revealed that 25% of his total fruit production does not manage to get to the market due to the fruit damaging. To solve this issue he formed the local network of 32 fruit producers together with the Polytechnic Institute of Leiria and COTHN Consulting Center. By joint efforts they elaborated the technology called "electronic fruit" which allowed measuring the damage caused to the fruits during harvesting, transportation, storage and packing. Through identification of the critical points in the fruits processing, they managed to minimize the fruits damaging and increase their market value [7, P. 4].

Allocation of previously unsolved parts of the general problem. The issue of the development of methodological and practical bases of cooperation among territorial and economic systems in the innovation sphere is very topical for the national economy since such cooperation contains, as the world and European experience show it, quite a substantial potential of the innovation and economic development of communities.

Formulation of research objectives (problem statement). Elaboration of the methodological and applied bases of realization of the innovation vector of economic development and cooperation among territorial and economic systems of Ukraine.

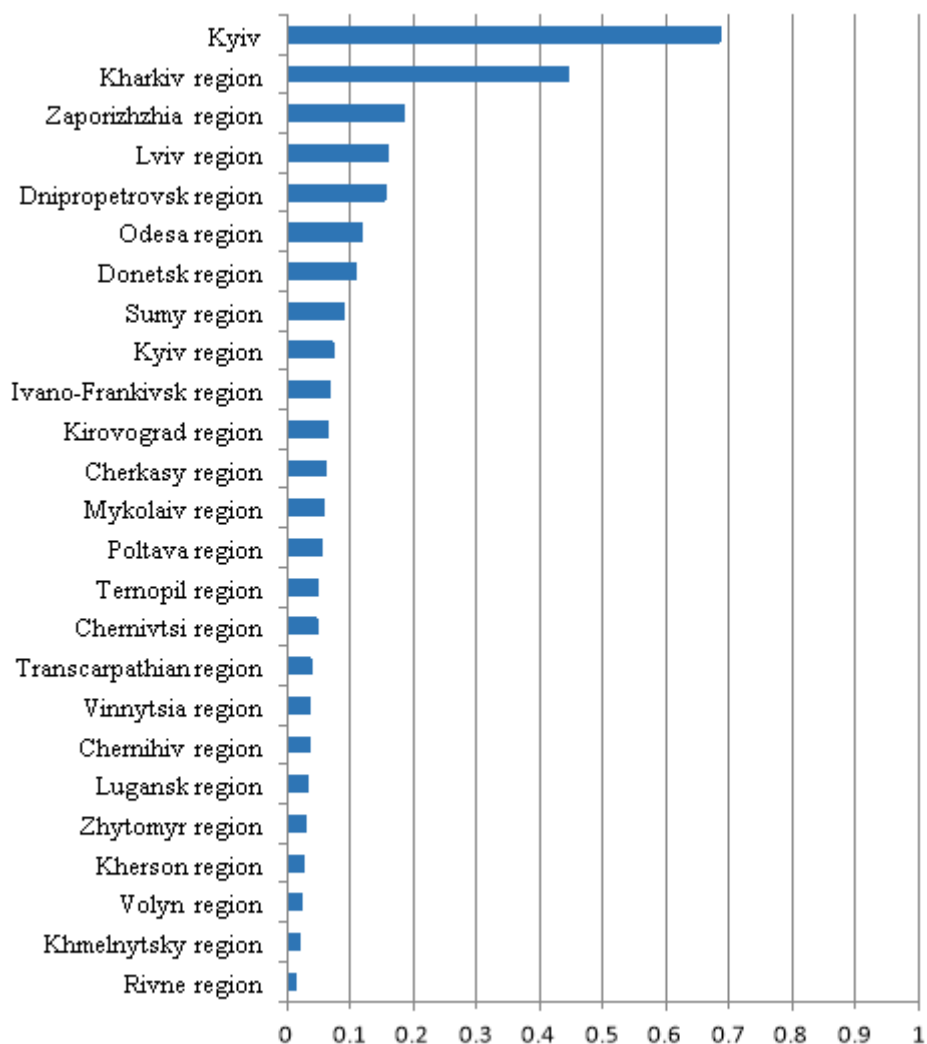


Fig. 1. Ranking of regions of Ukraine according to the Index of innovation development in 2017
 Developed by the author [3, P. 125]

An outline of the main results and their justification. Territorial and economic systems are complex formations with certain type of interactions, cooperation and interdependences of their components, that determine the nature and level of involvement of resources of the system-united territories into the economic turnover to reinforce the mutual development and reaching the synergetic effect.

It is necessary to distinguish the cooperation of already formed territorial and economic systems and formation of territorial and economic systems on the basis of cooperation. In the innovation sphere such cooperation is concentrated around the formation of innovation systems and value-added chains on the basis of innovations. The cooperation among territorial and economic systems is based, first of all, on the application of the existing economic principles and approaches, in particular, the agglomeration and scale effect that allow to achieve a higher efficiency, productiveness and synergy of the system, and, thus, higher competitiveness.

As principles of territorial and economic systems cooperation are determined the following:

- reciprocity: mutual benefit, in particular, in the economic sphere, and resources exchange;
- voluntary basis of mutual relations;
- objectification: common interests, desire and capacities of the common application of resources for efficiency increase;
- formalization: presence of formally established legal relations at least between two stakeholders;
- legal standing: availability of competences and possibility of their executing;
- resource availability [8].

The conditions of the realization of the innovation vector of economic development and cooperation among territorial and economic systems in Ukraine, according to the previous studies, are influenced by the

key characteristics of the new regional innovation policy, which, in particular, includes the following: systematicity, cross-sectoral cooperation, “smart” economic growth on the basis of innovations, competitiveness based on the innovation advantages, decentralization, cohesion, inter-territorial cooperation [3].

The formation and cooperation among territorial and economic systems in Ukraine is based on cooperation among territorial communities, determined by the Law of Ukraine “On Cooperation Among Territorial Communities”. Under the conditions of the decentralization reform in Ukraine during last years cooperation among territorial communities has been developing on the basis of agreements in different spheres. There are more than 600 of such agreements, however, only 3 can be classified as innovative, which include the following:

- agreement on cooperation among territorial communities in the form of the common project realization “Innovation and technical support of the tourist attractions of the ancient city Helon”;
- agreement on cooperation among territorial communities in the form of the common project realization “Implementation of the innovation energy-efficient measures for electricity supply of the Lohvytska Central District Hospital on the basis of renewable energy sources (solar energy)”;
- agreement on cooperation among territorial communities in the form of the common project realization “Implementation of innovation technologies for radiography in the Zhovkva District Council “Zhovkva Central District Hospital”.

Due to projects related to the innovation sphere, in particular energy efficiency projects, their amount is a little bit higher, but in general, it should be noted, that such tool as communities cooperation in the innovation sphere is insignificant, that does not allow to realize their innovation potential.

Logical structure of methodology of the realization of innovation vector in the economic development and cooperation among territorial and economic systems in Ukraine is the following.

Entities of territorial and economic systems can be combined into two groups:

- vertical: all levels of public administration, namely, territorial communities, united territorial communities, cities, agglomerations, regions, including cross-border regions, subregions, etc.
- horizontal: authorities, business, science and education, community representatives, non-governmental organizations, and other innovation process stakeholders.

The object of the cooperation-oriented policy is constituted by the functional units, the development of which is based on the differential approach adjusted to the local conditions, rather than by the administrative units. One more substantial difference of such policy is orientation not only on the production process but also on the population and its interests.

The subject of cooperation among territorial and economic systems in the innovation sphere is two-directional: on the one hand it is represented by the innovation system (functional specialization), on the other - by the chain of the value-added chain (sectoral specialization).

The forms of cooperation are determined by the Law of Ukraine “On Cooperation Among Territorial Communities”, there are common projects, joint ventures, objects of infrastructure, management authorities.

The cooperation tools are determined on a case-by-case basis depending on the cooperation subject and its tasks; they can be aimed either on the development of the innovation system and/or on the direct elaboration of innovations for certain link of the value-added chain.

The institutional measures of the cooperation among territorial and economic systems in the innovation sphere are based on the tools of local economic development which includes the following: planning, organizational, personnel, directive, coordination, control, budget, communicational [9].

All in all, cooperation among territorial and economic systems is based on the reduction of the local innovation systems fragmentarity, mutual strengthening of the innovation development of territories and increase of their competitiveness and people’s welfare as the superior value.

Implementation of the innovation vector of economic development and cooperation among territorial and economic systems is suggested in the following stages:

- 1) perception of the role of innovations in the socio-economic development;
- 2) identification of cooperation needs, based on which the cooperation models and related tools are chosen;
- 3) formation of a cooperation platform;
- 4) institutional support of cooperation.

On the basis of the above mentioned methodology, the following classification of the models of cooperation among territorial and economic systems in the innovation sphere is suggested:

I. Cooperation on the basis of interaction among regional innovation systems - formation of the innovation environment:

I.1. Complementary (compensatory) functional cooperation - is the cooperation among territorial and economic systems in order to compensate weak links of their innovation systems. This can be the compensation of the lack of innovations supply, innovations demand, innovation infrastructure, staffing and/or financial support. The European cohesion principle is realized.

I.2. Cooperation of leaders in the innovation systems development - is the cooperation aimed at the mutual growth and strengthening of territorial and economic systems. The European co-competition principle is realized, i.e. the mutual strengthening of global competitiveness of cooperation participants.

Main types of cooperation combinations are shown in Table 1. The mixed versions of the outlined models are also possible.

II. Cooperation based on sectoral specialization with a focus on innovations:

II.1. Complementary (compensatory) sectoral cooperation - is the creation of value-added chains (Figure 2).

II.2. Sectoral cooperation of leaders - is the cooperation oriented towards the mutual growth and strengthening of territorial and economic systems with similar or close sectoral specialization.

Main types of combinations are shown in Table 2.

Platform-type models (platforms of open innovations) represent the mechanism of cooperation among innovation process stakeholders through the realization of joint innovation projects. Open innovation platforms based on the modern digital management tools, form the new environment for cooperation and creation of a new value, integrating knowledge from different sources, including users' experience, creating a networking effect. Open innovations platform became the integral tool of the new European regional innovation policy.

The platforms are based on the participatory action research principles, according to which the researcher directly participates in the research process, encouraging the target community stakeholders to the perception and analysis of the situation, communication with other stakeholders to find decisions and progress to a new development level. Concerning the companies, such platforms allow joining the innovation projects or initiate their own project, allow joining different cooperation forms (living laboratories, demonstration projects, etc.) that encourage and regulate the open innovation activity and increase the amount of implemented innovation projects.

The examples of the world-class innovation platforms are as follows: Innocentive, Nine Sigma, Demola, acting as the innovation intermediaries among customers, interested in innovation solutions, and knowledge holders. Such services are more efficient in the formation of partnership alliances rather than traditional development agencies. The platform basis provides the innovation process with the distinct structure and reveals market effects.

The innovation eco-systems are aimed at the intensification of informational flows and strengthening the cooperation, resulting in new knowledge, ideas, technologies, forming the basis of the economic growth, production of new goods, development of business.





The platforms arise in response to the need to insure the cooperation among innovation process stakeholders - business, government, science and education, public sector. The multilateral Internet-platforms in the digital format provide innovation services that drive a networking effect, production scaling and reduction of marginal expenses.





Basic mechanisms of the regional projects funding in Ukraine, in particular, the mechanism of funding through the State Regional Development Fund, do not facilitate the establishment of partnerships among business, science, education, public sector and participation in the innovation activity. However, the European regional development funds, in particular, the European Regional Development Fund, European Social Fund, provide for the multi-sided facilitation of such inter-sectoral cooperation, determining it as the precondition for funding. The same mechanisms are applied also by the national innovation development institutes in the European countries, like Finnish Funding Agency for Technology and Innovation "Tekes" that provides the financial support of cooperation between universities and private sector.

There are different ways of the innovation platform management. It can be a private commercial company like New Factory International Ltd, the Finnish platform-type management company that employs 10 persons with the turnover of about 1 million EUR, and cooperation with the higher educational institutions is provided by unified service algorithm. The management can also be provided by the subregional development agency, like Business Tampere created in Finland in the Tampere subregion.

Table 1

Classification of regions/communities cooperation models on the innovation systems interactions

Cooperation model	Territorial and economic systems		Examples	Tools
	Region/community 1	Region/community 2		
<i>I.1. Complementary (compensatory) functional cooperation</i>				
1	2	3	4	5
1. Cooperation to balance the supply and demand on innovations	 <p>cooperation to compensate the lack of demand on innovations</p>	 <p>cooperation to compensate the lack of innovations supply</p>	Cluster for processing of recycled resources of winemaking, that have been formed within the agricultural, ecological and recreation cluster “Frumushyka-Nova”. The production capacities of the cluster are located on the territory of the Vesela Dolyna Village Council, Tarutinsky district of the Odessa region, and the scientific elaborations and technologies are located in Odessa (the Odessa National Academy of Food Technologies, Institute of Market Problems and Economic&Ecological Research of the National Academy of Sciences of Ukraine). Besides, the cluster staff is trained at the Odessa National Academy of Food Technologies. This cluster envisages cooperation between Vesela Dolyna community, that is represented by the production complex “Frumushyka-Nova”, and provides the demand on innovations and personnel, and Odessa city, that is represented by the higher educational establishment and scientific institution, and provides the innovations and personnel supply.	<ul style="list-style-type: none"> - innovation vouchers for purchasing the innovation goods and technologies by enterprises from the national providers (research institutions, universities); - involvement of customers into the innovation goods development process; - innovation requests in open access; - enterprises’ associations (clusters) to carry out the experiments, implementation of new technologies, researches, commercialization , etc.
2. Cooperation to balance the supply and demand on personnel in the innovation sphere	 <p>cooperation to compensate the lack of personnel in the innovation sphere</p>	 <p>cooperation to compensate the staffing demand deficit in the sphere of innovations</p>		<ul style="list-style-type: none"> - involvement of scientists into the business-sector, in particular, using the innovation vouchers; - training the specialists upon the request of the innovation enterprises (in particular, using innovation vouchers); - involvement of stakeholders into the studying programs elaboration; - high standards of life in regions in order to be attractive for qualified specialists.

1	2	3	4	5
<p>3. Cooperation to balance infrastructural support in the innovation sphere</p>	 <p>cooperation to compensate the lack of infrastructural support in the innovation sphere</p>	 <p>cooperation to compensate the lack of infrastructural support in the innovation sphere</p>	<p>Such model is typical for territorial and economic systems, which do not have enough resources to create an innovation infrastructural facility, that is why they joint their efforts. As an example of such cooperation can be the subregional innovation center of the Lower Danube region.</p>	<ul style="list-style-type: none"> - joint scientific and technological parks; - joint open access research laboratories; - joint business-incubators with innovation specialization; - centers of technologies transfer from research institutions to SMEs; - web-platforms to maintain the dialog among innovation activity stakeholders; - consultations and informational support of innovation enterprises by the regional development institutes (subregional development agencies); - joint financial infrastructure for start-ups: network of the business-angels, inter-territorial funds of seed and venture capital funding.
<p>4. Cooperation to balance the regulation in the innovation sphere, in particular, financial support</p>	 <p>cooperation to compensate the lack of strategic regulation in the innovation, and/or financial support</p>	 <p>cooperation to compensate the lack of innovations supply</p>	<p>Elaboration of strategies of the socio-economic and innovation development of communities of Lymanskyi district of the Odessa region by the scientific institution - the Institute of Market Problems and Economic & Ecological Research of the National Academy of Sciences of Ukraine (Odessa city).</p>	<ul style="list-style-type: none"> - elaboration of innovation development strategies for territorial and economic systems; - mechanism of the competitive selection of joint innovation projects for funding from local budgets; - acceleration programs.

1	2	3	4	5
<i>I.2. Cooperation of leaders in the innovation systems development</i>				
5. Cooperation for the purpose of mutual strengthening of territorial and economic systems in the innovation sphere			Foreign example: project “Six City Strategy” provides cooperation among six Finnish leading innovation cities in the elaboration of their smart-strategies and strengthening of their international positions in the European Union.	<ul style="list-style-type: none"> - joint technological platforms; - “living laboratories” for testing innovations by the public; - elaboration of subregional programs for promotion of national innovation products at the foreign markets; - territorial marketing; - joint projects in elaboration of the breakthrough innovations.

Developed by the author

- strong element of the innovation system
 - weak element of the innovation system

1 – innovation demand, 2 – innovation supply, 3 – innovation infrastructure, 4 – personnel in the innovation sphere, 5 – regulation in the innovation sphere, including strategizing and financial support

Table 2

Classification of regions/communities innovation cooperation models on the basis of their sectoral specialization

Cooperation models	Territorial and economic systems						Tools
	Region / community 1	Region / community 2	Region / community 3	Region / community 4	Region / community 5	Region / community 6	
	extraction of raw materials	production of materials, components, spare parts	production of finished goods	distribution	after-sale service	processing and recycling	
1	2	3	4	5	6	7	8
<i>II.1. Complementary (compensatory) sectoral cooperation</i>							
resource							- joint projects in elaboration of innovations in the sphere of raw materials extraction

Continuation of the tab. 2

1	2	3	4	5	6	7	8	
processing							- joint projects in elaboration of innovations in the sphere of raw materials processing	
production							- joint projects in elaboration of innovations in the sphere of production	
supply							- joint projects in elaboration of innovations in the sphere of distribution	
service							- joint projects in elaboration of innovations in the sphere of after-sale service	
wasteless							- joint projects in elaboration of innovations in the sphere of processing and recycling	
<i>II.2. Sectoral cooperation of leaders</i>								
leadership	Territorial and economic system 1							- joint projects in elaboration of the breakthrough innovations for the industry; - elaboration of subregional programs concerning the integration of the national producers into the global value-added chains
	Territorial and economic system 2							

Developed by the author

The innovation platforms may be both digital (virtual) and real (material). Real innovation platforms can take the form of coworking centers, business-incubators, etc. to provide flexible opportunities for direct long-term cooperation. An example is the real platform in Finland - Campus-Arena within which different independent suppliers offer services to support the innovation cooperation between the university and business. This model reminds the concept of the “Innovation services mall” where services, complementing each other, increase its attractiveness for customers (companies, university researchers, students).

The concept of the open innovations platform can be considered as the inclusive innovation policy based on the idea that the more subjects are involved into the innovation activity, the more significant benefits it provides to a wider range of participants, including innovators or consumers of innovation goods or services. This effect is caused by the diffusion of innovations, knowledge flows and intuitive ingenuity. These effects are difficult to measure or visualize, however, as world experience shows, they are significant factor in innovations increase [10].

For the Ukrainian realities, the platform model of cooperation among innovation process stakeholders in territorial and economic systems is promising as it solves one of the most important problems of the innovation development of Ukrainian regions - weak cooperation among regional innovation systems participants that prevents from the usage of regions’ innovation potential.

Ukraine already has the examples of the innovation platforms, however, their efficiency depends upon the orientation towards the needs of specific community, i.e. territorial and economic system. That’s why it is suggested making the platforms a compulsory element of regional innovation systems in Ukraine.

Conclusions and perspectives of further research.

The methodology of the realization of the innovation vector of economic development and cooperation among territorial and economic systems of Ukraine, which is suggested in the research, provides a systemic approach and determines the key guidelines of the policy of inter-territorial cooperation in the innovation sphere. Key structural elements of the methodology are systematized in Table 3.

Table 3

Methodology of realization of the innovation vector of economic development and cooperation among territorial and economic systems of Ukraine

Structural elements	Description
1	2
<i>Activity characteristics:</i>	
Peculiarities	-divergence of the innovation development of the regions of Ukraine; - contradiction between convergence and growth and increase of the global competitiveness of regions; - inter-territorial cooperation and strengthening the quality of institutions and management capacity at the local level are considered as tools to reduce this contradiction
Conditions	systematicity, inter-sectorality, “smart” economic growth on the basis of innovations, competitiveness based on the innovation advantages, decentralization, cohesion, inter-territorial cooperation
Norms of activity	cooperation among territorial communities is determined by the Law of Ukraine “On Cooperation Among Territorial Communities”. (In Ukraine there are more than 600 agreements on cooperation among territorial communities, however, only 3 of them can be classified as innovative)
Principles	reciprocity, voluntary basis of mutual relations, objectification, formalization, legal standing, resource availability
<i>Logical structure of activity:</i>	
Subjects	- vertical: all levels of public administration, namely, territorial communities, united territorial communities, cities, agglomerations, regions, including cross-border regions, subregions, etc. - horizontal: authorities, business, science and education, community representatives, non-governmental organizations, and other innovation process participants
Object	functional units (territorial and economic systems), the development of which is based on the differential approach adjusted to the local conditions
Subject	- innovation system (functional specialization); - value-added chain (sectoral specialization)

1	2
Forms	common projects, joint ventures, infrastructure objects, management authorities
Tools	cooperation tools are determined on a case-by-case basis depending upon the cooperation subject and its tasks, they can be aimed either at the development of the innovation system and/or at the direct elaboration of innovations for certain link of the value-added chain
Methods	planning, organizational, personnel, directive, coordination, control, budget, communicational
Activity result	reduction of the local innovation systems fragmentarity, mutual strengthening of the innovation development of territories and increase of their competitiveness and people's welfare as the superior value
Stage structure of activity:	
Stages	1) perception of the role of innovations for the socio-economic development; 2) identification of cooperation needs, based on which the cooperation models and related tools are chosen; 3) formation of cooperation platform; 4) institutional support of cooperation.

Developed by the author

It is revealed that realization of the innovation vector of economic development and cooperation among territorial and economic systems is based on the formation of innovation systems and formation of the value-added chains, based on innovations, that was taken as a base of suggested cooperation models classification. The cooperation model is selected on the basis of clear understanding of a goal of such cooperation and initial analysis of a regional innovation system and innovation specialization of a region. This approach will provide communities with the economically sound selection of cooperation form and related tools, that determine their effectiveness, as it will meet the needs of a particular territorial and economic system.

It is suggested to make such platforms a compulsory element of regional innovation systems in Ukraine. It is recommended to form innovation platforms with the orientation towards the needs of each particular territorial and economic system, which can be both in digital form (web-platforms) and/or in the material form (subregional innovation development agency). The platform-type approach, within which users create a new value for each other, receiving a networking effect and combination of digital solutions and real centers of innovations support, shall be considered as the resource of responses on current challenges in strategies elaboration and regional innovation development. For the Ukrainian realities, the platform-type model of cooperation among innovation process participants in territorial and economic systems is promising as it solves one of the vital problems of the innovation development of Ukrainian regions - weak interaction among participants of regional innovation systems that prevents from usage of regions' innovation potential.

ЛІТЕРАТУРА

1. Regions and Innovation: Collaborating across Borders. OECD Reviews of Regional Innovation. OECD Publishing, 2013. 235 p. URL: <http://dx.doi.org/10.1787/9789264205307-en>. (дата звернення: 01.12.2020).

2. Schmidt J. EU Cohesion Policy: A suitable tool to foster regional innovation? Policy Paper. Germany: Bertelsmann Stiftung, 2019. 12 p. URL: http://aei.pitt.edu/102430/1/EZ_Policy_Brief_Cohesion_2019_ENG.pdf. (дата звернення: 01.12.2020).

3. Стратегування інноваційного розвитку регіонів України на засадах глокалізації : монографія / [О. А. Єрмакова та ін.] ; за наук. ред. Єрмакової О. А. ; НАН України, Ін-т пробл. ринку та екон.-екол. дослідж. Одеса : ПРРЕД НАНУ, 2019. 387 с.

4. Блейклі Е. Дж. Планування місцевого економічного розвитку. Теорія і практика; [пер. з англ. Анжела Кам'янець]. [2-е вид.]. Львів : Літопис, 2002. 416 с.

5. Осипов В. М., Єрмакова О. А., Парасюк І. Л. Міжмуніципальне співробітництво як інструмент підвищення конкурентоспроможності Придунайського економічного субрегіону // Проблеми та перспективи інноваційного соціально-економічного розвитку в умовах глобалізації:

регіональний вектор : матер. І Міжнар. наук.-практ. Інтернет-конф., 16-17 квітня 2012 р. : тези допов. Ізмаїл, 2012. URL: <http://fei.idgu.edu.ua/conference/dokl/d112.html> (дата звернення: 01.12.2020).

6. Розвиток міжмуніципального співробітництва: вітчизняний та зарубіжний досвід / [В.В. Толкованов та ін.] ; за ред. В.В. Толкованова. Київ : Видавництво «Крамар», 2011. 261 с.

7. EIP-AGRI brochure. EIP-AGRI Network 2015. Brussels: European Commission, 2015. 8 p. URL: https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_brochure_network_2015_en_web.pdf. (дата звернення: 01.12.2020).

8. Територіальний розвиток в Україні: розвиток агломерацій та субрегіонів. Агентство США з міжнародного розвитку (USAID). Проект «Локальні інвестиції та національна конкурентоспроможність». Київ : USAID ЛІНК, 2012. 188 с.

9. Борода М., Гінкул А., Рубановський К. Методи та механізми фінансування економічного розвитку: звіт. К : Центр громадської експертизи. 2012. 106 с.

10. Raunio M., Nordling N., Kautonen M., Rasanen P. Open Innovation Platforms as a Knowledge Triangle Policy Tool – Evidence from Finland. *Foresight and STI Governance*, 2018, vol. 12, no 2, pp. 62–76. DOI: 10.17323/2500-2597.2018.2.62.76.

REFERENCES

1. Organization of Economic Cooperation and Development (2013) *Regions and Innovation: Collaborating across Borders*. Paris: OECD. Available at: <http://dx.doi.org/10.1787/9789264205307-en> (accessed 01.12.2020) [in English].

2. Schmidt J. (2019) *EU Cohesion Policy: A suitable tool to foster regional innovation?* Germany: Bertelsmann Stiftung. Available at: http://aei.pitt.edu/102430/1/EZ_Policy_Brief_Cohesion_2019_ENG.pdf (accessed 01.12.2020) [in English].

3. Iermakova O.A. (ed.) (2019) *Stratehuvannia innovatsiinoho rozvytku rehioniv Ukrainy na zasadakh hlokalizatsii* [Strategizing of innovation development of regions of Ukraine on the basis of glocalization], Odessa: IMPEER NASU. [in Ukrainian].

4. Blakely Ed.J. (2002). *Planuvannia mistsevoho ekonomichnoho rozvytku. Teoriia i praktyka* [Planning local economic development]. Lviv : Litopys. [in Ukrainian].

5. Osypov V. M., Iermakova O. A., Parasiuk I. L. (2012). Mizhmunitsypalne spivrobitnytstvo yak instrument pidvyshchennia konkurentospromozhnosti Prydunaiskoho ekonomichnoho subrehionu [Inter-municipal cooperation as a tool to increase the competitiveness of the Danube Economic Subregion]. Proceedings of the *Problemy ta perspektyvy innovatsiinoho sotsialno-ekonomichnoho rozvytku v umovakh hlobalizatsii: rehionalnyi vektor (Ukraine, Izmail, April 16-17, 2012)*. Available at: <http://fei.idgu.edu.ua/conference/dokl/d112.html> (accessed 01.12.2020). [in Ukrainian].

6. Tolkovanov V.V. (2011) *Rozvytok mizhmunitsypalnoho spivrobitnytstva: vitchyzniani ta zarubizhnyi dosvid* [Development of inter-municipal cooperation: domestic and foreign experience], Kyiv: Kramar. [in Ukrainian].

7. European Commission (2015) *EIP-AGRI Network 2015*. Brussels: European Commission. Available at: https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_brochure_network_2015_en_web.pdf. (accessed 01.12.2020) [in English].

8. USAID: Local Investments and National Competitiveness (2012) *Terytorialnyi rozvytok v Ukraini: rozvytok ahlomeratsii ta subrehioniv* [Territorial development in Ukraine: development of agglomerations and subregions]. Kyiv: USAID LINK. [in Ukrainian].

9. Bорода М., Гінкул А., Рубановський К. (2012) Методы та механизмы финансирования экономического развития: звіт [Methods and mechanisms of financing economic development: report]. Kyiv: Tsentr hromadskoi ekspertyzy. [in Ukrainian].

10. Raunio M., Nordling N., Kautonen M., Rasanen P. (2018) Open Innovation Platforms as a Knowledge Triangle Policy Tool – Evidence from Finland. *Foresight and STI Governance*, vol. 12, no 2, pp. 62–76. DOI: 10.17323/2500-2597.2018.2.62.76. [in English].