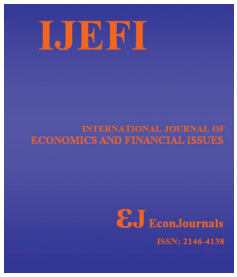

International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2015, 5(Special Issue) 13-18.

The Spatial Transformation of the Urban Environment in the Conditions of Post Industrial Development of Society: Dedicated to the 100th Anniversary of Jean Gottmann, Immanuel Kant Baltic Federal University, 23-26 August 2015, Russia.

The Territorial and Sectoral Trends in the Industry of the Eurasian Economic Union

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ABSTRACT

The article examines trends and changes in the territorial and sectoral structure of the industry of the Eurasian Economic Union, the patterns of transforming the industrial systems into more effective integrated centres under the transitive conditions. The national industry transformation is associated with the use of mechanisms of creating the industrial and integration structures through the single organizational and production modules capable of efficiently connecting and transforming the elements of the national industrial structure into transnational competitive production units. These units are spatial entities, such as clusters and other market-based forms of production that are a kind of "growth nodes" and act as elements of the emerging new regional industry framework.

Keywords: Industry, Transformational Economy, Transnational Reproductive Pole, International Integration, Growth Nodes, Industrial Policy
JEL Classifications: F6, L5, R12

1. INTRODUCTION

Scientific understanding of the structural and territorial shifts in the industrial sector has traditionally been among the priorities of the economic and geographic sciences. At the present stage of development of the world economy, studying the characteristics of identifying the economic nuclei for the design of the strategic industry development policies of countries and regions is updated. This kind of studies has become particularly relevant in countries with the transitive economy including the republics of the Eurasian Economic Union (EAEU) (Buzgalin et al., 2006). EAEU member states are post-Soviet countries such as Russia, Belarus, Kazakhstan, Armenia and Kyrgyzstan. EAEU was established to ensure the comprehensive modernization and cooperation as well as enhance competitiveness of the national economies and create conditions for the sustainable development in order to improve the living standards of the member states.

After the demise of the Soviet Union, the EAEU countries were not prepared for the establishment and active structural adjustment of the national industrial systems, which are still not meeting the modern standards of the International Division of Labor (IDL). Therefore, the structural and spatial transformations of the EAEU industry were largely of the spontaneous nature (Minakir et al., 2002). But in the last decade in the EAEU no effective industrial policy have been pursued at all territorial levels yet, and practically solving the problem is reasonably constrained by poor drafting of the scientific bases for the structural and territorial transformation of the national industrial systems (Treyvish, 2002).

The sectoral and territorial changes in the modern EAEU industry are often left without any sufficient theoretical analysis and methodological basis. It is not quite clear, what are specific advantages of the post-Soviet countries' interstate cooperation often characterized by the same type of resource specialization and weakened by the economic crisis? How should countries take into account their resource potential in adapting the national industry to the global market? What structures vertically integrated or those network-based can ensure the highest level of competitiveness for local companies in the global market? Despite the attempts of

the Russian researchers to characterize the structural and spatial transformation of industries and industrial systems, there are not enough corresponding concepts to reflect the process.

Due to peculiarities of the transitional economies of post-Soviet countries, the problem of creating a new integration-based industrial structure cannot be solved through the application of purely administrative, planning and market-based methods of management. Consequently, one of the research priorities is the search for the best ways for not only territorial-sectoral restructuring of the industry but also the territorial administration under the transitive conditions of national and regional economies.

2. THEORETICAL BASICS

The structural transformation of the territorial-sectoral industrial system includes the process of converting structures, forms and methods of economic activity in the systems which are determined by the action of the territorial aggregate of socio-economic and other factors (Moshkov, 2005). The industrial system consists of an aggregate of companies, each of which has quite a specific combination of characteristics. Thus, the process of structural changes in the territorial-sectoral industrial systems of various kinds should be considered as the key subject of research into changes in the territorial organization of industrial production. For that reason, the theoretical and methodological framework of the research is based on the conceptual set and theoretical positions developed by domestic and foreign scholars on the researched topic.

A significant impact on the theoretical generalized findings outlined in the work was exerted from the scientific works of foreign researchers in the field of economic theory, such as Boudeville (1966), Wallerstein (1984), Isard (1954; 1966), Perrous (1961; 1971), Porter (1998; 2003), Hagget (1968), Murdal (1972), Fredann (1973), Hagerstrand (1967), Lasuen (1969) as well as the works of domestic economic geographers and economists, such as Alekseev (2000), Baklanov (2004), Gorkin (1979), Zimin and Odesser (1989), Ishmuratov (1987), Kochetov (2006), Moshkov (2005), Mironenko and Fedorchenko (1999), Mironenko (2006), Smirnyagin (1997), Treyvish (2002), Chistobaev and Bazhenov (1984), Sharygin (1975; 1984), Schedrovitsky (2005) and others.

Unfortunately, the most important works on the industry geography are related to either the capitalist market or the planned economy of the Soviet era, while the research of the territorial and sectoral changes in the national industrial systems in the context of a transitional period are set out in simplified form and are insufficiently mapped. The trends and specificity of the structural and spatial transformation in the industrial segment of the economy of the former Soviet republics are examined without proper thoroughness (Pilipenko, 2003).

3. METHODOLOGY

We propose to consider the provisions of the theories of competitiveness and polarized development of states as well as the concepts of industrial clusters from the perspective of their being internationalized in the form of cross-border cooperation as the methodological tools for a comprehensive analysis of changes in the industrial national systems of transitive economies. The transformation of the national industry is associated with the use of mechanisms of creation of the industrial and integration structures with the single organizational and manufacturing units capable of efficiently connecting and transforming elements of the national industrial structure into the multinational competitive production units. In this research, we propose a new conceptual approach to studying the structural and special changes in the national industrial system in the context of a transformational and transitive economy designed to identify the key trends and changes in the national industry.

4. OUTCOMES

During the research, it was found that the EAEU countries, due to their specific economic and geographic characteristics as well as complexities in the transitional period, could be characterized by slow upgrading of the national manufacturing structures and adapting to the new kind of IDL (Mironenko, 2006). Therefore, in the organization of the national industrial production in the context of the world economy's up-to-date standards, these countries need to use the mechanisms of creating the industrial and integration structures through individual organizational units of production capable of efficiently connecting and transforming elements of the national industrial structure into multinational competitive production structures.

Under the transitive conditions for the post-Soviet countries, internationalization is intended to serve as one of the key reference points for decision-making in the field of transformation of the industrial production and involvement in the IDL. In this environment, the fragmented units relating to various national production entities are combined in the single global internationalized reproductive cycle, the expanded commercial reproduction process put beyond the scope of the national framework, in which the territorial, sectoral, national and supranational economic entities involved in the establishment of a single internationalized reproduction field act as links of the global reproductive process. This field in its development exerts influence on the territorial-sectoral shifts in the industrial production of a country as it has its own special territorial-sectoral structure, its independent components, i.e., the internationalized production and internationalized part of the distribution chain. In the aggregate, the internationalized parts of these areas constitute, in our opinion, the transnational reproductive poles (TNRP), the territorial and sectoral internationalized nucleus of reproduction. TNRP's connected by the cooperative production and economic ties can form the intermodal "growth (axis) corridors." Although both areas still have non-internationalized national parts of production, they act as a stepping-stone to possible future inclusion in the internationalization and transnationalisation of the industrial production.

As a rule, the international cooperation takes the national industrial estates to pieces to several multinational firms as the elements

of various production units. It is known that by the beginning of the 2000's, the major components, which make up the building blocks for constructing market-oriented industrial systems, were already established in the EAEU countries. This was also due to the increased exchange of scientific and technical ideas at that time along with new financing opportunities for large projects promoted by the joint efforts of multinational companies within the huge industrial and commercial agglomerations (ICA), or a kind of mobile cores of TNRP. ICA's function in the form of international consortia (groups of companies), or often joint subsidiary corporations established by several multinational companies with a wide range of activities (Kochetov, 2006). Products are supplied between them at all stages of the single production process going beyond the national scope (components or parts, basic and auxiliary materials, standard and special equipment, technical documentation). That means all what is embodied in the finished product "taken" from the internationalized reproduction chain. This cannot but influence the nature of the exchange.

The development of cooperation in science and technology, production and investment have led to shifting the goods exchange to a new interface, i.e., inter-enclave (Intercompany, Intercorporation), or an exchange between major production and investment systems. As a result, in the post-Soviet economic space, there was a trend towards transformation and adaptation of major national industrial monopolies to new conditions of the IDL related to the accelerated development of Intercorporate Division of Labor, in other words, the specialization of economic entities established on a transnational and geographical basis and acting as TNRP in the organizational and managerial terms. Against the backdrop of "introduction" of the industry of former Soviet republics to the new division of labor and intensive creation of elements of the ICAs, another trend emerged, i.e., the sectoral and territorial curtailment of the production of a wide range of national items, "washout" of the specific product-related branches of consumer goods and a variety of machines and equipment as part of the industrial estates established in the Soviet period.

Therefore, when considering the modern development of the social division of labor in the EAEU it is necessary to proceed from cooperation and unity of the international inter-enclave division of labor as the current reorientation in the flow of international loans creates preconditions for the expansion of the scope of ICA activities designed to implement multifaceted national projects; in turn, it gives the mobile tone to TNRP. TNRP quickly move to the points of geoindustrial space where the most favorable reproductive conditions are created. The increasing complexity of the social division of labor in the geoindustrial space leads to constantly reviewing the national territorial and sectoral structure of the industry. Thus, the changes between the two subsystems of the social division of labor, international and inter-enclave take the form of pulsations reflecting a tendency that is inherent in the global economy and extends to the EAEU industry as part of the global industry.

Of particular interest is whether the effect from participation in the IDL at the level of national industrial estates can be achieved in the transitive period. Taking maximum advantage of inclusion in the IDL of national industrial structures puts on the agenda the question of the carefully differentiated selection of industries. These should be the industries that can make allowance for shifts taking place within them and be actively included in the IDL through the export of their products. At the same time, they should have a well-developed infrastructure that can provide the necessary return on the machinery, equipment, components and raw materials imported for the technical refit of these industries (Perelygin and Knyaginin, 2007). The reality is that the "unregulated" entry of various national productions into the global market without the simultaneous connection to the associated sectors brings to the country's industry some negative "focal" processes. The hypertrophic "focal" development of several industries leads to an artificial obsolescence of many related branches of production, and it is associated with another trend in the industry of the EAEU (Moshkov, 2005; Tsvetkov, 2013).

For the transitive period, own economic models will be also required (a combination of various models) that would reduce the gap between the operating conditions of manufacturing businesses in the global economic and national environments. It is impossible to use the effect of diversity of the market relations, if the national industry is represented by giant monopolies on the global stage; the degree of the financial and industrial monopolization in some structures cannot be compared with any big Western companies. In the meantime, this is the case in the Russian economy. For that reason, another trend is related to structural imbalances in the EAEU industry that have reached such a size that it is almost sacrificed to three sectoral enclaves, i.e. raw materials, the fuel-and-energy and defense industries. The economic boundaries of these industrial estates often coincide with national boundaries and abuse other branches of the economy for their own ends (Gorkin and Smirnyagin, 1979).

In the meantime, the strategic plan should not put to an end the overgrown monopolistic industrial structures but restructure them into the latest economic associations and alliances singling out high-tech innovation and industrial "populations" (North-West Centre for Strategic Research, 2007). As a result of such a process such global and economic cooperation entities may emerge (e.g. associative groups, multinational companies, financial industrial groups and clusters) which will be able to harmonize the national structure of production. Thus, there is fertile ground for the introduction in the industry of a transnational element and the constituent elements of TNRP – The newly established financial industrial groups, multinational companies, clusters, technology parks and similar entities – May declare themselves as subjects of the global economic dialogue to which the state delegates the implementation of its geoindustrial interests (Kostyunina and Baronov, 2012; Pavlov, 2013).

As mentioned earlier, the production and investment model of cooperation contributes to dismemberment of the national production and process chains and taking their individual elements out of the national framework. Meanwhile, each production element is related to a certain organizational and functional structure (i.e., research, production, investment, planning and design, the foreign trade unit, service unit etc.) that has a custom-

tailored setup. In whole, the global economic relations are established from individual economic cells that in the aggregate constitute a particular grid the nodes of which are separate organizational and production entities. Including organizational entities for various purposes in particular associative groups provides a variety of production entities, i.e., ICAs, multinational companies, groups of companies and other production and organizational forms in the construction of which can be traced the repetition of individual cells, single organizational and production modules. These modules, irrespective of their combination by the structure, can normally change their territorial structure but remain the same because of the mandatory three economic and geographic components: (1) A single production cell; (2) production links with other entities; (3) links with the operational and economic environment (Kochetov, 2006).

On the basis of individual organizational and production modules, various organizational frameworks can be set up, the transnational communication entities that have a certain territorial-sectoral organization and influence territorial and sectoral shifts in the industrial production of countries and regions. Another point needs to be emphasized, i.e., the internal components of the single module at its embedding in a certain structure do not remain constant, and the "market environment" adds a new feature to them. The territorial and production nodes are subject to change; together they create a new entity typical of an economic agent (Moshkov, 2005). All of these changes have their own laws that should be considered as long as the sophisticated industrial structures are created. A single organizational and production unit is engaged in the creation of an inter-enclave (intercorporate) interface and a layerage (a storeyed structure) of the commodity circulation that is a fundamentally important point for understanding the nature of the strategic context in the internationalization of the EAEU industry.

Both integration and disintegration act as a springboard for engaging such a production unit in the world economy and the state's effective instrument for creating a background for maturation of TNRP (Minakir et al., 2002; Chasovsky, 2014). In the meantime, the industrial structures of the former Soviet republics have already certain features to integrate with foreign multinational companies and enter TNRP. Firstly, the inherited unique manufacturing structures in market context can be transformed by the best examples of multinational companies, the largest corporation of the fuel-and-energy and military-industrial sectors take the finished transnational shape; secondly, a significant number of multinational companies, cooperation with which is beneficial for foreign partners, are established on the basis of production and supply elements of the branch entities already owned by EAEU countries (the task remains only to consolidate these elements of multinational companies in consortia or clusters aimed at performing major projects); thirdly, some international consortia involving the EAEU industrial and financial institutions are being established (similar to the regional development associations) (Alekseev and Mironenko, 2000; Chebanov, 2010). Thus, the national and regional industrial policies can and should focus on achieving the optimum balance between the regional and global industries, between the domestic and multinational industrial entities (Knyaginin and Schedrovitsky, 2005; Perelygin and Knyaginin, 2007).

5. CONCLUSIONS

In a transitive period the rapid liberalization and "chaotic" privatization of industrial facilities along with the feverishly searching for Western reform models led to the destruction of many post-Soviet regional and local production estates, the broken links of energy-and-production cycles especially the middle and upper stages became uncompetitive with enterprises of other countries. The disturbed industrial estates are not subject to rehabilitation in its present form due to their being technologically imperfect. Meanwhile, some individual and relative competitive parts of the old decayed territorial and industrial estates were gradually transformed, modified and adapted to new market industrial structures. However, it was not enough for the modernization of the national industry. Therefore, a solution is seen in the scientific substantiation of the long-term development strategy for the EAEU industry, development of an effective regional industrial policy, programme and investment support to all territories by identifying "growth poles" and revitalizing the innovation activities. One of the upcoming trends associated with the plan is represented by the research ideas of the industrial cluster concept (Porter, 1998; 2003). In addition, one of the methodological foundations of the regional development including the industrial one is the polarized development theory the origins of which are associated with the names of Perrous (1961; 1971) and Boudeville (1966).

In our opinion, the ideas of the polarized development and economic core theory are also useful in the development of the industrial policy concept in all post-Soviet countries. In addition, it is known that the concept of clusters and the polarized development theory have in common the regional development idea as well as the focus on the industrial and economic relations of the companies and industries that were chosen for priority development and obtaining certain state aid in order to enhance the region's socio-economic development (i.e., the theory of polarized development) or competitiveness (i.e., the concept of clusters) (Pilipenko, 2003).

Thus, another trend associated with changes in the industrial structure of EAEU is the appearance and development of effective sectoral and regional clusters as a form of modernization and territorial setup of the national industry united by transport arteries in the line-and-node, network and areal structures (Mikhailov, 2013; Shastitko, 2009). For example, in Russia, some staff of the Ministry of Economic Development worked on the concept of a cluster of the regional policy, and experts of the Ministry of Regional Development did the same in the territorial dimension. The final version of the concept of development of the regional industrial clusters was passed to the government but not yet accepted for execution. Kazakhstan has already launched a project to diversify the industry through the creation of industrial clusters. Similar phenomena are taking place in the industry of Kyrgyzstan (Chasovsky, 2014).

Currently, in the former Soviet Union there are two types of a cluster policy representing a "top-down" approach (initiated by the authorities) and a "bottom-up" approach (initiated by business entities). In connection with the possible adoption and

implementation of a cluster policy in the EAEU, some appropriate tools to evaluate the policy implementation effectiveness at various spatial levels will be needed. In this regard, a cluster analysis of functioning of the industry's territorial and sectoral structure can be carried out at various levels. At the micro level, in the first place, the linkages between the firms will be studied; at the meso-level the intra- and inter-industry linkages in the production chain; at the macro level, the interaction between groups of sectors across the national economy. In recent years, a cluster model has been increasingly used for the economic and geographical research at the level of international industrial groups, which can be characterized by the relative homogeneity of the economic area (Gareev, 2012; Mikhaylov and Mikhaylova, 2014).

Due to the fact that a cluster approach focuses on the analysis of the entire value chain of the final product against the backdrop of the increased IDL, in the context of the EAEU transitive economy to research aspects of the international industrial cooperation this tool is more preferred than the traditional sectoral approach. However, due to the fact that it is impossible at the initial stage of the national industry reform to provide maximum support to all state industrial clusters, which can be arranged in the EAEU, priority national industrial clusters need to be clearly identified and otherwise promoted. These can be both export-oriented and import-oriented clusters. Innovation clusters can be created on the basis of analysis of the regional assessment of the structure of the country's or region's foreign trade turnover.

The cluster division of regions quite strongly underlines the relationship between the innovation index and the largeness of the centre of the region under study, thus emphasizing the importance of the creation of large cities to promote the region's innovative potential. For example, experts from the Russian Centre for Strategic Research North-West compared the results of the distribution of regions by the innovation index and the distribution of innovative tech industries by region. 10 most technologically advanced industries were considered (according to the technological effectiveness classification applied by OECD countries). Proceeding from the material obtained as a result of indexing, the experts identified six groups (i.e., clusters) of Russian regions characterized by different levels of innovation. On the basis of this classification a map of the Russian innovation space was prepared. This experience of the rational organization of production and the national economic space can be used in pursuing industrial policies in other EAEU countries as well (Centre for Strategic Research North-West, 2007).

It should also be noted that the establishment and development of market mechanisms in the Russian manufacturing space intensified regional processes some of which are linked to the development of the old trends in the domestic industry (for example, for Russia that means a shift of the mining and manufacturing industries to the east of the country). The new trends are as follows, the polarization of the national industrial space, growth of capital rents, strengthening the internal relatedness within the industry of the country's regions, a variety of regional trends in the main branches of industry, contraction of the industrial space in the country, the growing differentiation of the national production space by the directions of foreign economic relations, enhanced orientation towards the neighboring national or international markets and others in the regional production relationships and proportions.

It should also be noted that another EAEU trend in the transformation of the national industry is associated with the increasing role of modern forms of industrial setup, such as multinational companies, financial industrial groups, holdings, foreign direct investments, special economic zones, industrial parks and clusters in which the industrial, technological, financial, and scientific potential will be concentrated (Gavrilova, 2012; Ministry of Economic Development of the Russian Federation. Special Economic Zones, 2013; Research and Information Portal TASS-Telecom, 2013). Thus, the market forms of organization of the national industry can gradually provide the basis for the creation of a new industrial framework for EAEU on the basis of which more complex growth strategies also covering the development of new competitive sectors of the innovation economy will be initiated in the future.

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