GLOBAL COMPETITIVENESS, NEOINDUSTRIALIZATION AND INNOVATIVE CLUSTERS: INTERNATIONAL INDICATORS AND TRENDS OF RUSSIAN FEDERATION

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Abstract
The purpose of the study is to identify trends and future models for the innovative development of Russian Federation. Paper deals with the innovative development of the leading countries of world economic growth. Particular attention is given to «neoindustrialization» of economically developed countries and innovative nature of clustering of economic space. The modern factors of global competitiveness and economic content of the innovative transformation of the economy is specified. Theoretical approaches and tendencies of innovative transformation of economy are proved. The authors identified scientific, technological, production, spatial-territorial and institutional-market aspects of innovative transformation. Paper includes the differentiation of the States-leaders of industrial production in the context of key indicators of global competitiveness. The transformation model of innovative economy formation is presented, the indicators of global competitiveness of the Russian Federation are considered. The authors propose structural and logical scheme of innovative transformation of the national economic system of the Russian Federation is developed. A graphic interpretation of the transformation of the economic system of the territory under the influence of innovative development is proposed.
Key words: innovative transformation, economic development, innovative cluster, neoindustrialization, global competitiveness.
JEl Codes:

1. Introduction.

The current conditions of the Russian economy are characterized by increasing external threats caused by global technological challenges and high turbulence of the political system. The risks of maintaining the technological lag of the Russian industry are increased by dependence on energy exports and the presence of unresolved structural problems of sectoral and spatial development (Kochetkov, Larionova, Vukovic, 2017). At the same time, the Russian economy has retained its potential to implement the innovative development scenario, in 2016 the Russian Federation ranked 43rd in the global Innovation Index ranking, rising five positions compared to last year. According to the integrated indicator of innovative growth, calculated on the basis of national spending on R&D, the number of patents granted, the level of higher education and other key indicators, Russia in 2016 ranked 12th.

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In modern Russian conditions, the development of innovative enterprises remains a key area of initiation of new economic growth points in high-tech industries. The problems of practical implementation of the innovative approach to the modernization of regional economic systems are actualized by the need for accelerated implementation of the policy of import substitution and increase in the production of high-tech products (Boush, Kulikova and Shelkov, 2016). The insufficient number of successful cluster initiatives is due to the low demand for innovations from industrial enterprises, the underdeveloped institutions of technology transfer and the interaction of the main subjects of innovation processes (Dzhindzholia, Popkova and Shakhovskaya, 2015). Improving the management efficiency of the processes of innovative transformation of the economy solves the problems of infrastructure and investment support of innovative processes. The optimal solution of these problems is proposed based on the existing innovation clusters and individual large enterprises (Gimadeeva, 2015).

Section 2 presents the methodology, section 3 includes modern trends of innovative transformation and data of global competitiveness in the World, section 4 analyzes the transformation model of the Russian economy, accordingly with the trends, and section 5 presents de conclusion. Finally the Annex presents a summary of the evolution of industrial and economic development in Russian Federation .

2. Methodology.

The concept of the innovation cluster and the corresponding methodological tools are proposed as a theoretical and methodological basis for the structural optimization of innovative processes in the aspect of the spatial development of the Russian Federation. Methodological approach of the study focuses on the basic organizational model of cluster (Sölvell, 2009), the model of cluster and regional specialization (Feser, 1998), the institutional model of the cluster (Ketels, Lindqvist and Sölvell, 2012). Interesting and useful research in terms of applying the methodology of analyzing the data of authors Castillo-Montesdeoca E. A., Roget F.M., Vázquez-Rozas E.(2015); Ortiz-Montes S , Núñez-Tabales Julia M., (2017). The model of clustering of the economic space realizes the dialectic law of denying negation: the policy of cluster development comes to replace the previous concept of territorial production complexes, but in practice, it uses the industrial and infrastructural basis established within it. This denial of negation forms an institutional synthesis, which is one of the conceptual foundations of the model for the formation of regional industrial clusters, developing on the basis of a conglomerate of territorial production complexes.

As a criterion of specialization of the regional economic system in certain types of economic activity, it is proposed to use the localization coefficient of production (LC). Given that unlike territorial production complexes, clusters are characterized by both localization of production and its organizational deconcentration, the use of the Herfindahl-Hirschman Index (HHI), traditionally used to assess the degree of monopolization of production within a certain industry, is justified (Kucenko, 2009). For identifying the objective prerequisites for the formation of regional clusters deserves the coefficient of concentration of economic activity – «concentration ratio» (CR), which is calculated as the sum of market shares of three (four) largest economic agents of the territory (Kireeva, 2015).

Use of the indicators discussed above is not self-sufficient and the only approach for making managerial decisions on supporting cluster initiatives at the regional level. The technique proposed by the author supplements existing approaches to assessing the effectiveness of cluster development, which also requires a detailed analysis of the specific

socio-economic development of a particular territory. The advantage of using these indicators is the possibility of cluster development models in order to select the optimal strategy for clustering the economy for each particular territory, as well as differentiation of clusters from territorial production complexes and quasi-clusters.

3. Modern trends of innovative transformation of the economy.

The scientific discussion about economic nature and factors of innovative development is due to the difference in theoretical views on the current stage of the evolution of the world economic system. The multidimensional nature of the implementation of innovation processes in the XXI century formed by a complex of the following trends and patterns: formation of innovation sector as a key factor of economic growth, employment growth in the service sector, increasing Informatization of society, intellectualization of production and management processes.

The authors propose a step-by-step model of innovative economy formation consisting of three main and two transitional stages of economic development of national economic systems. The stages of economic development and the criteria for the designation of States are presented in table 1.

Table 1. Stages of economic development and criteria for the designation of States

Criteria	Stages of economic development (threshold values)				
	Stage I: Factorial	The transition from stage I to II	Stage II: Productive	The transition from stage II to III	Stage III: Innovative
GDP per capita (USD)	Less than 2 000	2 000–3 000	3 000–9 000	9 000–17 000	Further than 17 000
Share of basic factors of production in GDP (%)	60%	40–60%	40%	20–40%	20%
Share of added value created in GDP (%)	35%	35–50%	50%	50%	50%
Share of innovation and high-tech entrepreneurship in GDP (%)	5%	5–10%	10%	10–30%	30%

Source: Global Competitiveness Index: 2016-2017 edition (The World Economic Forum)

According to this classification, the Russian Federation is in transition from the first to the second stage of economic development in one group with the following States: Algeria, Azerbaijan, Bhutan, Bolivia, Botswana, Brunei, Gabon, Honduras, Kazakhstan, Kuwait, Mongolia, Nigeria, Philippines, Ukraine, Venezuela, Vietnam. Authors also offer the interpretation of the global competitiveness rating of the Russian Federation, based on the criteria of the innovative stage (table 2).

Table 2. Indicators of the global competitiveness of the Russian Federation in 2016-2017

Indicators	Score on a 7-point scale	WEF global rating
Global competitiveness index	4,5	43
Sub-index A: Basic factors of competitiveness	4,7	59
1. The level of institutional development	3,6	88
2. The condition of the infrastructure	4,9	35
3. Macroeconomic policy	4,3	91
4. Health and General education	5,9	62
Sub-index B: Efficiency factors of the economy	4,6	38
5. Higher education and further education	5,1	32
6. Development of the market of goods, works and services	4,2	87
7. Development of the labor market	4,4	49
8. Development of the financial services market and banking system	3,4	108
9. Technological development	4,3	62
10. Market size	5,9	6
Sub-index C: Innovation and high-tech entrepreneurship	3,6	66
11. A high-tech enterprise	3,8	72
12. Innovations	3,4	56

Source: Global Competitiveness Index: 2016-2017 edition (The World Economic Forum)

Table 3. Differentiation of global competitiveness indicators for the leading States of industrial production (100-point scale of assessment)

Global competitiveness indicators	States					
	USA	Germany	Japan	South Korea	China	India
Human capital	89,5	97,4	88,7	64,9	55,5	51,5
Innovation policies and infrastructure	98,7	93,9	87,8	65,4	47,1	32,8
Physical infrastructure	90,8	100,0	89,9	69,2	55,7	10,0
Law and institutional system	88,3	89,3	78,9	57,2	24,7	18,8
Energy policy	68,9	66,0	62,3	50,1	40,3	25,7
Price competitiveness	39,3	37,2	38,1	59,5	96,3	83,5

Source: Deloitte Touche Tohmatsu Limited and US Council on Competitiveness, 2016 Global Manufacturing Competitiveness Index

Based on the data of table 2 it follows that the most significant problems of the Russian economy are concentrated in the innovation sphere, which is the determining factor of global economic competitiveness in modern conditions. Table 3 presents the differentiation of the States-leaders of industrial production in the context of the key indicators of global competitiveness in 2016.

The analysis of the data presented in the table confirms the thesis that the innovative scenario of development is the only strategic choice that provides sustainable

economic development of the Russian Federation in the long term. Achieving economic growth in the Russian Federation on the basis of price competition due to cheap labor or the preservation of the raw material orientation of the economy is not the best strategic choice. Four trends related to the scientific and technological, industrial, spatial, territorial, institutional and market aspects of the development of the modern economy are highlighted. Consider these trends in more detail.

Trend I (scientific and technological dimension of economic development): Transformation of scientific knowledge into the main product and factor of competitiveness of the national economy on the global market. The formation of the knowledge economy is an objective trend shared by the scientific community, consisting in the role of scientific knowledge in economic development. At the same time, the innovative paradigm of sustainable economic development of territories is formed both under the influence of the policy of Central government bodies and under the influence of market forces that stimulate the innovative activity of economic entities.

Table 4. Structure of revenues from commercialization of innovative technologies in 2010-2012, %

States	The authors of innovative technologies	Laboratories and university chairs	Universities in general	Technology transfer center	Otherwise
Sweden	90	0	0	0	10
Portugal	63	6	29	2	0
South Korea	50	0	35	10	5
Ireland	47,8	23,2	18	11	0
Spain	47,6	15,2	32,6	4,3	0,3
Italy	47,3	8,6	39,6	4,5	0
Finland	46	20	30	0	0
Britain	45,8	19,3	29,3	5,6	0
Israel	43,7	2,5	29	24,8	0
France	42,1	15,6	29,7	12,6	0
Austria	38,1	23,1	17,4	19,1	2,3
Norway	33,3	24,9	15,1	26,7	0
Germany	29,3	15,6	42,5	4,6	8
Switzerland	27,6	28,8	32,7	10,9	0
Holland	25,4	43,7	20,7	10,2	0
Denmark	25,3	24,9	49,8	0	0
Belgium	23,7	40,3	29,1	0	6,9

Source: European Commission Knowledge Transfer Study 2010-2012, Final Report. // www.knowledge-transfer-study.eu

The modern innovation paradigm treats commercialization of knowledge as an established form of entrepreneurial activity and a key factor of competitiveness. In particular, in economically developed countries, universities are an active participant in the processes of generation, commercialization and transfer of innovative technologies, acting as an integrating link between science and production. Table 4 presents the data of the European Commission on the transfer of scientific knowledge on the distribution of income from technology commercialization.

During the research methods of financial and resource support of scientific researches in the Russian Federation were generalized, the structure of sources of financing of scientific works for various organizational forms of the Russian science is

presented in table 5. It is concluded that the model of attraction of Federal funds and grants, developed in modern Russian conditions, dominates to the detriment of commercialization and transfer of innovations, attraction of investment financing and performance of commercial R&D.

Table 5. Share of different sources of funding for scientific work performed at the Research Institute and University, %.

Source of financing	Academic research institutes	Sectoral scientific research institute	University research institute	Faculty and University chairs
Federal budget funds	91,8	70,0	75,8	83,5
Regional and local budget funds	0,2	0,1	2,6	1,6
Russian grants funds	5,5	0,6	10,4	5,1
Funds of foreign grants	0,1	0,2	1,3	0,1
Commercial R&D	2,3	29,0	8,8	6,6
Sponsorship receipts	0,1	0,1	1,1	3,1

Trend II (production aspect of economic development): Formation of a new production and technological platform based on the use of new materials, additive technologies, artificial intelligence and "green energy". According to the authors, the most promising is the implementation of the following national technological initiatives of economic development:

- Digital 3D modeling and design of technological processes;
- New composite materials and coatings;
- Additive technologies and 3D printing;
- Quantum communications and cryptography;
- Sensor technology and mechatronics;
- Synthetic biology based on the technology of bionics, and genomics;
- Neuro technology, cloud computing and "big data»;
- Distributed control systems based on artificial intelligence;
- Green energy and new renewable energy sources.

This is due to the fact that without a large-scale innovative transformation, the Russian economy will not be able to compete with the leading countries of the world economy, which have a number of absolute advantages (the number of population, the volume of the domestic market, climatic conditions, etc.). In the framework of the research, innovation transformation refers to a qualitative change in the economic system characterized by the preservation of long-term efficiency and competitiveness in a changing external and internal environment.

Trend III (spatial and territorial aspects of economic development): Neoindustrialization of economically developed countries, the innovative nature of the processes of clustering economic space. Trends of neoindustrialization and return of industrial production to the economically developed countries of the West ("reshoring") have received a new development after the economic crisis of 2008 – 2009 (table 6).

Table 6. Results of implementation of reshoring policy for US companies in 2010-2015

Industry	Number of jobs	Number of companies
Transport engineering	13823	33
Electrical industry	9240	58
Computer and electronics	3483	25
General engineering	2850	25
Light and textile industries	2154	46
Metalworking	1721	39
Food industry	1628	10
Woodworking	1028	18

Source: The US Manufacturing Renaissance: Driving a Resurgence in Industrial Real Estate. NAIOP, Spring 2016, 9p.

Neoindustrialization is declared as the key development goals as adopted by the European Parliament document " Renaissance of Industry for a Sustainable Europe Strategy" (RISE) [323], which contains mechanisms for achieving objectives of the development Strategy of the European Union "Europe 2020: European Strategy for Smart, Sustainable and Inclusive Growth" [283], in particular the increase in the share of manufacturing in GNP of the European Union to 20%. In 2013 more than 15% of companies in the manufacturing industry of United Kingdom follow a policy of returns of production, it is noted that the neoindustrialization has the potential to increase the GNP of the UK for 6-12 billion pounds and the creation of 200 thousand new jobs by the middle of the 2020-ies (Kondratiev, 2015).

Trend IV (institutional and market aspects of economic development): global informatization and innovatization of society, commitment to innovation as a driver of demand and supply. The strategy proposed by the authors for the implementation of the national technological policy of the Russian Federation as "new markets" highlights the following markets:

– markets EnergyNet: innovative technologies from small distributed energy ("smart grid") to optimization of energy systems of large cities ("smart city»);
– markets FoodNet: technologies of creation of distributed systems of personal production and delivery of environmentally friendly food and water;
– markets SafeNet: services of creation of personal security and information protection systems;
– markets HealthNet: modern biomedical technologies focused on personal medicine and the preservation of active longevity;
– markets AeroNet: control technologies distributed systems of unmanned aerial vehicles in various sectors of the national economy and municipal economy;
– markets MariNet: control technology of distributed systems for Maritime transport without crew and offshore transportation;
– markets AutoNet: control technology in motor vehicles without a driver and the automated logistics based on navigation systems;
– markets FinNet: services of decentralized financial and payment systems, focused on cashless payments;
– markets NeuroNet: technologies of integration of artificial components of consciousness and human psyche.

4. Transformation model of innovative economy. The selected trends form the logic of innovative transformation of the Russian economic system, presented in figure 1.

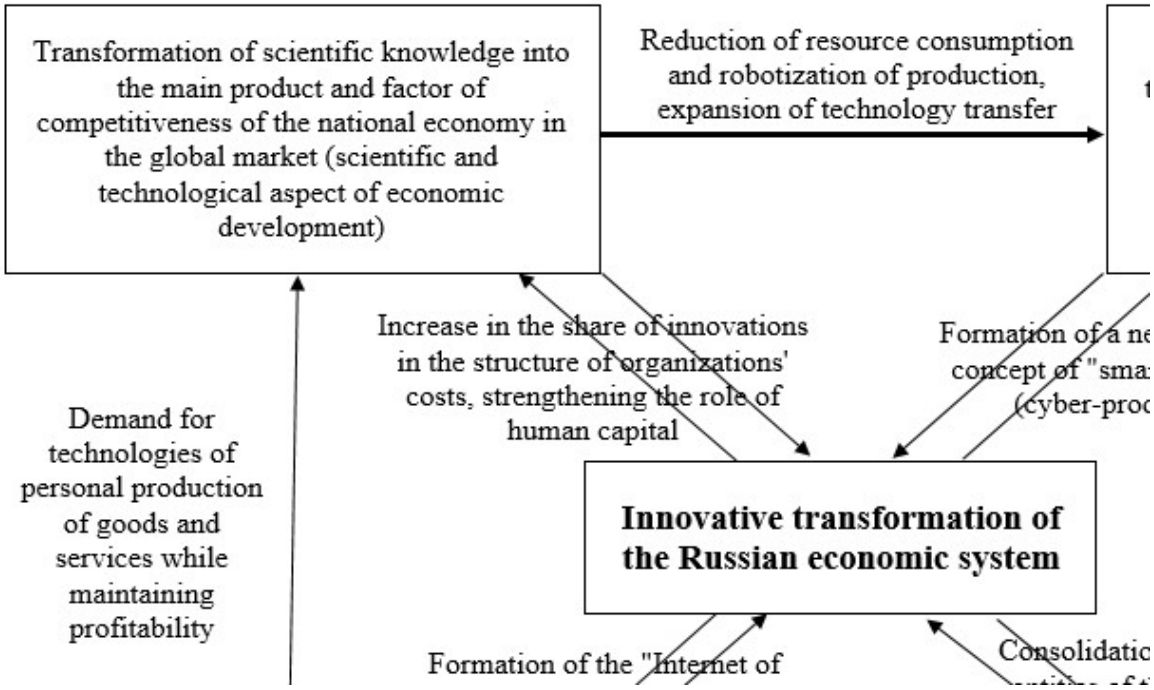

Figure 1 Structural and logical scheme of innovative transformation

During the study of transformation processes at the regional level developed a graphical interpretation of the transformation of the territory economic system under the influence of innovative development, presented in figure 2.

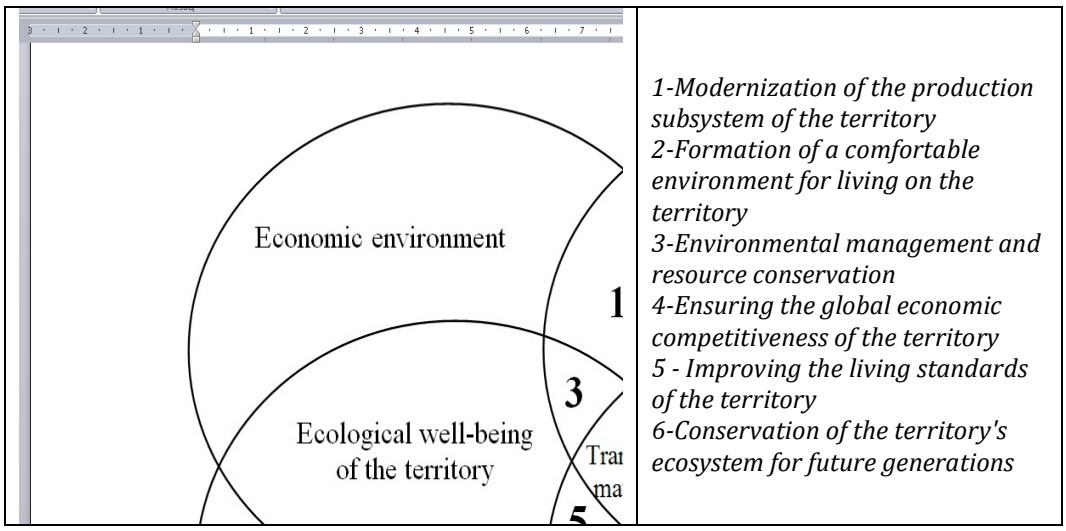

Figure 2. The transformation of the territory economic system under the influence of innovative development

Results. Within the framework of the author's approach to the development of the model of innovative transformation clusters are considered as a fundamental element of the Russian economy. The development of innovative clusters is proposed as one of the areas of transformation of the national economic system. The theoretical model of formation and integration of innovation clusters is presented in table 7.

Table 7. Model of formation and integration of innovative clusters

Innovative clusters that develop breakthrough technologies of the next technological order	Clusters of innovative technologies and means of production that initiate multiplicative effects	Clusters of high-tech products, massively replicating innovative technologies
Clusters of new composite and polymeric materials	Clusters of additive technologies and digital modeling tools	Clusters of heavy and medium engineering
Clusters of sensorics and mebiotics	Cluster of robotics	Clusters of precision engineering
Clusters of quantum communication and cryptography	Clusters of new communication technologies	Clusters of personal security systems
Clusters of new and portable energy sources	Clusters of distributed energy technologies	Clusters of energy-efficient lighting equipment
Clusters of genomics and synthetic biology	Clusters of biopharmaceutical technologies and biomedicine	Clusters of personal medicine
Clusters of nuclear physics research	Clusters of radiation technologies	Clusters of nuclear engineering
Nanotechnology clusters	Radioelectronic clusters	Clusters of microelectronics and instrument engineering
Photonics clusters	Clusters of laser and fiber optic technologies	Clusters of industrial and medical equipment
Clusters of neurotechnologies	Clusters of technologies of virtual and augmented realities	Clusters of artificial components of consciousness and psyche

Based on the results obtained, the organizational parameters of the empirical model of clustering the Russian economy are systematized, presented in table 8.

The analysis of branch specialization of regional economic systems and processes of clustering proved that success of cluster initiatives depends on the general development of economic system of the region and the developed spatial structure of localization of industrial production within the country. On the basis of the obtained results, the values of the production localization coefficient on the territory of the Russian regions where innovation clusters operate were generalized and systematized. Table 9 shows the economic activities that are key to the formation of cluster types.

Table 8. Organizational parameters of the empirical model of clustering the economy of Russian regions

Level of organizational development of clusters	Range of quantitative values for assessing the level of development				
	Number of organizations in the cluster (units)	The average number of cluster employees (pers.)	Herfindahl-Hirschman index HHI	Concentration ratio	
				CR_3	CR_4
Innovative clusters of microelectronics, instrumentation and information technology					
Low	10 - 25	<5 000	>1800	<0,90	<0,95
Middle	25 - 50	> 5 000	<1800	<0,60	<0,75
High	> 50	>10000	<1000	<0,50	<0,60
Innovative clusters of medical and pharmaceutical technologies					
Low	10 - 50	< 10 000	>1800	<0,95	<0,95
Middle	25 - 50	>10 000	<1800	<0,7	<0,75
High	> 50	> 10 000	<1000	<0,50	<0,60
Innovative territorial clusters of mechanical engineering					
Low	10 - 25	< 5 000	>1800	<1	<1
Middle	25 - 50	>5 000	<1800	<0,60	<0,70
High	> 50	>20 000	<1400	<0,50	<0,60
Innovative aircraft clusters					
Low	10 - 25	< 25 000	>2000	<0,95	<1
Middle	25 -50	> 25 000	<2000	<0,70	<0,80
High	> 50	>30 000	<1500	<0,55	<0,60
Innovative territorial clusters of the automotive industry					
Low	25 -50	< 10 000	>1000	<0,60	<0,75
Middle	50 -100	> 10 000	<1000	<0,50	<0,55
High	> 100	> 30 000	<800	<0,40	<0,50
Innovative forestry clusters					
Low	10 -25	< 25 000	>1800	<0,90	<0,95
Middle	25 - 50	> 25 000	<1800	<0,50	<0,65
High	> 50	> 50 000	<1000	<0,40	<0,50
Innovative biotechnological clusters					
Low	10 - 50	< 7 000	>1800	<0,95	<1
Middle	50 - 75	> 7 000	<1800	<0,60	<0,70
High	> 75	> 15 000	<1000	<0,40	<0,50

Table 9. The key for the formation of clusters of economic activity

Potential direction of clustering and innovative development of the economy	The threshold values of the coefficient of localization of production (KL)		
	Minimum allowed value	Allowed vCastillalue	Optimal value
Clusters of microelectronics, instrumentation and information technology			
1. Manufacture of electrical, electronic and optical equipment	0,05	0,5	1,5
2. Manufacturing plants in total	0,7	1	1,5
Innovative clusters of medical and pharmaceutical technologies			
1. Production of petroleum products, chemical production	0,05	0,7	1
2. Manufacturing plants in total	0,5	1	1,5
Innovative territorial clusters of mechanical engineering			
1. Manufacture of machinery, vehicles and equipment	0,2	0,6	1,35
2. Manufacturing plants in total	0,6	0,9	1,5
Innovative aircraft clusters			
1. Manufacture of machinery, vehicles and equipment	0,8	2	2,5
2. Manufacture of electrical, electronic and optical equipment	0,25	0,5	2
Innovative territorial clusters of the automotive industry			
1. Manufacture of machinery, vehicles and equipment	1	1,5	2
2. Metallurgical production and production of finished metal products	0,2	0,5	1
Innovative forestry clusters			
1. Wood processing and production of wood products	1	2	3
2. Pulp and paper industry, publishing and printing activities	0,15	0,5	2
Innovative biotechnological clusters			
1. Agriculture, hunting and forestry	0,8	1,2	2
2. Manufacture of food products	0,4	0,6	1

Discussion. The dynamics and causes of the "resoring" processes are considered in the works of H.L Sirkin, J.R.Rose, M.G. Zinser (2012), G. Pisano, S. Shih (2012) and H. Moser (2016). These trends are due, on the one hand, to the formation of new sources of economic growth, on the other hand, they represent the reaction of the national economy

to the growth rates of developing countries and the strengthening of their competitive positions in the global market. As an example of companies implementing the policy of "resoring", V.B. Kondratiev leads Apple, Ford Company, General Electric, National Cash Register (Kondratiev, 2015). It is necessary to clarify that the policy of "resoring" is mainly implemented by large companies (more than 150 employees), related to high-tech industries.

In the studies of E.D. Kormishkin also argues that in the current conditions for the development of the Russian economy, it is necessary to implement a strategy of neoindustrialization, consisting of a comprehensive innovative modernization of national industrial production (Kormishkin, 2016). At the same time, the implementation of this strategy is based on the following provisions: the growth of the intellectual component at all stages of the innovation process, ensuring a stable link between the generation and commercialization of innovative technologies, the development of a technology transfer institute, and the formation of territorial innovative clusters. The cluster structure of the economic space makes it possible to use the resources already available in the economic system by including high-tech enterprises in the existing technological chains, rather than forming anew a complete closed cycle of industrial production.

5. Conclusion. Thus, the presented structural and logical scheme for the innovative transformation makes it possible to identify and generalize the actual and prospective trends in the changing conditions for the management of innovation activity. Dedicated trends are realized in interrelation with each other, on the one hand, forming an innovative development of territories, on the other hand, using certain aspects of its theoretical and methodological potential.

The proposed structural-logical scheme represents a certain closed cycle, which corresponds to the requirements of the principle of sustainability of development. At the same time, each new stage of the transformation cycle implies its qualitative development and rethinking in comparison with the previous stage, which corresponds to the principle of innovation. Thus, the proposed structural and logical scheme based on the implementation of the laws of dialectics can be considered as an empirical model for removing epistemological contradictions between the requirements for sustainability and innovation in the economic development of the territory.

These conclusions determined the direction of the further scientific discussion, which consists in the development of the theory and methodology of research of processes of spatial localization and clustering of innovative production. The results obtained in the course of this study formed a further scientific task of systematization and improvement of the methodological toolkit for studying the formation of innovative clusters.

References

Boush, G.D., O.M. Kulikova and I.K. Shelkov (2016). Agent modelling of cluster formation processes in regional economic system. The region's economy, 12, 64-77.

Castillo Montesdeoca E. A. & Roget F.M.& Vázquez Rozas E.(2015). El Turismo En Ecuador. Nuevas Tendencias En El Turismo Sostenible Y Contribución Al Crecimiento Económico*, Revista Galega de Economía*, University of Santiago de Compostela., vol. 24(2), pages 69-84, on line at Ideas.Repec.

Dzhindzholia A., E. Popkova and L. Shakhovskaya (2015). Cluster as an Innovational and Organizational Form of State Regulation of Business. American Journal of Applied Sciences, 12, 814-819.

Europe 2020: European Strategy for Smart, Sustainable and Inclusive Growth. URL: http://ec.europa.eu/ europe2020/idex_en.htm (Date of access: 01.04.2018)

European Commission Knowledge Transfer Study 2010-2012, Final Report. // www.knowledge-transfer-study.eu (Date of access: 01.04.2018)

Feser E.J. (1998). Old and New Theories of Industry Clusters. Clusters and Regional Specialisation, ed. by M. Steiner. London, Pion Press, 78.

Gimadeeva, Je.N. (2015). The modern model of the formation of industrial cluster innovation. Economics and management: analysis of tendencies and prospects of development, 18, 150–154.

Guisan, M.C. (2017). "Manufacturing and Development in Countries and Areas of Europe and Eurasia", Regional and Sectoral Economic Studies, Vol. 17-1, on line at Ideas.Repec.

Ketels Ch., Lindqvist, G. and Sölvell, Ö. (2012). Strengthening Clusters and Competitiveness in Europe. The Role of Cluster Organizations. [Electronic source] URL: http://gosbook.ru/node/84334 (Date of access: 01.04.2018)

Kireeva, A.A. (2015). Methodological approaches to the identification of innovative clusters. Actual problems of humanitarian and natural Sciences, 3, 33–37.

Kochetkov D. M., Larionova V. A., Vukovic D. B. (2017). Entrepreneurial Capacity of Universities and Its Impact on Regional Economic Growth. Economy of Region, 13(2), 477-488 doi 10.17059/2017-2-13.

Kondratiev V.B. (2015) The return of production, or the new industrialization of the West. Portal «Prospects» http://www.perspektivy.info/productsrecovery_proizvodstva_ili_novaja_industrializacija _zapada_2016-12-20.htm (Date of access: 01.04.2018)

Kormishkin, E.D., Sausheva O.S., Gorin V.A., Zemskova E.S. (2016) Innovation and investment safety as the condition for neo-industrial development. European Research Studies Journal. Vol. 19. № 3. 94-109 pp.

Kucenko, E.S. (2009). Clusters in the economy: practice identifying. The generalization of foreign experience. Observer, 10 (237), 109–126.

Moser H. (2016) Reshoring: The Trend from Globalization to Localization. – URL: industrytoday.com/FlippingBook/19.4/#50 (Date of access: 01.04.2018)

Ortiz-Montes S & Núñez-Tabales Julia M., (2017) "Inclusión Financiera: Diagnóstico De La Situación En América Latina Y El Caribe," Revista Galega de Economía, University of Santiago de Compostela. Faculty of Economics and Business., vol. 26(1), p. 45-54.

Pisano G., Shih S. (2012) Producing Prosperity: Why America Needs a Manufacturing Renaissance. Harvard. 165 p.

Porter, M. (2003). The economic performance of regions. *Regional Studies*, 37 (6/7), 549–578.

Renaissance of Industry for a Sustainable Europe Strategy (RISE). URL: http://greenmediabox.eu/archive/2013/10/16/a-renaissance-of-industry-for-a-sustainable-europe-rise/ (Date of access: 01.04.2018)

Sirkin, H.L., Rose J.R., Zinser M. (2012) The US Manufacturing Renaissance: How Shifting Global Economics Are Creating an American Comeback. Philadelphia. – URL: kw.wharton.upenn.edu/made-in-america-again/ (Date of access: 01.04.2018)

Sölvell Ö, (2009). Clusters – Balancing Evolutionary and Constructive Forces. Stockholm, Ivory Tower Pub, 136.

Annex: Manufacturing and economic development of the Russian Federation, 2000-2010

Here we analyse a comparison of Russian Federation with other areas of the World, regarding the great importance of manufacturing, and investment per head for economic development.

Guisan(2017) analyzes the evolution of manufacturing and economic development in 42 countries of Europe and Eurasia, as well as investment and savings per capita and presents the estimation of an interesting econometric models showing the positive impact of manufacturing on non-manufacturing production for the period 2000-2010.

Table A1. Invesment, Savings, Manufacturing and real production per capita (Dollars per inhabitant at 2005 prices and purchasing power parities)

Area	Investment 2010	Savings 2010	Manufacturing 2000	Manufacturing 2010	GDP per head 2000	GDP per head 2010
1.Nordic and British E.	5458	5428	5109	3819	30081	33474
2.Central-West Europe	6229	8260	6387	6668	31306	34227
3.Latin Europe	5698	4792	4761	3562	27173	27659
4.Central-E+Baltic+E.Med	3213	2524	2150	2695	10812	15093
5..Russia, East and CIS	2435	2745	1052	1527	6038	10208
Russian Fed	3240	3921	1465	2127	8615	14183
Africa	620	578	278	282	2080	2638
Asia-Pacific	2115	2315	903	1443	4004	6333
America	3811	3094	3312	3052	19865	21908
Europe and Eurasia	4151	4195	3220	3191	17408	20828
World	2403	2422	1494	1728	7905	9852

Source: Elaborated by Guisan(2017) from World development Indicators of the World Bank.

We may notice that Russian Federation presented a value of real value-added of manufacturing per capita near the World average in year 2000, and an important increase for the period 2000-2010, reaching in year 2010 a value higher than World average and over the average of the area *of Russia, East Europe and Commonwealth of independent States*. It is important for economic development in Russia to follow this positive trend of increasing industrial development in order to foster also non-industrial production.