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INFLUENCE OF INTEGRATION PROCESSES ON MODERN FORMS OF A CLUSTERING OF ECONOMY

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Abstract

In this article the authors analyze the theoretical aspects of the economy under the conditions of modern processes of integration. The authors describe the existing schools and concepts of integration. Modern studies focus on the evolution of integration processes, which has largely affected the key elements of the world economic mechanism.

There are features and advantages of clusters in the context of strengthening regional integration. The factors of the regional economy, which contribute to the increased efficiency of clusters and the territory as a whole at the micro and macro levels, are determined. Also, components of the strategy of cluster development are grounded.

WPŁYW PROCESÓW INTEGRACYJNYCH NA NOWOCZESNE FORMY KLASTERYZACJI GOSPODARKI

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Słowa kluczowe: ekonomia integracji, koncepcje szkoły integracji, klastry przedsiębiorstw, marketing terytorialny, konkurencyjność międzynarodowa, inwestycje, partnerstwo publiczno-prywatne.

Abstrakt

W artykule autorzy przeprowadzili analizę teoretycznych aspektów gospodarki w warunkach istniejących, współczesnych procesów integracji. Autorzy scharakteryzowali koncepcje integracji w kontekście teorii różnych szkół. Badania skoncentrowano na rozwoju procesów integracyjnych, które w znacznym stopniu odnoszą się do elementów ekonomicznego mechanizmu światowego.

W artykule ukazano cechy i zalety klastrów w kontekście wzmocnienia integracji regionalnej. Przedstawiono i omówiono czynniki gospodarki w aspekcie regionalnym, które przyczyniają się do wzrostu efektywności klastrów i terytorium jako całości w skali mikro i makro. Określono również oraz uzasadniono elementy strategii rozwoju klastra.

Introduction

In the second half of the 20th century, the processes of economic integration started to actively develop in the developed countries. The scale of economic development in bordering countries, where the domestic product grew higher than the national market average as did the social division of labour, further enabled economic integration.

Social division of labour is an objective process of productive force development that is associated with the separation of jobs, specialization of production units and the exchange of activity outputs between them. Social division of labour determines its subsequent integration, and the relationships between individual profiled parts are known as clusters.

Clusters in the information economy play the role of a bridge between public and private capital, fundamental research and technological innovation. In a market economy, the social sphere and the environment remain out of the focus of big business, so that in most industries there is a tendency to pump resources out of business. In such circumstances, the state does not have leverage on the private business development strategy. Therefore the search for reasons to build relationships within the public-private partnership is a relevant aspect of regional development. In this context, the clusters enable high efficiency of industrial and socio-economic development of the region.

Currently the cluster development theory is widely discussed in the framework of the Organization for Economic Cooperation and Development (OECD), the World Trade Organization (WTO), the EU and the US. Clusters are seen as a key tool for attracting FDI, the development of the fifth and sixth technological structures within the national innovation strategy, improving the international competitiveness of countries. For example, the EU formed a pan-European model to stimulate the growth of clusters by means of national and regional funding and increasing co-operation between them.

Ideas about the benefits of a clustered business organization emerged in the late XIX century in Alfred Marshall's work "Principles of Economics", which first noted the strategic effect as a consequence of the merger and the increasing specialization of commercial structures.

E. DAHMEN (1950) on the example of Swedish corporations showed the innovative dynamics of their development through mutual support within clusters ("blocks of development"). L.G. METSON (1987) investigated the intracluster interaction. M. PORTER (1993) compared the competitiveness of clusters and countries. M. ENRIGHT (1995) and S. ROSENFELD (1996) developed a system to classify clusters (WELFORD 1995).

Theoretical aspects of integration of regional processes

Economic integration is the process of combining elements of national economies, and, at present, the highest level of internationalization of economic life. One result of internationalization is the structure of the world economy, with its markets for land, goods and services, capital, labour, monetary, financial and credit systems.

Regional economic relations are inextricably linked to the processes of internationalization, since they provide the basis for industrial specialization of regions and the need for integration with other regions, especially the neighboring ones (BILCZAK et al. 2015, BILCHAK 2012).

There are a lot of economic schools and concepts of regional integration that create a very complicated system. A closer look shows that the system has undergone a certain evolution.

The science of economics deals with objective transformations through the prism of its own scope of research to consider economic relations through the economic mechanism of production factor operation and development. The economic mechanism is a system of methods and instruments for regulating the process of social reproduction based on economic laws that are general and specific to the formation.

The modern day economic mechanism has three principal regulatory elements. In this study each of them represents a different mainstream direction of economic thought. The key element of the mechanism is the natural market regulation of social reproduction that in the 17^{th}–19^{th} centuries contributed to the classical bourgeois political economy with its ideas of free trade and a deeper faith in the omnipotence of the market.

Monopoly regulation associated with the deviations in the development of the global economic mechanism is another element thereof. It has a purposeful impact on the market for the benefit of one or more of its agents. This modification of the capitalist economic mechanism triggered the emergence and development of various *monopolistic competition* theories (E. Chamberlin, R. Triffin etc.), *imperfect competition* (J. Robinson) theory, the theory of *oligopoly* (A. Kaplan, J. Clarke), the *fields and poles* of economic growth (F. Perroux), and the *economic system,* which states that modern capitalism contains, in essence, two systems, the market and planned, which counterweigh each other (J.K. Galbraith).

The third major element of the capitalist economic mechanism is state regulation of certain aspects of social reproduction in the national economic system, or interstate regulation on an international scale. Such regulation is target-oriented and is therefore opposed to spontaneous markets. However, the last two elements are not only in cooperation with each other but can also stand against each other. This can be expressed, for example, in antitrust regulations by the state.

Expansion of government intervention in economic processes (especially after the crisis of 1929–1933) is embodied in various theoretical concepts of government regulation of the economy (W. Sombart, J. Maynard Keynes, A. Hansen, S. Harris et al.). In the 1920s the German economist and social scientist Werner Sombart (1863–1941) developed a theory of the mixed economy according to which the developed economies as a result of economies of scale and economic activities of the state evolved from a system of private enterprise in a mixed economy consisting of private and public sectors which mutually complement each other. After World War II, a strong supporter of this concept was the American economist Alvin Hansen, a representative of Keynesianism (1887–1975) who believed that the control of the modern economy of developed countries is exercised by public and private institutions in order to improve the social welfare of the people and that the economic and social activities of the state can eliminate the contradictions of capitalism, ensure crisis-free development of the economy, and sustain high growth rates.

These "stages of evolution" can be traced in the development of the theory of international regional integration, the mechanism of which serves as the international version of the national economic regulatory mechanism.

There are several points to be made about the mechanism of regional integration. First, it began to develop even in the existence of all three elements of the economic mechanism within sovereign states. Therefore, when projected on the regional scene, these elements were not transferred one after another but all at once. The transfer process that took place leaned towards a market economy, which played a major role in the integration mechanism, as well as the process of purposeful development of the inter-regional, cross-border economic co-operation related to the initial stage of the weakening of the state regulation of foreign economic relations of the member countries.

Consequently, the market school acted as the first school to theorize regional integration. Its representatives were among the first who tried to provide a theoretical explanation of the regional integration. Those include the American economist Ludwig von Mises, the Swiss economist Wilhelm Röpke, and the French economist Jacques Rueff.

These scholars (and some other representatives of this school) have been consistent supporters of the basic principle of economic liberalism, i.e. the recognition of the market as the best regulator of the economy, which cannot be replaced by any "artificial" economic regulation mechanism by the state. Moreover, according to liberal economists, government intervention in economic processes can cause nothing but a violation of the normal functioning of the economic system.

The idea of a disconcerting role of state regulation in economic processes is transferred by representatives of that school to the area of foreign trade. As early as 1934, a Swedish economist G. Cassel, whose ideas had a great influence on the contemporary theory of international trade, claimed that all the economic woes in the capitalist world stemmed from protectionism (CASSEL 1934).

This position is most clearly expressed in the works of W. Röpke who stated, "One thing is clear, i. e. excessive government intervention by misleading the market economy from the way prescribed by the mechanisms of competition and pricing, the pile of commandments and prohibitions, blunting initiatives, the official pricing and limitation of the key economic freedoms should lead to errors, bottlenecks, sub-optimal action and all kinds of distortions. At first, all this is still relatively easy to overcome but with the deepened state intervention it would eventually end up with the overall chaos" (RÖPKE 1971).

In the views of market school economists, regional integration's key focus is on creating such international economic space, which would restore the violated rights of the self-sustaining market mechanism, the elemental forces of which are optimally adjusted to the economic life of the bordering countries.

Thus, full integration, according to the representatives of that school, is the achievement of a single market space between several countries where there is full freedom for competition and natural market forces.

Another school theorizing regional integration was the market-institution school based on the principles of neoliberalism. The representatives of this school were Jean Weiler, Maurice Allais, Bela Balassa, Hans Kramer and Klaus Meyer who considered regional economic integration both as a process and as a state of affairs. As a process, regional integration includes measures designed to eliminate discrimination between businesses belonging to different national states; considered as the state of the economy, it can be represented as the absence of various forms of discrimination between national economies (ALLAIS 1972, BALASSA 1962, MEYER 1966).

By the absence of discrimination, representatives of the market-institutional school meant the absence of any restrictive measures on the part of the governments that suppressed the freedom of action of private business in the integrable region, including market monopolization freedom. In other words, the need to harmonize the economic policies of the countries involved in integration is only a supporting element to create optimal conditions and ensure functioning of the market mechanism.

The scientific concepts and conclusions of G. Kramer, B. Balassa, K. Meyer and others have been fully confirmed by modern theoretical studies that are convincingly supported by the example of Western Europe (BALASSA 1962, KRAMER 1969, MEYER 1966). At the end of the 20th and beginning of the 21st century, Europe has seen three interconnected regional integration processes. The first concerns the winding down of borders within the European Union (EU) and transferring them to the external borders of the states involved in the integration. Secondly, there is a convergence of intellectual, cultural, political, trade and economic contacts, both within the integration itself and states on the other side of the external EU borders. Thirdly, economic integration had a positive impact on the processes of clustering.

Role of clusters in the context of solidifying regional integration

The need to create clusters in the modern economy arises without doubt, which is proven by the works of leading scientists in this field. The aim of this paper is to reveal the features and benefits of clusters in the context of strengthening regional integration. Results: a cluster is a group of geographically localized enterprises which are directed toward the satisfaction of consumer demand and the increase of the region's competitiveness in the global market.

The directions of clustering activity can take various forms depending on the scope of activities: from cities to regions. This may bring together a number of countries. Depending on the industry and the coverage of distribution channels, the interaction may bring together a cluster of public authorities, local governments and research institutions.

Accordingly, in both developed and developing countries the economic efficiency of the clusters is different due to the varying degrees of integration of its participants.

Factors that contribute to the increased efficiency of clusters include:

– production of final or intermediate products (extraction and processing of raw materials, semi-finished products, machinery and installations);

– involvement of highly specialized manufacturers of equipment and rendering of business services of a specific character in a cluster;

– the presence in the region of financial institutions and the availability of funds;

– interaction with industry related products and activities;

– feedback from consumers, the extensive distribution network, established distribution channels;

– availability of technologies and industries for recycling and processing waste and by-products;

– development of corresponding types of infrastructure (market, production, transport);

– a level of regional training in general and specialized education, as well as professional development services;

– regional and sectoral research centers which ensure the flow of information, conducting research, consulting and technical support;

– centers of product standardization and certification as well as other government agencies that may be part of the cluster, thereby increasing its importance in terms of public-private partnerships;

– strategic alliances and other forms of public cooperation in industrial and commercial areas of the cluster, which support the work of its members in the associative form.

Consideration of the economy from the perspective of clusters has several advantages compared to the traditional grouping according to different sectors or types of production.

Firstly, the clustering does not contradict the theory of competition, according to which each member of the cluster acquires its own competitive advantages which are not in conflict with the sectoral approach in which intra-industry competition is ignored or acquires the character of monopolistic collusion.

Secondly, within the cluster production (commercial) communication reaches a higher degree of efficiency due to the speed and timeliness of information flow about the technological features, the demands of consumers, successful marketing solutions, and distressed counterparts. Also, individual adaptation is highly expressed in clusters, which manifests itself in minimizing competition when targeting specific segments and niches of the market. Eventually, due to these particular features clusters significantly improve the internal productivity, efficiency of attraction and use of innovations, among others in the context of local regional development, as well as an increase in the international competitiveness of the region.

Thirdly, the common terms of regional development and international competition, threats and opportunities for growth allow cluster participants to form a similar development strategy based on cooperation actions and to ensure cooperation between the companies inside and outside the cluster, with government agencies and other institutions of market infrastructure. Such interaction has a positive impact on the cluster members due to the shared infrastructure and results of public and private investment in the relevant region.

Fourth, the selection of clusters in the industry structure enables the reduction of corruption, including industry lobbying, preferential subsidies and unfair decreases of the tax burden. There is no misallocation of investment and targeted funding, which may distort the existing market structure.

Fifth, the lack of direct competition of cluster members with each other does not weaken it towards external competitors, reducing the intensity of production and business activities; companies are not afraid to weaken each other and strengthen competitors.

Ultimately, industry development based on cluster theory can increase the flow of capital and technology, direct investment, which in addition to financial resources introduces new technologies and intellectual resources, management skills, and world-renowned brands into the region. Regional competition stimulates the growth of the international competitiveness of the cluster in contrast to a sectoral approach, which distorts the competitive relationship.

There are two main types of clusters:

– "horizontally integrated" – formed by combining small and medium-sized enterprises (Italian model);

– "vertically integrated" – formed by combining small and medium-sized enterprises around large industrial structures (Scandinavian model).

Industrial and commercial ties have a stimulating effect on the development of different types of innovation and the introduction of more efficient technologies, and can significantly improve economic performance. This contributes to the intensification of information exchange and the promotion of new products to distributors and to end users. The increasing interdependence of the cluster members reveals new possibilities of competitive advantage. Clustering enables participating companies to escape from inertia through the development of partnerships and the interests of each other, with a focus on internal problems. This significantly improves their competitiveness and has a positive impact on their progressive development.

Thus, the cluster is a community of closely related firms (both economically and geographically) with an adjacent profile, which facilitates the overall development and growth of each other's competitiveness. Mainly it is an informal group of large leading companies with many small and medium enterprises, the creators of technology oriented to similar customer segments within a single chain of product promotion, focused on a limited area and carrying out joint activities in the production and supply of a certain type of products and services. The role of big business in the process of cluster formation is to attract small and medium-sized enterprises to establish production on the basis of close cooperation and subcontracting relationships with active business and information interaction. This contributes to the development of all cluster members and provides them a competitive advantage compared to other separate entities that do not have such strong relationships.

The development of clusters enables national economies to develop and maintain their competitive advantage, focusing on competition with the countries that are socio-economically and technologically developed. Cluster members invest in specialized research, the development of related technologies, information, infrastructure and human resources, which results in a synergistic effect and enables small businesses to survive in the increasing competition of the global market. Within a state, clusters serve as points of growth for the domestic market and provide promotion of their goods and services to international markets. This enhances the international competitiveness of a country as a whole through a number of inherent advantages of the cluster form of interaction among large, medium and small businesses in all areas of business relations. As a point of economic growth, clusters attract major investments, which are closely watched by the government and local administrations.

Clusters have increased economic and innovative potential. This is due to the transfer of technologies and products with a high value for the target market, as well as the availability of other competitive advantages with respect to related companies, which boosts the quality of semi-finished products and thus improves competitiveness. Increased competition among the cluster member companies in all types of markets (both internal and external) leads to a substantial expansion. Through close collaboration, the firms in a cluster adopt the same business idea, which provides them with a privileged position in the domestic and foreign markets. This includes, for example, an increase in the use of knowledge, or the creation of new networks of cooperation within clusters aiming at improving competitiveness and developing new market niches.

The cluster approach is of particular importance for small businesses. Some experts see it as an effective way for small forms of enterprises to survive in the global economy (BILCHAK et al. 2009).

In the context of regional integration, competitive advantages of clusters depend on the information flow vector, the degree of freedom in the exchange thereof, and the readiness to jointly implement the collective decisions that match the interests of the cluster.

In an information economy, the regional structure of a cluster is particularly crucial. Not all clusters are capable of realizing a competitive advantage based on the concentration of activities and resources. Thus, cluster associations in emerging economies comprise fewer companies compared with clusters formed in economically developed countries, and they are characterized by a different social structure, even though they are still regarded as one of the most important ways of socio-economic development.

The development strategy for high-tech clusters involves the implementation of new approaches in different sectors of the economy: science and technology, education and training / retraining, export promotion and investment mobilization. The level of socio-economic development of a region is strongly influenced by the local and national authorities, although the regional component of a cluster is always dominant. In some cases, the influence of governments crosses national boundaries when the cluster covers a number of neighboring countries and they form a coherent regional policy.

At the microeconomic level of regional integration, the cluster theory shows that the choice of location should be based on the level of income and expenses as well as the overall capacity of the cluster in terms of system effectiveness (synergy).

The degree of success of the cluster regional integration strategy depends on the interaction of several factors:

– acknowledgement of the clusters' progressive role in the development of the regional economy and recognition of clusters as subjects of economic relations;

– formalization of state policy towards clusters (initiation procedure, laws and regulations);

– the concept of long-term vision and the role of clusters (strategy, programs, motivation, control, place in the strategy of socio-economic and technological development of the region);

– state support of cluster initiatives (especially at the stage of cluster formation);

– active use of government contractual work as the primary instrument of cluster support and the formation of strategic directions for its development in the context of the development of new technologies;

– development on a scientific and educational basis;

– innovative market infrastructure (business incubators, technology and science parks, venture investment institutions, offshore centers and other special economic zones);

– active marketing policy of the state and regional authorities, public (international) organizations aimed at the presentation and promotion of clusters in the global market;

– free access to strategic and marketing information for cluster member companies.

It has been proven that clusters are one of the most effective ways of regional development, which overcome a number of disadvantages in the information economy.

Firstly, the information economy cannot provide a high efficiency for industry, which developing countries need in terms of social and productive infrastructure development, fundamental research, applied research, and pilot production.

Secondly, the capabilities of a centrally planned economy with respect to the formation of clusters and scientific / production associations are much higher than the willingness of businesses to bear the costs of large-scale organizational R&D; not to mention its implementation in production. On the contrary, within a cluster a set of small and medium-sized enterprises are able to take on innovative development in the "utility room or garage", as it was during the time of the formation of high-tech clusters in the US and the EU, and to ensure the formation of new high-tech industries in developing countries.

In today's world of high technology, clusters play an essential role. Owing to the development of new clusters and public support for existing ones, technologically developed countries are constantly improving their international competitiveness and the overall standard of living of their population. There is a trend of moving production to lesser developed countries with the exception of clusterized production. The latter demonstrates operational efficiency that exceeds the economic advantages from moving production abroad. Examples of this are Silicon Valley and Detroit in the US, telecommunications in Finland, Portuguese wine, and the fashion industry in Italy.

Clusterization contributes to:

– developing effective ways of interaction between government and business, focusing on the establishment of public-private partnerships;

– enhancing of the multiplier effect, which manifests itself in an increase in turnover of investments, in the growth of profitability and competitiveness of the region;

– transformation of science and education from subsidized social services into high-yielding activities;

– increased integration of regional cluster formations in the global system of world partnership;

– strengthening the region's independence from economic fluctuations beyond;

– promotion of the development of small and medium-sized businesses in the region;

– an increased number of cluster member enterprises, the increase in employment in the region, the growth of wages and deductions to the budgets of different levels;

– an increase in the purchasing power of the population and in the capacity of regional commodity markets, improvement in the investment attractiveness of regions;

– formation of economic prerequisites for the transition from the policy of average investment in industry, to a policy of supporting and promoting the regions that could be classified as "engines of growth" and will be able to show stable dynamics of regional development due to targeted investments in the formation of clusters;

– manifestation of economies of scale and economies of agglomeration, which promote the development of regions that – as "engines of growth" – create impulses for the development of neighboring regions.

At the heart of regional clusterization is a modernization process based on innovation. Structurally, it covers the technical, technological, organizational, managerial and institutional innovations. Consequently, the clusters may have a different focus – innovational, industrial, recreational, financial, agricultural, telecommunications, construction, or fishing; as well as being supplemented by active logistics and marketing activities.

Thus, one of the main factors ensuring the effective development of industry can be a cluster approach as a basis for regional integration.

Conclusions

The influence of the integration processes, which leave their mark on the basic elements of branch economy, including the formation of clusters is of huge interest to modern science. An important factor which promotes effective clustering is combining its participants into associative groups.

Advantages of cluster formation as a key element of reforming industrial policy are manifold. There is a growing concentration of scientific and industrial potential inherent in a planned economy, while the intracluster competition is maintained, supplemented by the international division of labor, specialization of enterprises in the region, and the establishment of cooperative ties substantially increasing the international competitiveness of regions that are specific to the market economy. It is the presented combination that reflects the specificity of the cluster approach.

As a result of cluster policy, a clear vision of the strengths and weaknesses of industrial development is formed. The productivity of partnership dialogue increases, and the regional economy is diversified. All this leads to an increase in the number of taxpayers, and as a consequence of the increased tax base there is a reduction of dependence on the budgets of individual business groups.

The cluster approach encourages the development of business by promoting a more efficient use of human resources and infrastructure areas. This is done by providing access to the research and recommendations of research centers, which results in lower costs and enables access to new markets.

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