# TRANS-BORDER CLUSTERS SYSTEM DEVELOPMENT POTENTIAL AS A STRATEGIC PLANNING OBJECT

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## 1. Introduction

Worldwide experience of developed States shows both efficiency and inevitable generation of the Trans-border Clusters Systems becoming centers of innovative progress of European regional economy and, consequently, "safety zones" in conditions of globalization. Nowadays, the development of uniform mechanisms of their creation and their further development are very actual matters. Therefore, a new strategy development is required to implement the regional economy modernization on the basis of trans-border clustering. Such strategy should include detailed mechanism of formation and governmental support of cluster corporations at both sides of the border relative to prevailing conditions in Ukraine. Implementation of new advanced marketing tools enabling to improve competitiveness of individual regions in the European market in developing new technological order is possible on the basis of feasible forms of trans-border cooperation, coordination and integration of joint efforts of business entities in European regions. The problem of improving competitiveness at the global market is certainly the most insistent for Ukraine [1, p.17].

Importance of European regional aspect of strategic planning; integration of the most actual problems of trans-border regions development with actions of authorities in peripheral economic area to solve such problems as: evaluation of consequences of their existence and reproduction; insistent demand for methodology of strategic planning at European regional level that requires, as a priority, to consider specific features of European regional Target Implementation Systems (TIS).

Process of social and economic development in peripheral regions often experiences situations with changes in external and internal conditions increase beyond subjective adaptive capabilities, i.e. lack of levers to eliminate a problem that occurs with governing bodies.

In this work a trans-border cluster system (TCS) is considered as a problem-solving system being a result of external addition to problematic TIC by parties being competent to control factors contributing to the problems' reproduction. In this view, analysis of negative factors and consequences of existing problem construes a basis for developing a system operation which could provide control of such factors and their implementation and enable to mitigate individual consequences. Potential development strategy in a trans-border region in general will represent a complex of techniques to solve identified problems with European regional development by means of generating certain problem-solving systems, a trans-border net cluster being one of them.

## 2. Analysis of latest researches and publications

Cluster approach to economy structure formation, strategic development of regional industrial policy and economic systems competitiveness improvement is a common concept with advanced States [2, p.10]. M. Porter is a founder of modern clusters concept who investigated their influence upon competitive advantages. Well-known economists J. Schumpeter, F. Perrou, W. Price and I. Ansoff made significant contribution into solving the problems of regional competitiveness and clusters operation within certain branches of economy. Clusters concept and development of organizational and economic aspects of their formation in Ukraine were explored by Ukrainian economists V. M. Heyets [1–3], B. V. Burkinskiy, M. P. Voinarenko, V. I. Zakharchenko, V. M. Osipov, N. A. Mikula [4], S. I. Sokolenko, and others. Scientific works by these scientists identified theoretical and methodological aspects of competitive cluster development [4, p.130; 5, p.22].

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## 3. Problem Description

Aim of the proposed work consists in exploring approaches to structuring a development potential of trans-border cluster systems – poles of competitiveness – as an object of strategy planning in conditions of demand to develop a strategy for European regional development on the basis of innovative forms potential evaluation for industrial integration of peripheral economic area entities.

## 4. The Essential Research Material

Essence interpretation of a "potential" may be narrowed to a formulation, as follows: capacities of an object named "X" will transform from hypothetical into reality provided only the event titled "Y" occurs. Possibility of occurrence of the said event "Y" is what is named "a potential". Studying the potential from the point of view of stochastic analysis disables scientific research of this category and prevents development of practical recommendations which could display reality and existing conjuncture. Therefore the potential concept should be mostly considered, from my point of view, as certain probable obvious and implicit resources, aids, advantages which may be implemented or mastered within close and remote future.

Approaches to the TCS development potential structure formation may be outlined, as follows: universal, functional, productive, marketing, institutional. In this view the TCS development potential consists in integrated display (evaluation) of existing and prospective possibilities of European regional system to transform available resources (on the basis of self-organization, cooperation and competition) by means of business capabilities inherent to personnel into economic benefits thus meeting corporative and social interests of parties at both sides of the State border to the best of efforts, which becomes not a dividing barrier, but a factor facilitating consolidation of ideas, knowledge and technologies.

It should be noted that the result of the potential implementation should not be narrowed only to deriving extra monetary revenue (profit). The achieved effect may bear reputational, marketing, social, informative orientation, but it goes without saying that the value of delivered advantages should exceed the costs spent to detect and implement possibilities.

Potential of forms which network unitization of business entities may take within a European region should be defined as integrated complex of economic, quasi-economic and non-economic opportunities capable to bring a certain effects in both monetary and non-monetary forms within a certain time period, provided that management of such entities should be competent enough to implement such factors / opportunities.

The TCS are proposed for consideration as objects of strategic planning. These are territorially localized in social and economic systems created by a group of independent business entities residing at both sides of a border, involving organizations representing executive authorities of States and civil society who work in close cooperation with each other by means of data exchange, services exchange, personnel exchange and finances exchange thus reaching higher efficiency in comparison with other objects which do not possess the feature of systematic organization. The TCS may become centers of regional development in attracting investments, spreading innovations, forming human resources of newer quality, business culture, and development of adequate institutions aimed to solve problems of economy modernization for entire relevant State [4].

Economic potential of the TCS is represented by a total complex of regional resources (labor, material, financial, natural, etc.) available at a disposal of horizontally integrated business entities as well as capability and competence of their employees and managers to use such resources according to aims of activities and to derive maximum income possible under existing conditions.

The TCS potential structure should take into account a wide scope of probable components forming such integrated indication. They include, *inter alia,* manufacturing component, taking into account both pure values characterizing production and possibility of innovations and optimizing management system, financial and marketing components oriented both to consumers and to suppliers as well, as civil society in general, and labor component taking into account both employees potential and that of managers and owners of the relevant business entity.

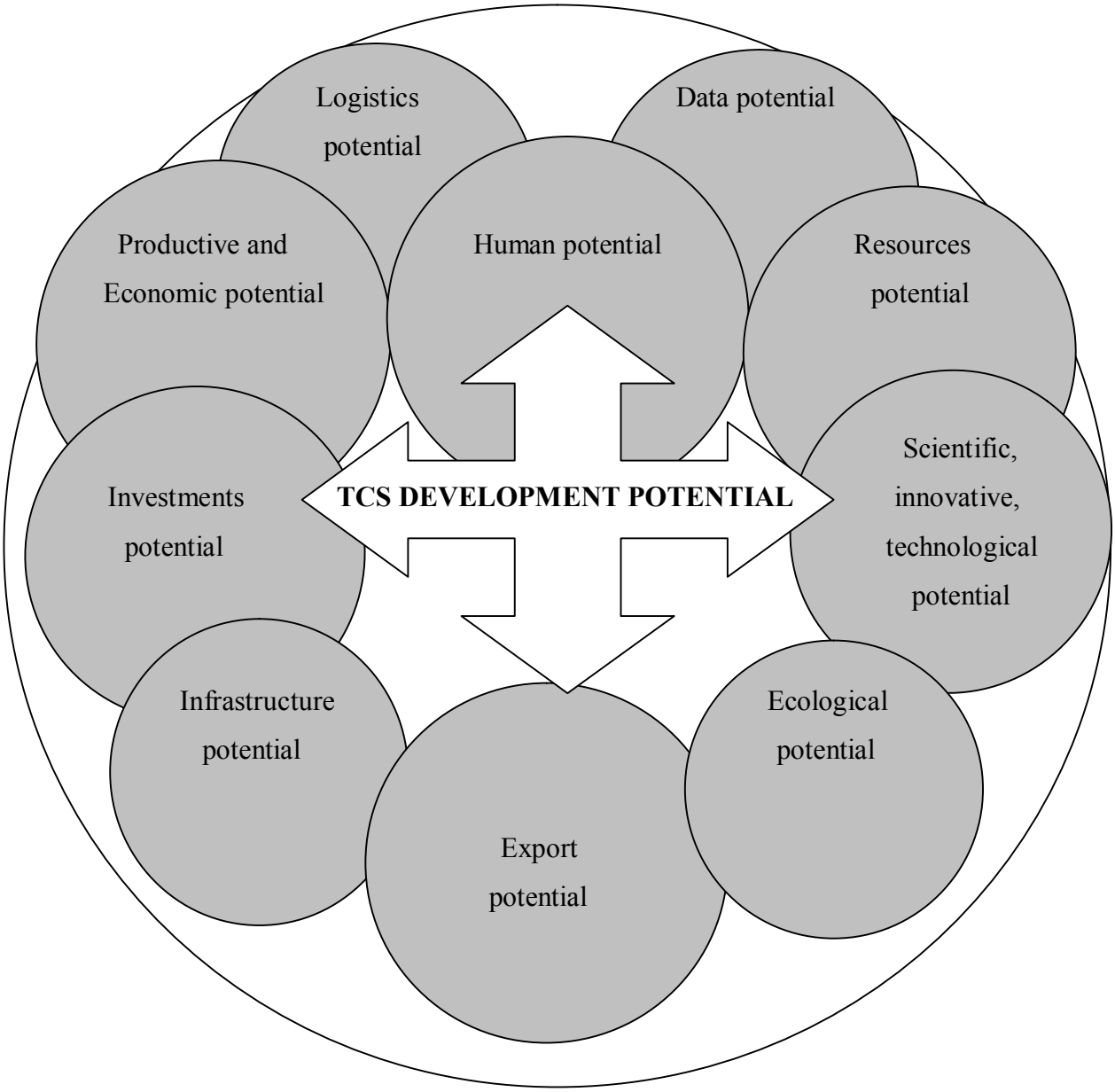


**Fig. 1. Areas of functional subsystems of the TCS development potential**

The trans-borders clusters encompass territories adjacent to state borders of neighboring states and include institutions and corporations located at both sides of the border. Therefore such trans-borders clusters may be defined as groups of independent companies and associated institutions which being geographically concentrated within a trans-borders area cooperate and compete specializing in various branches of economy, operate using common technologies and techniques and mutually add each other, which, finally, enables to obtain synergic and network effects and diffusion of knowledge and skills [5].

Certain functional subsystems within the TCS framework formed by various elements of existing self-regulated organizations assembled on the basis of their orientation towards particular functions may be identified. Structure of productions generating the TCS may vary and depends on existence cycle stage, maturity, localization area and activities forming the core of the TCS [6, p.27]. First of all, it is the core of the cluster system formed by a group of business entities, providing services and manufacturing production competitive at external or internal market; suppliers of raw materials and semi-fabricates for corporations forming the core and associated manufacturers; corporations producing equipment for both above branches; institutions and organizations dealing with personnel training according to aggregated demands of all parties forming the cluster system; educational institutions, scientific and experimental construction institutions, whose activities are focused to

maintain scientific and technological potential of the entire massive of enterprises forming the cluster system and meeting their requirements, core at the first turn, in development of newer products and technologies and improving their efficiency in broad sense; organization of financial sector providing the financial activity of the TCS and normal running of investments processes throughout the development of all the subsystems within the TCS; system of information support and management; organizations involved in environment protection activities working in the sphere of environment protection and wastes utilization.

Education system should take into consideration not only secondary special and higher education institutions meeting the needs of the TCS members in qualified labor resources, but the total system in general. It may be explained with the fact that education development influences not only the labor resources quality but the entire social environment within the area where the cluster system resides. Finally, an important part is played by infrastructure elements subsystem, transport and logistics, power supplying, information and communications, marketing and social elements.

The "second level" of functional subsystems or elements, oriented towards certain functions are identifiable within the framework of the above mentioned subsystems of the TCS. In general, the following functional "second level" subsystems should be considered:

- manufacturing and technological dealing with productions and service providing;
- personnel (labor potential) reproduction;
- personnel dealing with economic activity of the system in total;
- innovative, whose activity is oriented to development of new products and services to be produced by the individual subsystem and adaptation of such subsystem to new technologies generated beyond the scope of the system and arriving either from outside, as a new equipment, or as a result of own scientific and technological research or inventions;
- investments, monitoring the investments projects and procedures implemented within the subsystem;
- financial, dealing with finance activities of each subsystem;
- supplying current resources required for manufacturing;
- management system (adopting decisions in planning and administration);
- environment protecting oriented towards rational usage of natural resources, environment protection, wastes utilization.

This work proposes to operate a category of "functional section" to analyze the TCS potential. It means a group of similar functions and functional parameters servicing it within the structure of enterprises and institutions forming the TCS. Strategic parameters of each of such group of elements determine characteristics and features of elements forming the potential of the TCS.

Depending on the TCS specialization, emergence of crisis events or problems or, on the contrary, favorable opportunities, various versions of formation strategy may be realized. They may be characterized by the prevailing growth of a particular component of development potential – raw materials scope and quantity, technological potential, human potential, infrastructural potential, financial potential, etc. the potential represents a category addressing future prospects and provides meeting forthcoming needs. Once the potential determines future possibilities, the essential criterion for its analysis is its increasing component or increasing efficiency. Increase in social and economic system potential or its element supposes not only increase of quantitative value, but also increase in capability to achieve aims of its development, mitigate affect of external and internal negative factors and tendencies and to use new coming opportunities. Since the potential defines the forthcoming opportunities, they may not be implemented with 100% probability. The achievement and realization requires favorable coincidence of external and internal factors and/or elimination of factors, preventing successful realization of such opportunities.

A separate place in analysis and evaluation of a potential of each branch and potential of their merging into cluster is occupied by analysis of prospective development potential, which provided maintenance and development of positive tendencies and guarantees that all the functions of system

formation within the TCS will be implemented. The development potential may be defined as a particular section of all the components forming the potential. In particular, it is quite correct to discuss a development potential for innovative or investments potential. In particular, one of the indicators for the prospective development may be an investments rating of an individual region (especially nice if it is split into branches of regional economy), tender for entering an educational establishment, extent to which structure of the students' contingent and offered level of education meets the demands in highly qualified personnel, presence of innovative and technological prospects in scientific research organizations, environment protection activity, etc. the potential analysis and constructive conclusions derived from its result are aimed to tendencies analysis and working out procedures for their correction, as and when required or practicable. Applicable analytical and target indicators should enable to analyze existing tendencies in formation of various elements of prospective development potential, evaluate their mutual balance in processes of reproduction and modernization. The development potential may be expressed in expected increase in gross regional product, taxation base, financial assets increase, creation of new high-tech employment (increase in wage payments fund), population income increase and life quality, development of education, etc.

Thus, various components of the potential create the TCS development "areas". These elements of the potential should be considered in association with various branches of manufacturing and other activities located within the trans-borders region within the TCS framework.

Grouping into innovative cluster on the basis of vertical integration does not form spontaneous concentration of various technological inventions. It forms a clearly aimed system of spreading new knowledge, technologies and innovations. Here formation of a network of stable contacts among all the participants in cluster is the most essential precondition for efficient transforming inventions into innovations and innovations into competitive advantages. [7, p.21]. Innovative clusters create a new manufacturing product or service using efforts applied by a group of enterprises or scientific institutions enabling to speed up their spreading through the network of business partnerships. The cluster's innovative structure facilitates to save total costs of research and development of advanced or totally new production with its further commercialization due to highly efficient manufacturing and technological structure within the cluster and thus enables the participants in cluster to maintain a stable innovative activity over longer time [8, p.310].

Thus, the TCS economic potential may be characterized by some important features. Firstly, it is determined by its actual capabilities, not only implemented but latent, too. Secondly, the potential is characterized by a certain quantity of resources and reserved stores, both involved into economic activity and being probably available. Thirdly, the TCS potential is determined not only by opportunities and resources, but also by capability of management to use them efficiently, i.e. implement innovations to achieve strategic aims in specific institutional situations [9, p.13].

## 5. Conclusions and recommendations for further development

1. Potential or latent TCS localized within donated adjacent to State borders regions are of priority interest from the point of view of solving problems inherent to peripheral economic areas. It is a consequence of a fact that TCS creation within peripheral regions is very important for reducing their dependence on external financing and smoothening the extent of their inter-regional differentiation and bringing modern industrial technologies, giving a new impulse for development.
2. Development and implementation of trans-borders strategy applying European experience of trans-regional strategic concept is very urgent aimed to stable economic development of European regional system aggregating human, natural and manufacturing potentials and institutional environment. As Ukraine proceeds towards EU, it should summarize the experienceof trans-borders cooperation as an initial and additional stage of integration in regional scale.
3. Theoretical and methodological ground should be elaborated for quasi-integration of business entities within the European regional frameworks and research new forms and aids of its implementation within the concept of network cluster systems to form a clear efficient policy of development for trans-borders cooperation with active part of Ukrainian peripheral regions.

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## Summary


Essence and internal relations of development potential of trans-borders cluster system as a factor increasing the competitiveness of a European region under conditions of increasing integration processes and demand to improve the part of peripheral territories in economy are explored in the proposed work. Theoretical provisions and methodological approaches are systematized in view of structuring a potential of trans-borders clusters basing on the system approach. Strategic priorities are identified and innovation potential of cluster forms for trans-borders industrial integration is analyzed in view of prospects of Ukrainian entering EU.

The mechanism of transplantation of network economics institutions is studied as the necessary growth factor of competitive capacity of the European regions in terms of European integration. By means of institutional approach it is justified that postindustrial economics evolved into the system of interlocking institutions, forming a new economic area of postmodernity in cross-border dimension, in which such virtual resources of development are necessary as: information, innovations, ways of communication, knowledge and other institutions of postindustrial society.



**Keywords:** trans-border cluster system; European region; strategy; integration; innovations; competitiveness.

**JEL classification:** C120, C140, C180

**UD classification:** 339.92:332.1

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