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## ПРОБЛЕМА МЕЗОЕКОНОМІЧНОГО СИНТЕЗУ КОНЦЕПЦІЙ КЛАСТЕРНОГО РОЗВИТКУ ТА МІЖНАРОДНИХ ІНТЕГРАЦІЙНИХ ОБ'ЄДНАНЬ

**Актуальність.** Сьогодні, світовий порядок окреслюється навколо великих силових полюсів. Європейський союз, з його зростаючою економічною значимістю, стає таким полюсом, що вимагає розробки та реалізації такої моделі взаємовідносин периферійних регіонів різних країн, яка відповідає б принципам регіональної політики Європейського Союзу, сприяла становленню нових форм співпраці у форматі «регіон - регіон». Загострення проблем глобальної нестабільності на початку XXI століття викликає необхідність розвитку поряд з єврорегіонами, нових форм транскордонної кооперації: «транскордонні кластери», «транскордонні промислові зони», «транскордонні партнерства», «транскордонні інноваційні проекти» тощо. За сучасних умов розширення процесів євроінтеграції зростає роль транскордонного співробітництва регіонів та відкриваються нові можливості для активізації господарської діяльності на периферійних територіях України й підвищення їх конкурентоспроможності. Потреба в розробці нових теоретичних підходів до вирішення проблем формування та розвитку мезоконкурентоспроможності назріла давно і потребує вивчення світового досвіду в цій галузі.

**Мета та завдання.** Метою статті є дослідження проблеми мезоекономічного синтезу концепцій кластерного розвитку та міжнародних інтеграційних об'єднань та перевірка наукової гіпотези про те, що кластерний підхід є найбільш результативним механізмом розвитку міжнародних економічних взаємодій у сучасних умовах і, в кінцевому підсумку, є мезорівень конкурентоспроможних міжнародних інтеграційних систем та необхідна умова якісного зростання інтеграції України у Європейський економічний простір.

**Результати.** У постіндустріальній економічній системі основним об'єктом господарського управління стають індустріальні підприємницькі мережі, які під впливом процесів глобалізації та інтернаціоналізації приймають форму мережевих кластерів. Мережеві кластери є агентами технологічних змін, оскільки об'єднують організації з проведення науково-дослідних робіт, а також їх комерціалізації і впровадженню у виробництво в рамках одного кластера. Кластерний підхід стає найбільш ефективним механізмом розвитку міжнародних економічних взаємодій у сучасних умовах і, зрештою, є мезорівнем конкурентоспроможних міжнародних інтеграційних систем і необхідною умовою якісного росту інтеграції в європейському економічному просторі.

**Висновки.** В сучасній постіндустріальній парадигмі єврорегіонального розвитку істотно трансформуються пріоритет основних факторів розміщення, що змінює функції периферійної території: з фізичного базису - місця розміщення матеріальних (ресурсних) факторів виробництва вона все більше перетворюється на просторову середовище для розвитку людського капіталу, інновацій і забезпечення саморозвитку Єврорегіону. Таким чином, доведено необхідність формування і визначення основних характеристик мезорівня міжнародних інтеграційних об'єднань, що є організованими або управлінськими структурами внутрішньогалузевого та міжгалузевого співробітництва у вигляді транскордонних кластерних систем, які об'єднують макро- і мікрорівень інтеграції національних економік.

**Ключові слова:** мезоекономіка, транскордонний регіон, кластерна стратегія, транскордонний кластер, інновації, інтеграція, конкурентоспроможність, інноваційна система.

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## THE PROBLEM OF MESOECONOMIC SYNTHESIS OF CLUSTERS DEVELOPMENT AND INTERNATIONAL INTEGRATING FORMATION CONCEPTS

**Topicality.** Nowadays, global order is concentrating in the vicinity of great power poles. European Union with its growing economic significance becomes such a pole and faces a demand for development and implementation of a certain model of mutual relation between peripheral regions of different states, which could meet principles of the EU regional policy and facilitate newer forms of cooperation in "region-region" format. Increasing global instability problems at the beginning of XXI century demand for development newer forms of cross-border cooperation along with euroregions, such as "cross-border clusters", "cross-border industrial zones", "cross-border partnerships", cross-border innovations projects". The significance of regional cross-border cooperation increases under the conditions of European integration processes opening newer opportunities for economic activation at the peripheral territories of Ukraine increasing their economic competitiveness. The demand for newer theoretical approaches to problems of generation and development competitiveness within meso-economic sphere became ripe long ago and demands for studying global experience.

**Aim and Objectives.** Aim of this work consists in reviewing a problem of meso-economic synthesis of cluster-type development concept and international integration formations as well, as checking scientific hypothesis supposing that the cluster approach represents the most efficient mechanism of development of international economic cooperation under prevailing conditions being, finally, a meso-level for competitive international integration systems and necessary condition of advanced integration of Ukraine into European economic space.

**Research Results.** Industrial corporate networks are becoming essential objects of economic management in post-industrial economic system. They take a form of network clusters under the influence of globalization processes. Network clusters are catalysts and participants of technological transformation, since they incorporate entities carrying on scientific research activities and entities facilitation their results' commercialization and implementation into manufacturing within an individual cluster. Cluster approach becomes the most efficient mechanism of development of international economic cooperation under modern prevailing conditions and is, finally, forming a meso-level of competitiveness of international integration systems and necessary condition of quality advance of integration within European economic space.

**Conclusion.** Priority of essential deployment factors experiences substantial transformations in the modern post-industrial paradigm of euroregional development. This phenomenon changes functions of peripheral territories from physical basis, i.e. location of material manufacturing factors (resources) to spacious environment for development of human capitals, innovations and regional self-development. Thus, there is a proven necessity to generate, format and identify essential characteristics of international integration meso-levels, representing organizations or management structures of intrabranch and interbranch cooperation in the form of cross-border cluster systems, incorporating macro- and micro- integration levels of national economies.

**Keywords:** meso-economy, mesoeconomics synthesis, cross-border region, cross-border cooperation, cross-border cluster, innovations, integration, competitiveness, innovations system.

**Problem statement and its connection with important scientific and practical tasks.** Solution of cross-border regional problems is one of the main trends in the EU regional policy. Under prevailing conditions of European integration processes the significance of cross-border regional cooperation increases opening newer opportunities for advance of economic activities at peripheral territories of Ukraine improving their competitiveness. The demand for development of newer theoretical approaches to solving problems of formation and improvement of competitions on meso-level became ripe long ago and requires to study global experience in this aspect.

Network clusters become a newer source of competitive advantages for European regions and, in essence, change not only deployment factors system, but also they change the very structure of economic space itself. Implementation of cluster type business organization in cross-border dimension facilitates to great extent to develop network structure of economic state, to strengthen its integrity and coordination. Global experience of advanced states proves persuasively both efficiency and inevitable consistency of emergence of cross-border network clusters of various types [1].

Active rapid formation of network-type self-organization of cross-border economic space matches the impulse of generating newer economic reality of post-industrial society, which waives “totalitarian ideology”, but admits variety and freedom of economic models choice.

Cluster mentality and cluster strategies possess certain potential to boost regional economic progress and to facilitate economic structural transformations. However, in this context it is more important that clusters are being rather a paradigm than a particular program. Thus, the second reason of turning to cluster concept consists in the fact that clusters, further to pure practical aspect, provide a powerful modern paradigm to understand principles of economic life and economic policy. We shall further keep in line with this position and review possible ways of cluster paradigm development within the system of international economic integration.

And, finally, the third reason of modern addressing to cluster lies in the opinion, that clusters enable to build «pre-manufacturing» system and avoid the obsolete rhetoric of “industrial policy”, enabling, however, governments to improve national competitiveness.

Synchronous shifting in vector of territorial social and economic development systems in modern world both towards centripetal and centrifugal forces displayed in dialectic interaction of globalization and regionalization tendencies is of multi-faced nature. It is based upon, together with multiple factors affecting modern economic and social development, principles of complicated non-linear interaction of borders and transboundariness phenomena displayed in economic objects’ development localized in euroregions. Thus, the border category incorporates also the transboundariness category incorporated into it as a capability of individual neighboring objects and their features (or objects of borderline) to mutual penetration.

Having proved its efficiency in international practice, cluster, as a version of economic self-organization, is one of the ways to achieve efficiency and competitiveness priorities [2, p.81]. Full-scale wide in scope application of cluster approach, presence of stable “cluster” theory, its massive incorporation into modern science and practice are, nevertheless, combined with actually total lack of instruments of cluster initiatives’ monitoring, simulation and stimulation adapted to Ukrainian territorial, economic and institutional realities as well, as assessment of multiple priority factors effect upon clusters’ generation.

It is necessary to clarify the phenomenon of cross-border cluster generation and to explore factors and specific features of the said process in view of peripheral regions of Ukraine.

Cross-border clusters being formed in the Black Sea euroregion are immanent to Ukrainian economy. Their features and states display as in a mirror its multi-aspect defects, both situational and fundamental, problematic, vulnerable points, from actual abuse of the “maritime factor” in territorial and economic dynamics up to exaggerated “heel towards raw materials” and transfer of assets and profits beyond the Ukrainian jurisdiction. Potential and associated risks in the cross-border clusterization are, under such circumstances, much more substantial in euroregions involving advanced EU States with substantial level of economic and cultural integration.

Competitiveness begins to take priority positions in business management targeting. Continuous improvement of competitiveness is declared as a crucial component for achieving strategic aims, strengthening of political and economic positions of Ukraine in worldwide community.

Features of this stage place new challenges in competitiveness improvement for business entities as main subjects in competitiveness. First of all, the matter concerns identification of factors and conditions, development of stable competitive advantages, search and selection of adequate instruments improving competitiveness.

Increase in economic competitiveness of Ukraine proceeds as a result of leaving centralized control of economic space for pluralism with further transformation from vertical hierarchy to horizontal networks. This process is identified by Western scientists as “quasi-integration” with innovative network clusters as one of its forms. Nowadays, EU on its current level faces the objective of cross-border clusters development to homogenize the manufacturing and innovation space.

**Analysis of recent publications on the problem.** Advantages of the clusters’ theory were outlined as long ago, as at the end of XIX century. Alfred Marshall was one of the first who evaluated these advantages [3, p.118]. M. Porter is the founder of modern clusters’ concept and its effect on competitive advantages

generation [4, p. 12].

Ukrainian economists, such as O. A. Yermakova [1,2], B. V. Burkynskyi, V. M. Heyets [6], M. P. Voynarenko [10], V. I. Zakharchenko [6], N. A. Mykula [7], S. V. Filippova and others focused in their researches upon problems of cross-border regionalism forms and instruments development based on quasi-integration in terms of newer technological order development and newer challenges imposed by global instability. They explored various aspects of development of innovation forms of network cooperation, including well-grounded strategies of economic progress in view of problems faced by Ukraine on its way to European integration [8]. Nevertheless, it should be noted that cluster systems generation mechanism in Ukraine has not practically been explored, which causes the necessity to work over this subject.

M.Porter identified three main advantages of clusters as he explored competitiveness problems. Firstly, they increase productivity making specialized resources and labor accessible, simplifying access to data, institutions and social benefits. Secondly, clusters encourage higher temps of new business entities formation by means of transformation of personnel employed with existing business entities into new venturers. Thirdly, they increase possible innovations implementation due to quick diffusion of technological knowledge [9, p. 77].

The “integration – disintegration” dichotomy is supplemented with another category, so-called “quasi-integration”, and that of “corporation – market” is expanded with “hybrid” definition in the modern economic theory.

#### **Allocation of previously unsolved parts of the general problem.**

Special part in decreasing global hazards level is played by development of cross-border regionalism innovation model, providing for concentration of resources of territories adjacent to borders in the framework of scientific, technological and manufacturing potentials; implementation of programmed and targeted approach to innovative activities of entities integrated into cross-border cluster system; formation of different forms of innovative development organization; and encouraging minor business involvement in innovative cooperation.

Certain theoretical lines should be identified as causing modern economists’ addressing to cross-border cluster systems’ development problems:

1. Development of international competitiveness of business entities and territories (regions, states, macro-regions, international integration aggregations);
2. Territorial manufacturing organization;
3. Detection of newer innovative growth sources;
4. Principles of development of network-type relations between corporations including knowledge spillover, development of social relations due to growth of mutual confidence within the network structure.

Development of definition of “international economic integration on meso-level” demands to outline problems to be explored within the framework of meso-economy.

In general, meso-economy is a recognized branch of economics, as science, together with macroeconomics and microeconomics both in Ukraine and abroad. However, even taking into account deepened theoretical approaches to international economic integration processes in general and to cluster approach development on the level of individual enterprises, economy branches and regions, i.e. regional economic clusters there is no universal international economic integration applying methods of international innovative clusters development [10].

Such a statement of the problem may be described as an attempt to make a mesoeconomics synthesis of cluster development concept and international integration aggregations.

Nowadays, at the EU level in general an objective is put to develop European cross-border clusters to homogenize manufacturing and innovative space within the EU.

The objective is put forward to develop theoretical provisions and methodological principles of strategic planning of generation and development of cross-border cluster systems in different sectors of economy taking into note their potential roles as aiming and problem solving systems focusing upon achieving objectives of economy modernization in peripheral areas of Ukraine.

**Formulation of research objectives (problem statement).** The presented work aims to research meso-economic synthesis of cluster development process and to check scientific hypothesis that cluster approach is the most efficient under prevailing conditions and, finally, represents a solution on meso-level for competitive international integration systems and necessary pre-condition for quality progress in integration of Ukraine into European economic space.

**An outline of the main results and their justification.** Cross-border manufacturing cooperation in

terms of post-industrial society plays a part of economic instrument to improve competitiveness in view of scientific and technological progress and implementation of innovative technologies of newer order. It is the competitiveness of regions adjacent to borders construes an important pre-condition of integration of Ukraine into global market, while euroregions boost their development in terms of globalization.

Euroregional competitiveness means a capability to achieve labor efficiency increase and efficient usage of all types of capitals, such as natural, productive, financial, human; to generate opportunities to enter into global market and catalyze financial, technological and commodities exchange.

Nowadays, global order concentrates around great power poles. The EU with its growing economic significance becomes such a pole, which demands for development and implementation of such a model of relations between peripheral regions of various States, which could meet the EU regional policy principles and facilitate establishment of newer forms of cooperation in “region-region” format. Aggravation of global instability problems at the beginning of XXI century demands development of newer forms of cross-border cooperation, such as “cross-border clusters”, “cross-border industrial zones”, “cross-border partnerships”, “cross-border innovation projects” along with regional development [1].

There is a sufficient number of positive examples of cross-border cooperation between corporations on meso-levels including industrial and innovative clusters. However, experience gained by corporation and individual States in this aspect is not studied sufficiently. Regulations, obstacles and motives for development of such a cooperation system are not identified. Decrease of significance of territorial component of production deployment with development of information technologies and economic space self-organization leads to generation of virtual inter-corporative networks and possibilities to create *cross-border cluster systems* capable to evolve rapidly under modern prevailing conditions. Thus, cluster approach becomes wider and enables to involve great number of companies and States worldwide. To date, universal concept of European economic integration applying method of development of international industrial and innovations clusters is not formulated clearly.

The proposed problem statement may be described as mesoeconomics synthesis of international industrial and innovations clusters and international integration aggregations. To the authors’ opinion, it enables to develop both mechanism and scientific understanding of development of modern integration systems [10].

Necessity to fill a gap between industrial cluster theoretical construction and needs of administrative bodies and business in scientific grounding of strategic decisions adopted on meso-level [2, p. 48]. It means that there is a demand for development of methodological instruments of the model application for development of direction and measures for cross-border industrial policy, strategies and development programs for the Black Sea euroregions, corporative competitive strategies. Furthermore, cluster theory is related with theory of corporation, innovative development theory, economic growth theory. However, even with rather large-scale researches in the field of network clusters these structures, as in the recent past, remain unstudied in cross-border aspect both in terminological and in conceptual senses.

Modern industrial innovative clusters take a form of international cross-border cluster systems, which may be regarded as main object in mesoeconomics research, i.e. the main mesoeconomics system. Mesoeconomics is supposed to play a part of linking bridge between microeconomics and macroeconomics, though it is an underestimated component of economics as science, especially from the point of view of modern international economic relations. In brief, mesoeconomics is defined as a system of links between branches of economy, which consists of networks and links of certain types.

Meso-level of international economic integration is an organization structure of intrabranched and inter-branched cooperation in a form of international cluster systems, which unite macro-levels and micro-levels of national economies’ integration. Cross-border economic cooperation should be highlighted as mesoeconomics’ component which leads to cross-border regions’ formation performing contact and communicating functions [10, p. 98].

National clusters began their development in cross-border territories beyond national borders. In other words, cluster paradigm shifted into sphere of cross-border and international interactions. So cluster cooperation became a matter of several States. At the same time processes of inter-corporative mutual relations started gradually along with clusters’ virtualization.

In general, logical basis of international cluster system synthesis concept is formed on criteria, as follows,

- Demand for improved efficiency of regional integrating associations in terms of accelerating economic and innovative cycles;

- International economic integration meso-level identification (regions, institutions, inter-corporative networks);
- International cluster systems as the most comprehensive reflection of meso-economic approach under modern prevailing conditions;
- International clusters as business ecosystems, evolutionary network approach to development of international economic integration.

Cross-border cluster systems are advantageous, since they generate certain synergy effects and are efficient being, at the same time, cost-saving. Main synergy sources in clusters include knowledge exchange, mutually accessible skilled labor pools for participants or possibility to use common social benefits. In this context clusters play a part of signaling characteristic of real economy.

Cluster mentality and cluster strategies possess a potential capable to boost regional economic growth and facilitate economic restructuring. However, statement that clusters in this context represent a paradigm to greater extent is more important. So, the second reason to address to cluster concept consists in the consideration, that clusters, further to pure practical aspects, provide a powerful paradigm enabling to understand principles of economic life and economic policy [11].

Finally, the third reason of current turning to cluster from the point of view of economic policy consists in a fact, that clusters enable to build “pre-manufacturing” post-modern economic system and to evade from rhetoric of obsolete “industrial policy”, providing, however, national governments an opportunity to strengthen national competitiveness.

Cross-border clusters form in adjacent to borders areas of two, or more, states “over” their administrative borders. They encompass adjacent territories of neighboring states and include institutions and corporations located at both sides of the borders. Therefore the cross-border clusters may be defined as groups of independent corporations and associated institutions, which are 1) geographically concentrated in bordering regions; 2) cooperate and compete; 3) operate within various branches; 4) are linked with common technologies and habits and mutually supplement each other. These features, finally, enable to achieve synergy and network effects, knowledge and skills diffusion [12].

Cross-border cluster systems (CCS) are proposed to be considered as objects of strategic planning. They may be defined as territorially localized social and economic systems formed by a group of independent economic subjects at both sides of a border, administrative bodies of involved States and civil society, cooperate steadily with each other by means of exchanging data, services, people and capitals and show higher efficiency in comparison with other objects, which are not organized into system. CCSs may become centers of regional development, which may include investments attractions, innovations spreading, generating human capital of newer formation, business culture improvement, and development of adequate institutions oriented towards modernizing national economy, in general.

TCS is considered as network organization of mutually related and mutually supplementing entities located at both sides of borders, including specialized suppliers of commodities, services, manufacturers and customers grouped around scientific and innovations center, connected via vertical links with local public authorities and aiming to improve competitiveness of enterprises, regions and national economy.

The term of «Cross-border cluster» reflects the fact that in terms of global instability corporation compete rather in the field of capability to innovations than in the field of productivity. Cluster associations or aggregations of business entities are flexible enough to adapt to modern innovative processes [12].

Global integration processes create pre-conditions favorable to clusters formation in adjacent States to improve international competitiveness of manufacturers.

International clusters have following definitions, 1) Network-type agglomerations of suppliers, manufacturers and customers residing in different States and geographically concentrated in a region adjacent to border (cross-border cluster); 2) International networks of national clusters (transnational cluster), which cooperate and compete and are linked into technological chains mutually supplementing each other and interact with cross-border institutions, such as scientific, educational, business infrastructures, government authorities of both national and international administration and international organizations in order to improve competitiveness of cluster participants and national economy [13, p. 33].

Specific feature of international clusters consists in their participants are residents of different States linked into technological chains and mutually supplement each other and cooperate and compete simultaneously. Structural elements of cross-border cluster may be classified into seven blocks (groups): manufacturing; innovative informational infrastructure encompassing venture corporations, business hubs, research and trials centers, consulting and marketing agencies; scientific and educational; commercial and

financial; transport and logistics; інженерної інфраструктури; suppliers of raw materials, supplies and equipment.

Cluster strategy of cross-border cooperation provides generation of territorially localized cluster associations in regions adjacent to borders around foreign innovating corporations. Network agents of such corporations represented by manufacturers of innovative products and services, suppliers, infrastructural objects, scientific and research centers, higher educational establishments cooperate on the cooperation and competition basis. They generate synergic effect mutually supplementing each other and improving competitive advantages of individual corporations and cluster in general [13].

Classic integration provides for establishment of total control over both property and assets belonging to subjects of activities. Depending on direction and sphere of manufacturers' cooperation, a certain number of integration types may be identified in reproductive chain. Horizontal integration consolidates manufacturers operating at a certain stage of the chain and provides competitive advantages due to scale effect [14].

Vertical integration represents a protective strategy for major business direction from negative market effects. Reverse vertical integration at the initial stage of manufacturing chain is normally required to protect it from suppliers' monopolistic tendencies. Direct integration enables to increase added value and to influence final demand. Formation of various cross-border holding is the most common form of classical integration. Motivating force of holding-type formation is striving to stabilize contacts and to improve own stable economic status by means of creating balanced business portfolio. There are a number of different types of corporative management within the framework of holdings. Common objective advantages for all the types of holdings are substantial reduction of transactions' expenses, scale effect, substantial productive synergy and risks hedging. Since cross-border clusters formation is a typical stage in evolution of technical, technological and social relations on meso-level, the cluster policy becomes a new policy in euroregional development [15].

Cross-border cluster as an economic agglomeration of mutually dependent enterprises represents a "growth point" or an important factor of steady social and economic development. Thus, the cluster policy facilitates activation of innovative activities in real economic sector and its modernization for technological breakthrough. Secondly, such a policy enables to solve major social problems under conditions of resources deficit and inconsistent policy of national administration. According to modern worldwide economic trends and priorities in society development, social aspect becomes a prospective strategy to achieve stability and competitiveness of peripheral territories. Role of socially oriented network clusters in regions should grow, respectively.

Applying the assets control criterion, quasi-integration may be defined as a process of establishing control of behavior of formally autonomous corporations without control over their ownership. Nowadays, there are various hybrid forms of cross-border quasi-integration as associations of economic bodies with stable long-term relations and assigned control of common activities without legally formalized transfer of ownership, such as clusters, business associations, strategic alliances, various network-associations. prevailing ratio of medium and minor business rather than big business is their common feature.

Euroregional Innovation System (IS) – is a complex of institutions which participate both individually and jointly in a process of generating new knowledge or transfer and adapting of already available relevant knowledge to meet economic demands of the euroregion.

Normative institutions include legal provisions and informal regulations governing innovative activities. Innovation system subject institutions include public administration bodies, knowledge generation and spreading institutions, business structures, innovation infrastructure entities.

Research bodies, which may represent a combination of governmental and education bodies consists in fundamental researches transformation into applicable aids with their further commercialization. Part playable by educational establishment consists in active implementation of innovations into education process, transfer and diffuse new knowledge into business environment via "lifetime learning" programs.

Evolution of cluster approach supposes correction and modification of these "triple spiral" elements. Now the time came to turn to the problem of cooperation coordination between all the participants in European clusters and to identifying factors influencing clusters' development.

A certain covert formula was elaborated within the EU. It supposes combination of evolution and constructiveness, determinism and voluntarism. It means that networks develop naturally, yet enjoying support from states and EU in general, identify their own concept of development facilitating, at the same time implementation of major EU priorities.

Only balance of all the four parts provides a harmonized industrial and innovative progress. Thus, the

“invisible hand” of business component in Europe combines with the “visible hand” of cluster policies of European states and the EU in general.

This approach found a comprehensive reflection in research by Swedish consulting corporation «Ivory Tower», which reviewed the problem of business initiatives combination with governmental support in the course of efficient clusters formation in Europe on national and regional levels.

The IS model varies depending on regions and States referring to parts played by Government, business, functions performed by either of them and general dynamics of innovations. However, the IS assessment instruments are universal. They are innovative activity results expressed in patents’ quantity, number of innovative processes participants and extent of their cooperation with each other, quantities of financial, labor and material resources construing the IS subsystems. Each cooperation stage between major “stockholders” faces certain problems, which interfere with efficient running of processes. Role of government bodies consists in development of legal field in spheres of standards, infrastructure, institutional climate and researches funding instruments.

Business part lies in generation of common technologies based upon researches’ and developments’ adapting and commercialization as proposed by scientific community. The cross-border business association (branch or territorial union) represents a form of horizontal quasi-integration featuring cooperation of rivals and partners within adjacent stages of value-generating chain. The participants use their own resources to develop and govern common market and promoting collective interests in administrative bodies.

Unique capability of cross-border cluster to boost innovative diffusion enables to define them as innovatively active economic agglomeration or cross-border area with increased innovative activeness. Further to cluster positioning as a specific economic structural element the cluster may also be defined as specific local social and cultural association of prevailing cooperation and mutual confidence. The CCS facilitates to deepening of economic integration of its participants into global economy and improves their international competitiveness level. It is achieved due to formation of common manufacturing and sales chain, spreading of knowledge and innovations, costs-saving effect achievement in manufacturing, transaction expenditures reduction, improvement of economic specialization due to applying common management bodies and transportation expenditures decrease due to common infrastructure, etc.

Thus it may be stated, that nowadays a “secondary wave” in cluster theory development arises. It confirms the urgency of the matter and enables to develop the concept in cross-border cluster systems’ aspect.

Here are potential direction of the “secondary wave” of researches in the field of innovation clusters:

- Clusters’ development in the evolving economics theory context, cluster concept as business-ecosystems;

- Opportunities and principles of international cluster systems’ generation (including cross-border);

- Clusters as stimulants of internal and external economic growth;

- Mutual competition and other synergies within a cluster and between clusters;

- Mitigation of clusters’ development territorial component factor, cooperation networks’ virtualization within “network space”.

Strengthening of external and internal competition and necessity to include regional enterprises into international chains of added value generation should be mentioned particularly among important pre-conditions of CCS systems formation. Activation of international cooperation in regions adjacent to borders and implementation of full-scale joint projects in transport, logistics, power-generating and tourism and entertainment are being reviewed as essential factors contributing to clusters generation.

Major objective of cross-border clusters formation lies in improvement of competitiveness of regions adjacent to borders. It provides a number of advantages to business entities such as labor productivity increase, transaction expenditures reduction, easier access to sales market, technologies, cost-saving, synergy effect. It also facilitates to strengthening regional economic competitiveness, activate business activities, increase investments, rationalize resources consumption, improve innovations environment, increase export potential and provide steady advance for social processes. Referring to M. Porter’s conclusion, geographic clusters are one of the most dynamic and rapidly spreading processes in modern economic development [9].

Markets’ globalization and increased competition lead to increasing popularity of new manufacturing and innovations model where all the parties involved into manufacturing strive to group into clusters.

Cluster-type development, as a factor improving regional competitiveness is a common feature of modern innovative economy [15]. Worldwide practical experience showed, that formation of clusters in regions adjacent to borders motivates and influences favorably processes of improving competitiveness and

boosts innovative activities. It construes a new economic phenomenon enabling to confront the pressure of global competition and duly respond challenges of national and regional development.

Thus, thorough attention should be paid to improvement of economic efficiency of cross-border formations towards applying cluster initiatives as successful coordinating structures. To authors' opinion, allocation of European experience to improve competitiveness of Ukrainian regions adjacent to borders by means of cross-border clusters is a reasonable and feasible measure. It may enable to improve regional institutional capability, facilitate to organize education and training of qualified personnel in the field of cross-border cooperation and, finally, enable to obtain network and synergy effects in economic sphere involving Ukrainian regions adjacent to border.

Firstly, cross-border cluster participants gain substantial benefits from saving expenditures due to synergic effect improving efficiency of their activities and competitiveness of production at the global market. However, the main benefit here consists in ability to adapt to innovations and improved competitiveness.

Secondly, cross-border clusters formation will improve economic competitiveness of the Black Sea region due to business development and guaranteed employment, opening new business within clusters' framework and cooperation in science and education. International clusters facilitate growth of export component of foreign trade in involved States by means of common marketing programs implementation and innovative products sale to the third parties; activate innovative and investment activities by means of joint innovations projects within the framework of partnership between administration authorities and business entities, attract foreign investments, stimulate business activities by means of implementation of cross-border cluster cooperation.

Thirdly, participation in euroregions may facilitate to prompt solving of problems arising on borders at local level and to create flexible economic structures. Applying cluster model to cross-border cooperation enables to improve competitiveness and to attract potential investors to the region, which are normally remote from centers of business activities and feature a substantial depressiveness.

Fourthly, a cross-border cluster aggregates corporations residing in different States into a single integrated manufacturing complex concentrated around innovative corporation generating modern technologies, advanced knowledge, information, funds and infrastructure. Cluster formation ensures implementation of venture projects basing on demand forecast for innovative products, advanced technologies transfer, which, being implemented improve economic safety and produce favorable social effects.

#### **Conclusions and prospects of further research.**

1. In terms of globalization economic progress of Ukraine requires territorial concentration of economic activity rather than production volume and availability of natural resources. Cross-border manufacturing cooperation is considered as an instrument to improve competitiveness of peripheral territories within the framework of progressive technological development and emergence of dominant technology in the framework of newer technological order. Regional competitiveness represent a compulsory pre-condition of gaining a decent position in global market and global exchange system. Cross-border regions experience intensive development in terms of globalization.

2. Regionalization processes strengthen in terms of social globalization. This process shows itself in strengthening of existing international transnational regionalization and emergence and strengthening cross-border regionalization due to loss of a barrier function and gaining a contact function by State borders. Under modern conditions economic progress of peripheral regions depends substantially on economic self-organization and efforts and initiatives applied by local regional authorities to create stable reproduction contour to form a basis for newer technological order with technological innovations and labor resources with appropriate qualification being the major assets. Territorial social organization changes as a result of simultaneous intensification of regionalization and globalization processes intensifying formation of transnational regions and further active development of cross-border regions.

3. Industrial business networks become a major object of economic management in post-industrial economic system. They take a form of network clusters under the influence of globalization and internationalization. Network clusters play a part of catalyst in technological transformations since they combine scientific and researching structures and structures dealing with matters of discoveries commercialization and implementation into manufacturing within the framework of an individual cluster. Cluster approach becomes the most efficient mechanism of development of international economic relations in modern prevailing conditions and, finally, construes a meso-level of competitive international integration systems and pre-condition for quality advance of integration in European economic space.

4. Development of efficiently operating cross-border clusters is the most significant step on the way to developed regional economy, production competitiveness improvement. Cluster is an aggregation of corporations, which may not even belong to the same branch, but which are technologically and economically connected with each other to manufacture production of the global quality level. Essence of such a model consists in the fact that an isolated individual corporation is unable to enter global market under modern level and terms of competition. Corporations, especially small and medium in size may enter the global market with competitive production only by means of cooperation and joint efforts. Entire system of competitiveness in global economy is based on this principle, whether for territory, or region, or State.

5. The cluster concept itself experiences, to the author's opinion "the secondary wave" of scientific and practical interest. It is illustrated by researches of possibilities of internationalization of industrial and innovation cluster, understanding the role of clusters in the context of economic evolution as business-ecosystems bringing necessary variety and flexibility into existing models of network cooperation and opportunities to detect positive and negative clusters' externalities.

6. Priority of major factors of deployment experiences substantial transformations in modern post-industrial paradigm. It affects functions of a peripheral territory transforming it from physical basis, i.e. location of material (resources) factors to environment of development of human capital, innovations and an aid of regional self-development. Thus the demand for formulation and identification of major features of meso-level is proven for international integration associations, being either organizing, or administrative structures of either intrabranch, or inter-branch cooperation in the format of cross-border cluster systems combining integrations of national economies on both macro-level and micro-level.

To the authors' opinion we face a challenge to develop a strategy of economic competitiveness improvement for euroregions involving Ukraine on the basis of generation, formation and development of innovative cluster structures. Creation of such resources gravity poles in Ukrainian regions adjacent to borders should mitigate risk and stimulate economic growth in terms of global instability. To date, it is the competitiveness that moves to the first place among the factors of national economy safety.

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