

Modern Specialization of Industry in Cities of the Russian Far East: Innovation Factor of Dynamics

Especialización moderna de la industria en las ciudades del Lejano Oriente ruso: factor de innovación dinámica

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ABSTRACT:

Industrial specialization of the Russian Far Eastern cities is one of the most urgent topics of the Russian researches in such areas as industry economy, efficiency of using industrial productive sources, regional economy, and innovation economy. The main science and practice challenge of the research is the problems that restrain the transition of industry in Russian Far Eastern cities to the innovation economy. The goal of the article is to update on the problems of the modern specialization of Far Eastern cities taking into account the innovation factor of the regional economy development. Methodologically the article is based on general provisions of the modern economic science, particularly, the theory of productive forces' development, concept of innovative development, theory of human capital applied by using the system analysis. The authors stipulate the specificity of forming and developing industry of Russian cities in the Far East, define the accelerated industrialization on the innovation platform as a basis of sustainable growth of Eastern territories, provide industrial specialization of strategically important cities of the Russian Far East, reveal problems of industrial development for the period of 1990-2000, consider peculiarities of innovation financing of the region and providing the regional economy with qualified labor force. Based on this, the authors define the potential of developing the industry and its specialization in strategically important cities of the Russian Far East for the period of up to 2025.

Key words. the Far Eastern region of Russia, the Far Eastern Federal District, industrial development, industrial specialization, industry of the Far East, strategically important

RESUMEN:

La especialización industrial de las ciudades rusas del Lejano Oriente es uno de los temas más urgentes de las investigaciones rusas en áreas como la economía industrial, la eficiencia en el uso de fuentes productivas industriales, la economía regional y la economía de la innovación. El principal desafío científico y práctico de la investigación son los problemas que restringen la transición de la industria en las ciudades rusas del Lejano Oriente hacia la economía de la innovación. El objetivo del artículo es actualizar los problemas de la especialización moderna de las ciudades del Lejano Oriente tomando en cuenta el factor de innovación del desarrollo de la economía regional. Metodológicamente el artículo se basa en las disposiciones generales de la ciencia económica moderna, en particular, la teoría del desarrollo de las fuerzas productivas, el concepto de desarrollo innovador, la teoría del capital humano aplicada mediante el uso del análisis del sistema. Los autores estipulan la especificidad de la formación y desarrollo de la industria de las ciudades rusas en el Lejano Oriente, definen la acelerada industrialización en la plataforma de innovación como base del crecimiento sostenible de los territorios orientales, proporcionan la especialización industrial de ciudades estratégicamente importantes del Lejano Oriente ruso, revelan Los problemas del desarrollo industrial para el período 1990-2000, consideran las peculiaridades del financiamiento de la innovación en la región y proporcionan a la economía regional mano de obra calificada. Con base en esto, los autores definen el potencial del desarrollo de la industria y su especialización en ciudades estratégicamente importantes del Lejano Oriente ruso para el período de hasta

1. Introduction

The research of problems on developing Russian territories, especially Eastern that are traditionally considered as sparsely populated and remote from the center, is one of the most urgent areas of the modern Russian science. It is extremely important practically both for Russia and its economic and political partners. Industrial specialization of the Far Eastern cities is an important economical problem, the solving of which is a guarantee of the further acquisition of the region, improvement of competitiveness of products made by the Far Eastern enterprises, efficient functioning of the Far Eastern industrial complex and the whole regional economy in general.

Historically industry has played an important role in the economy of the Russian Far East. It ensured active and balanced development of economy of the region's cities. Various industrial areas accumulated considerable production and scientific and technological potential. However, for the years of reforming the economy industrial specialization has considerably transformed, and now it complies with market criteria of the open economy rather than strategic priorities of the national development of Russia. The further development of industrial specialization of key cities considered in the context of innovation development supposes the analysis of a number of structural, investment, technological aspects of developments, as well as studying issues related to the reproduction of human capital and research potential. The goal of this research is to update on the problems of the modern specialization of industry of the Russian Far Eastern cities in terms of the innovation type of the regional economy development.

The essential basis of the research includes numerous scientific works of researchers on a number of research areas. Works of such Russian researchers as V. Boykova, I. Boyarchuk, S. Valdaytsev, M. Gelvanovsyug, S. Dolgov, P. Zavalov, A. Krutik, G. Kulikov, V. Kurskiy, L. Molchanov, O.A. Seleznev, E. Sogomonov, I. Solovyov, R. Tikhonov et al. are devoted to problems of tactics and strategy of managing industrial enterprises, sectors, analysis and competitive strategies on the domestic and international markets. On the regional and municipal level various aspects of the industry specialization and innovation developments are studied by P.Ya. Baklanov (2014), O.Yu. Vorozhbit (2012), E.L. Domnich (2016), V.N. Embulaeva and O. G. Degtyaryova (2013), V.K. Zausaev and N.A Kruchak (2015), A.P. Latkin (2012), P.A. Minakir, L.I. Vlasyuk and A.P. Goryunov (2012), A.V. Moshkov (2015), M.T. Romanov, A.I. Tonkih (2015) and others. Works of V.G. Gelbras, O.V. Zaborovskaya, T.Yu. Ksenofontova, S.N. Nayden and E.L. Motrich (2014), L.L. Rybakovskiy, S.V. Riazantsev and other researchers are devoted to regional aspects of developing labor resources and human capital.

In their conclusions and offers the majority of researchers follow the concept of the long-term progressive development of the region and its strategically important cities on the innovation basis. However, today's realities set new challenges to researchers and practitioners and objectively expand a range of scientific inquiry of practical problems.

2. Methods

The methodological basis of the article includes general provisions of the modern economic science, in particular theory of development and allocation of production forces, concept of innovation development, theory of human capital, theory of regional growth, general theory of adaptation applied through the system analysis. In terms of methods, the research is based on methods of economic and institutional analysis, comparative researches, expert reviews, structural and statistical analysis, social and economic forecasting, as well as on approaches applied in the global practice of taking management decisions.

The use of the system approach takes into account the specificity of the research object. The latter is interpreted as the specialization of the Russian Far Eastern industry. The authors are based on the classical conceptual framework that has been developed by the global science and allows to objectively and reasonably research the innovation factor of industry development in Russian cities in its dynamics.

3. Results

The development of economy of any territory comes with the production specialization both in terms of

sector and region. The Far Eastern Region of the Russian Federation was reclaimed and developed as a territory, the economy of which was formed according to a special way that differed from the traditional one when rural settlements were gradually concentrated and cities were created based on this. In the Far East there was the pioneer reclamation of territories by creating the basis of development in the form of urban and military (fortress) settlements and extending the economic impact on the territory on this basis. In a way, the innovation process on the Far Eastern territories was initially a basis for developing economy. Thus, for example, since the XVIIIth century the first city on the coast of the Sea of Okhotsk – Okhotsk – had been a starting point of maritime expeditions that researched the Northern part of the Pacific Ocean and discovered the Western coast of the Russian America. Here in 1732 upon an initiative of Vitus Bering a navigation school was established. It is also important that here double-deckers “Saint Peter” and “Saint Paul”, which were innovative at that time, were made. Later the city of Petropavlovsk-Kamchatskiy was named in their honor.

Since their foundation Russian cities in the Far East have had a certain economic specialization. The economic geography distinguishes regional functions of the cities that focus on providing and servicing surrounding, as a rule, rural areas and central functions that are related to functioning of a certain city. The scheme of populating the territory based on forming cities that combine servicing functions and functions of the center of economic development considerably differs from the traditional process of forming cities in Europe and the European part of Russia. The first attempt to theoretically consider this phenomenon was in the works of the German researchers Johann Heinrich von Thunen (1783-1850). In his work “The Isolated State in Relation to Agriculture and Political Economy” (1826) (Fujita 2011), he created a model of the interrelation of a city and surrounding agricultural areas. It can be considered as a simplified model of the local agro-industrial complex.

The formation and development of the Far Eastern cities during the XIXth-XXth centuries conformed to important political and economic tasks: production and processing of natural resources, allocation of important industrial objects, and providing military and external political interests of the country in the region. Cities were founded by the state’s will on the advanced technical basis and formed an innovation background of its development. Then the social and economic infrastructure of adjacent territories developed. That is why in the 1960, 1970 and 1980s the tempos of the population growth and volume of industrial production in the region were higher than analogous indicators of Western cities of the country. Populating and intensive reclamation of territories along with the active process of city formation were carried out during the greatest part of the XXth century under the toughest conditions of the severe climate, deficit of labor force and international political tension. The development of transport on large territories contributed to fulfilling regional functions by urban settlements, above all, the function of a center of the local industrial and agricultural production because of the surplus and seed fund of the surrounding areas was often stored in forming cities. Thus, key zones of social and economic development were created. They still go on playing an important role as a factor of the innovation development of Russia in the Far East.

Self-sufficiency and technological specialization of the Russian Far Eastern territories caused the fact that for the period from 1926 to 1989 (the period between the first and the last Soviet enumeration) the population of the Far Eastern region had increased 5 times while the Russian population had grown only 1.9 times. Actually for almost 70 years (the Soviet period from 1922 to 1990) the Far East had formed the human potential in 8 mln. people or 2.8% of the total Russia population. This potential was enough to produce almost 7% of the country gross product (Statistics of the Russian Population, n. d.).

Thus, the scales and efficiency of the economic reclamation of the Far Eastern territories allow speaking about the Eastern direction of developing production forces of Russia over the recent one and a half century. In this context, it is possible to mention that it was in the XIXth century when the Russian democrat A.I. Gertsen (1812-1870) formulated that the Pacific Ocean was the Mediterranean Sea of the future.

Today as a country with the longest borders Russia transfers the functions of the safety guarantor to its regions, the largest of whose is the Far East. Since the XIXth century up to now the factors that substantiate the need to provide a high level of innovation development have not changed: important geostrategic position of the region, large deposits of natural resources, and neighborhood with heavily populated Asian countries. Over the previous century the role of the Far Eastern region as a forward position of Russia had not only been lost but become even stronger as a result of integration of Russia in Asia with its powerful economic and political players – China, the Republic of Korea, Japan, and the USA. The researchers define the accelerated industrialization based on innovation and development of the human capital to improve the economy competitiveness as a basis for sustainable growth of both the

region itself and the whole country (Latkin 2012; Isaev 2016).

As a consequence of the accumulated technological potential and implementation of the programs on developing the Far Eastern Federal District (FEFD), by now the following specialization of large cities in the Far East has been formed (Table 1).

Table 1
The largest Cities of the FEFD

City	Size of the population, thous. persons	Basic areas of the city economy specialization
Vladivostok	623	Transport: sea, docks, air, railway, highway Industry: machine building, shipbuilding, ship repair, tool engineering, fishing industry, research center of the Academy of Sciences of the Russian Federation, higher education
Khabarovsk	586	Transport: air, railway, water, highway Industry: machine building, shipbuilding, ship tool industry, oil processing, power plant industry Research center and higher education
Yakutsk	295	Transport: air, highway Industry: diamond Higher education
Komsomolsk-on-Amur	260	Transport: air, railway, water, highway Industries of specialization: shipbuilding, aircraft engineering, oil processing. Higher education
Blagoveshchensk	221	Transport: air, railway, water, highway Industry: power sector, machine building, shipbuilding, gold mining, agricultural processing. Higher education.
Yuzhno-Sakhalinsk	193	Transport: air, railway, highway. Industry: fishing industry, agricultural processing. Higher education
Petropavlovsk-Kamchatsky	180	Transport: air, water, highway. Industry: ship repair, fish industry. Higher education.
Ussuriysk	188	Food industry, machine building, transport (railway, highway)
Nakhodka	160	Transport: railway, water, highway; ship repair industry.
Artem	112	Transport: railway, water, highway.
Magadan	102	Transport: air, water, highway. Industry: mine engineering, ship repair, fish industry

As seen in Table 1, the region's industry is represented by a wide range of mining and machine-building areas, which automatically creates the space for the innovation breakthrough. However, over the recent decades a sort of slowdown of the industry development in the Far Eastern Region has been observed. To a great degree, it is related to general problems of the development of Russia, the economy of which tends to decreasing tempos of growth and restraining the innovation process. It is expressed in slowing down the dynamics of the country's labor efficiency (Table 2).

Table 2
Dynamics of Labor Efficiency and Some Indicators of the Innovation Process in the Russian Federation (Statistics of Labor Efficiency, n. d.).

Years	2010	2011	2012	2013	2014	2015
Index of labor efficiency in total in the economy as to the previous year	103.2	103.8	103.5	101.8	100.7	97.8
Share of products of highly technological and research-driven areas in the gross domestic product, %	-	19.6	20.1	21.0	21.8	21.5
Internal expenditures for researches and developments, in percent from the gross domestic product as a whole in the Russian Federation	1.13	1.02	1.05	1.06	1.09	1.13
Ratio of organizations that carry out technological innovations, %	7.9	8.9	9.1	8.9	8.8	8.3

There is a similar situation in the FEFD. For example, in Primorsky Krai only 50 enterprises out of 70 thousand fulfill innovation processes. At the same time, they are fulfilled not in advanced productions, and not always cause an increase in the economy competitiveness (Table 3).

Table 3
Number of Organizations that Make Researches and Developments by Sectors of Activity (Primorski Krai. Social and Economic Indicators: Statistical Annual, 2016)

Years	2011	2012	2013	2014	2015
Number of organizations	52	49	48	47	51
including					
state	32	32	32	33	36
entrepreneurial	9	9	8	6	2
higher education	10	7	7	7	13
non-commercial	1	1	1	1	-

It is possible to note the historical regularity of the gradual decrease in the efficiency of acquiring the Far Eastern territories related to the replacement of priorities of the Russian government (Table 4) in favor of preferential development of Western territories.

Table 4
Fulfilling Investment Tasks of the Far East and Trans-Baikal Development Programs

Document, decision	Fulfilling tasks,

	%
Decision of the All-Russian Central Executive Committee and the Central Committee of the All-Union Communist Party of the Bolsheviks dated 1930	130
Decision of the Central Committee of the Communist Party of the Soviet Union and Council of Ministers of the USSR dated 1967	80
Decision of the Central Committee of the Communist Party of the Soviet Union and Council of Ministers of the USSR dated 1972	65
State target program for 1986-2000 (1987)	30
Presidential program for 1996-2005 (1996)	10

Note: The table was taken from the report of V.I. Ishaev, Governor of Khabarovsk Krai (1991-2009) "Strategy of Developing the Far East in the Changing World" at the international symposium on May 6, 2003 " Strategy of Developing the Far East in the Changing World".

A low level of acquiring investments in the 1980-2000s stipulated rather low competitiveness of the region's products. In its turn it caused the fact that foreign partners got interested only in the limited segment of the Far Eastern natural resources. In the 1990s in the context of deficit of active investment policy structural shifts in the regional economy became regressive. It was expressed in the quick degradation of its technological structure. At the same time the most serious regress covered principle areas of the specialization of the region's industrial production, namely ship building, ship repair, fish industry, military machine-building and instrument engineering.

Along with this, the Far East is the main part of the modern Russia where economy can be developed both extensively and intensively. The source of extensive development is large deposits of strategic types of natural resources found in the region. The source of intensive development is the innovation factor expressed above all in the volumes of financing innovations, size and level of qualified personnel preparation.

4. Discussion

Today the Far Eastern economy is mainly focused on mining and selling raw materials. In the region there are the largest deposits of hydrocarbons, coal, diamonds, large deposits of ferrous, non-ferrous and rare metals, and other mineral resources. The Far Eastern territories have a great power potential including deposits and resources of oil, gas, condensate, coal, natural uranium, as well as resources of the hydro-, tidal, wind and geothermal power. There is serious potential of developing some segments of machine-building, double-purposed productions (military and civil), processing strategically important types of raw materials for getting products of high degree of preparation. An important direction of developing cities is areas providing infrastructure to solve international economic and political problems: military and civil production, army and fleet servicing, construction of transportation and trading infrastructure of the global level, formation of the tourist infrastructure, tighter populating of border territories, etc. Technological equipment of goods production and services along with modern marketing strategies are considered today as a main factor of improving real competitiveness of industrial enterprises. It is an urgent task to create a reasonable and flexible system of regulating access of foreign producers to the Russian market in accordance with the existing practice of international economic relations. The combination of free trading and protectionism is an integral feature of external economic policy of developed countries that must be characteristic of Russia and its regional policy.

In the 2000s the President of the Russian Federation declared the focus of the national economy on innovation development, and in the situation, where there is a deficit of internal investments of the research and technical progress, the state has to finance essential researches and carry out applied developments, mainly, at the expense of budgetary funds. In order to create the innovation economy in Russia, and in the Far East in particular, first of all, large-scale investments, their diversification, and efficient acquisition are required.

According to the researches' data of the Presidium of the Russian Academy of Sciences, by the volume of budgetary assignments for civil researches and developments Russia is in the top five of the leading world states: the USA – \$62.7 bln., China – \$59.1 bln., Japan – \$33.1 bln., and Russia – \$18.5 bln. The share of

funds from the state budget in internal expenses for researches and developments in Russia makes up about 70% (\$27.5 bln.) and only 27% (\$11.5 bln.) was obtained from business. The share of foreign financing of the Russian science is not large and is about 3% (Investments in Science, 2016).

Today issues on attracting investments in science are considered on all state levels in the Russian Federation, which, above all, is substantiated by priorities of the state development of Russia. In the context of considerable budgetary financing of science of regions, today's strategic task is to solve the problem on attracting investments of business in science.

The main indicator that characterizes scientific activity and defines a level of allocated financial resources is the volume of internal expenses for researches and developments. This indicator characterizes expenses for researches and developments made by scientific organizations, including current and capital expenses from all resources. In total, in Russia the volume of internal expenses for researches and developments in percent from GDP was 1.13% (this was position 25 in the global rating) and 0.8% for civil science. These indicators for essential researches made up 0.17% and position 16 in the world (Investments in Science, 2016).

In spite of difficult conditions of financing, the Far Eastern region managed to achieve positive tendencies in attracting its own capital in science: for the period of 2005-2014 the volume of internal investments for scientific researches and developments increased by RUB 8.3 bln., or 2.8 times, and reached almost RUB 12 bln. (Statistics of Labor Efficiency, n. d.). About 60% of these funds were spent for paying for the labor of employees involved in innovation process, and the rest 40% were allocated for purchasing equipment, materials, etc. It is possible to say that in the mid-2010s the historical maximum of financing the science of the region at the expense of its own funds was reached. On the way to innovation development, instability of dynamics of internal investments depending on a number of economic and political factors, as well as the mechanism of state and private partnership in financing innovations is still a certain problem. However, positive changes are rather obvious.

The main factor of innovation development is to maintain and reproduce human capital expressed in the actual availability of highly qualified labor force. Over the years of Soviet construction the Far Eastern region had accumulated considerable labor potential that to a certain degree was lost during the 1990-2000s. During the 1992-2016 the size of the region's population decreased by 1.8 mln. persons or by 22.7%, its age structure changed in favor of old people: while in 1991 the share of youth had been 27.6%, in 2000 it was 21.4%, and in 2015 - 18.6%.

The main demographic problem of the region during the above period was the development of internal migration flows from the east to the west. The Far Eastern cities of Russia became donators for Western Russian megalopolises. The latest urban researches show that independent population successively migrates to cities with the size of population of more than 500 thous. Persons, where a relatively high quality of the urban environment is formed (Tokareva 2007). It is necessary to take into account higher mobility of the modern population: it is less tied to the territory, parents' house, its small Motherland, and is more focused on jobs with good prospects, life quality, opportunities to spend leisure in an interesting manner, and travel. In particular, the population of the city of Vladivostok – the southernmost administrative center of the FEFD – increases mainly at the expense of the migration component, namely at the expense of population moving from the northern cities of Primorsky Krai and the whole Far East. In its turn, Vladivostok gives its population in favor of large Western cities of Russia and thus forms the "east-west" migration direction (instead of the "west-east" movement during the Soviet time). According to the Ministry of Economic Development of Russia, if the current tendencies do not change, during the 2010-2020 the outflow of population from the Far Eastern periphery to large Western cities of the country can make up to 2 mln. persons.

As a whole, over the recent quarter-century the demographic potential of the Far East has returned by more than it was 40 years ago to the level of the first half of the 1970s. Such decrease in the population is equal to the loss of three such cities as the modern Vladivostok. A number of employable, professionally qualified citizens have suffered most of all because these are they who leave the region and take away their children who are the labor reserve of the region (Osipov and Krasova 2015).

Thus, the 1990-2000s epoch showed how weak and instable the human potential could be under unfavorable market conditions. Nevertheless, in spite of the negative tendencies with the population, it is necessary to note the decrease in the tempos of the population fall in the 2010s, gradual breakaway from the demographic depression and return to the migration policy of populating and reclaiming the region based on the research and technical progress and using advantages of the qualified labor force. Due to both the state support of the region, especially during the APEC summit in 2012, and the activation of the internal competitive environment in the FEFD, indicators of the natural growth of the population, share of

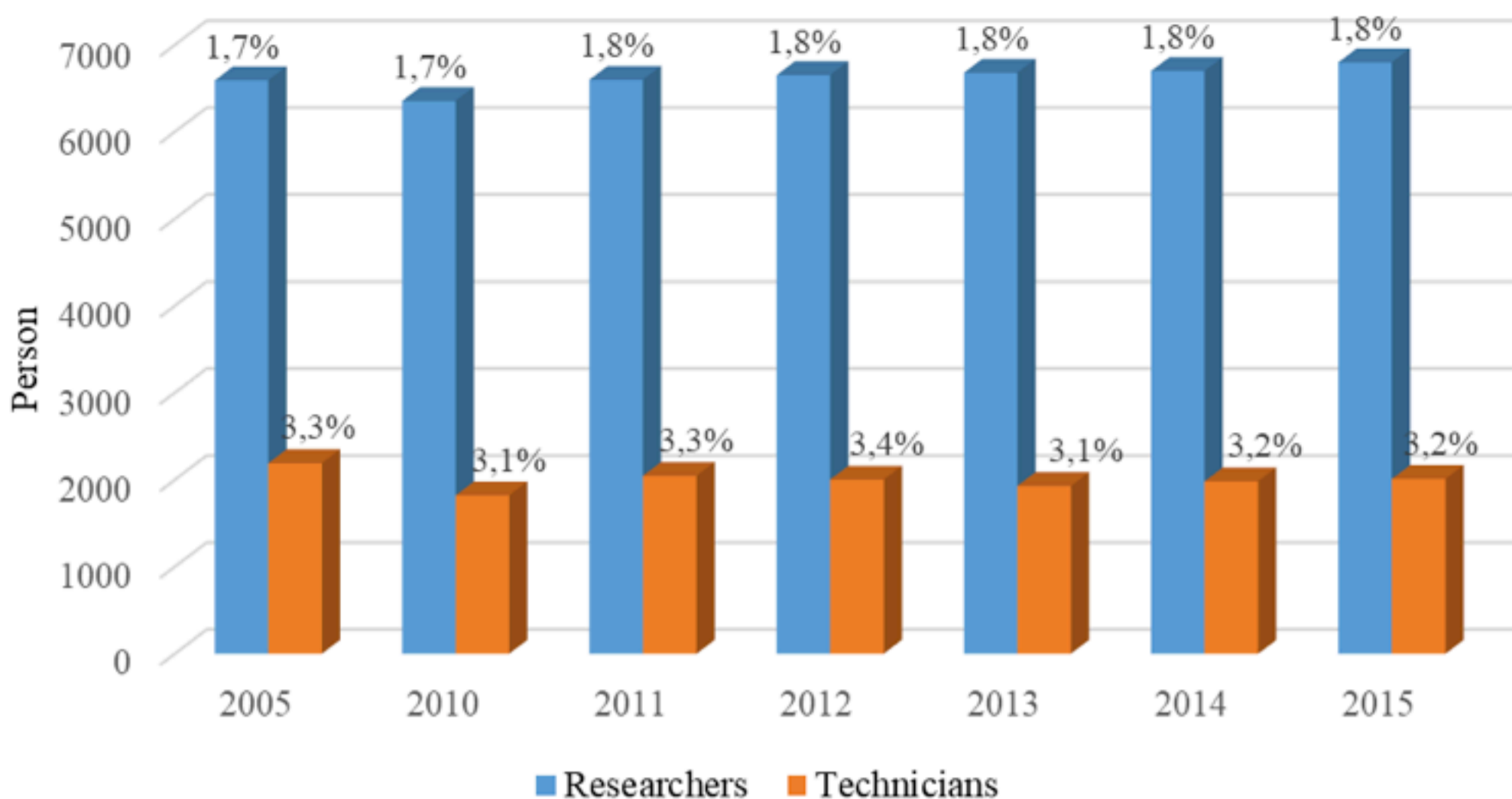
population with substandard income and some others have positive dynamics. In particular, the economy of Primorsky Krai is also characterized by a reversal of negative tendencies (Table 5).

Table 5
Basic Indicators of Social Development of Primorsky Krai
(Primorski Krai. Social and Economic Indicators: Statistical Annual, 2016)

Years	2011	2012	2013	2014	2015
Size of permanent population (as on the end of the year), thous. persons	1,950.5	1,947.3	1,938.5	1,933.3	1,929.0
Natural growth, decrease (-) of the population, thous. persons	-4.1	-2.1	-1.6	-1.3	-1.5
Average annual number of those who are involved in economy (recorded labor resources), thous. persons	983.5	982.6	978.5	973.9	970.5
Average monthly nominal gross payroll of those who work in organizations, RUB	24,423	27,445	29,966	32,431	33,807
Real wages, in % as to the previous period	104.2	106.4	102.8	100.8	90.2
Size of the population with the monetary income of not less than the living wage, in % from the total size of the population	15.7	14.2	15.9	14.7	14.82

Today the FEFD continues remaining a center of training specialists in many areas and specializations, as well as one of the largest research centers in Russia. Support of the state in the 2000-2010s allows maintaining a sufficient level of intensity and efficiency of the research process although the potential of the Far Eastern science is far from exhausted. In particular, for more than a decade period of 2005-2015, an average number of people involved in researches had not decreased but increased by 206 persons or by 3%. Besides, the ratio of the Far Eastern people in the all-Russian number of researchers was maintained. It was on the level of 1.8% (Regions of Russia. Social and Economic Indicators – 2016, n. d.). In the context of decreasing the size of employable population, it could be estimated as a positive feature.

Figure 1
Dynamics of the Number of Researchers Both In Total and in the Technical Sciences
of the FEFD (Regions of Russia. Social and Economic Indicators – 2016, n. d.)



Note: the share of the FEFD in the all-Russian number of researchers is specified in percent

A great number of technicians as compared to the all-Russian level come into the spotlight. While on average in Russia their ratio in the total number of researchers is 16.6%, in the Far East this number is 29.6%, i.e. almost one third.

About 57% of the Far Eastern researchers have a scientific degree, which is considerably higher than as a whole in Russia where this indicator is only 29%. At the same time Doctors make up only 30% in the total number of researchers with a degree assuming that in Russia this indicator is 25%. In total, there are 1.1 thous. Doctors of Sciences who work in the FEFD, or this is 4.1% of all Doctors of Science in Russia. There are 2.7 thous. Candidates of Sciences in the FEFD, or 3.2% of all Candidates of Sciences in Russia (Regions of Russia. Social and Economic Indicators – 2016, n. d.). If to compare the number of scientists with the total size of population, it is possible to say that in the Russian Far East there is one scientist with a degree per each 1,500 persons.

The decrease in the number of young scientists who take post-graduate courses is a troubling sign for the Far Eastern science. For the long-term period of 2005-2015 the number of post-graduates in research and educational establishments of the FEFD had decreased by 1.4 thous. persons or by 31.5%. On the background of the all-Russian decrease in the number of post-graduates (23%) this indicator looks depressing. The decrease in the number of postdoctoral researchers looks even more serious. However, to a greater degree the decrease in their number is related to reforming the institute of higher doctorate itself.

Based on the Forecast of the Long-term Social and Economic development of the Russian Federation for the Period of up to 2030 developed by the Ministry of Economic Development of the Russian Federation (Forecast of the Long-Term Social and Economic Development of the Russian Federation for the Period of Up To 2030, n. d.), Strategy of the Social and Economic Development of the Far East and Baikal region for the Period of up to 2025 (Strategy of Social and Economic Development of the Far East and the Baikal Region for the Period Up To 2025, n. d.), as well as based on the analysis of the current social and economic and agglomeration development, the authors calculated the potential of developing industry of Far Eastern cities up to 2030. The made calculations comply with the optimistic scenario of the region's development (Table 6).

Table 6
Potential of Developing Industry of Strategically Important Cities of the FEFD Up To 2025

City	Potential of	Potential of	Top priority areas of the city

	increasing the size of the population, thous. pers.	the volume of industrial production, bln. RUB*	economy/industry specialization
Vladivostok	930	350	Transport of all types, tourism, ship building, ship repair, tool engineering, petrochemistry, building materials, wood processing, fish and other food industry, innovations and education
Khabarovsk	880	420	Transport: highway, railway, air, machine building, ship building, ship tool industry, oil processing, wood processing, power plant industry, innovations and education
Yakutsk	330	200	Transport: air, highway, diamond and jewelry industry
Komsomolsk-on-Amur	350	250	Transport of all types, Ship building, aircraft industry, oil processing, technical innovations and education
Blagoveshchensk	400	120	Transport of all types, health resorts, power plant industry, machine building, ship building, gold mining, developed agro-industrial complex
Yuzno-Sakhalinsk	250	340	Transport: air, railway, highway, fishing industry including fish breeding, fish processing, building materials
Petropavlovsk-Kamchatski	230	140	Transport: air, water, highway, ship repair, fish industry, including fish breeding, fish processing, mountaineering, extreme, ethnic tourism
Ussuriysk	300	100	Food industry, building materials, machine building, consumer goods manufacturing
Nakhodka	200	100	Fish processing, consumer-oriented production, eco-tourism, ship repair
Magadan	120	40	Mining, mining engineering, ship repair, fishing industry

Note: * in 2015 prices.

Thus, by 2025 there is a potential of twofold and threefold increase in production in the area of mining, resources' processing, construction, and transport. Education will remain the most important area of specialization. At the same time, first of all those directions will develop that provide top priority areas of specialization.

5. Conclusion

The research of problems of resourceful and innovation potential of the Far Eastern region's economy made it possible to make the following conclusions:

1. Cities of the Far Eastern region of Russia were established and extended simultaneously with the active acquisition of the eastern territories of the country. The development of industry in cities was also based on using the results of the scientific and technological progress and creating the advanced productions, including strategically important resource producing, processing and military.
2. The Russian state focuses on intensive development of its eastern territories. Functions of the largest Far Eastern cities as political and economic centers, as well as territories with a high level of industry developments, highly qualified personnel and high quality of life, entirely maintain their urgency.
3. The Far Eastern cities have an accurate specialization of the industrial production that develops on the specificity of the resourceful base, size of the population and role in the political life of the country.
4. Historically social and economic development of the Far Eastern cities has irregular dynamics. In 1990-2000s the active growth of cities was replaced by the fall and decrease in the product competitiveness. Now there is a course on innovation development of territories that will allow overcoming technological arrears of the region's enterprises, and set positive tendencies of the industrial production.
5. Labor potential, qualified labor forces are the most important factors of the innovation development of territories. In 1990-2000s during the transfer to the market economy, negative tendencies of forming labor resources and outflow of qualified personnel were allowed. The further development of the human capital of the region depends on the tendencies of the general economic development and implementation of its innovation component.
6. The implementation of the innovation model of the region's economy development allows to improve the potential of industrial production in cities several times and considerably improve the region's positions in terms of its product competitiveness.

In the medium- and long-term perspective the strategically important cities of the Russian Far East must turn into important centers of the economic, political and cultural development in the Asia-Pacific region. The place of Russia in the global economy will depend on the direction of economic, innovation, political and social processes in the Far East.

References

Baklanov P.Ya. (2014). Territorii operezhayuschego razvitiya: ponyatie, struktura, podhody k vydeleniyu [Territories of Rapid Development: Notion, Structure, Approaches to Defining]. *Regional Researches*, 3, 12-19.

Domnich E.L. (2016). Struktura dalnevostochnogo mashinostroeniya: problemy izmereniya i opyt otsenki [Structure of the Far Eastern Machine Building: Problems on Measuring and Practice of Estimating]. *Regional Economy: Theory and Practice*, 8 (431), 4-18.

Embulaev V.N. and Degtyaryova O.G. (2013). Metod nauchnogo podhoda v issledovanii transportnoy sistemy krupnogo goroda [Method of Research Approach When Researching the City Transport System]. *Territory of New Opportunities. Bulletin of the Vladivostok State University of Economics and Service*, 5 (23), 169-178.

Fujita M. (2011). Thünen and the New Economic Geography. RIETI Discussion Paper Series 11-E-074

Investitsii v nauku: na puti k ekonomike znaniy: predlozheniya Rossiyskoy akademii nauk po povysheniyu effektivnosti vlozheniya finansovykh sredstv v razvitie fundamentalnykh nauchnykh issledovaniy i poiskovykh nauchnykh issledovaniy [Investments in Science: on the Way to the Economy of Knowledge: Offers of the Russian Academy of Sciences on Improving Efficiency of Investing in Development of Fundamental and Scientific Researches]. Official Website of the Presidium of the Russian Academy of Sciences. (2016). Moscow. Date View September 17, 2017 <http://ras.crowdexpert.ru/news/news-8573>.

Isaev A.G. (2016). Razvitie vysokotekhnologichnykh proizvodstv v Habarovskom krae [Development of Highly Technological Productions in Khabarovsk Krai]. In the collection: *Regional Strategic Planning: Experience of Khabarovsk Krai. Materials of the Research and Practice Conference*: Edt. A.N. Demyanenko; Institute for Economic Researches of the Far Eastern Department of the Russian Academy of Sciences, pp. 108-116.

Latkin A.P. (2012). Rossiyskiy Dalniy Vostok: retrospektiva i perspektiva sotsialno-ekonomicheskogo razvitiya [Russian Far East: Retrospective and Perspective of Social and Economic Development]. *Territory of New Opportunities. Bulletin of the Vladivostok State University of Economics and Service*, 3, 120-128.

Minakir P.A., Vlasyuk L.I. and Goryunov A.P. (2012). Sintez tekhnologicheskogo i ekonomicheskogo podhodov v dolgosrochnom regionalnom prognozirovanii [Synthesis of Technological and Economic Approaches in the Long-Term Regional Forecasting]. *European Journal of Economic Studies*, 2(2), 117-130.

Moshkov A.V. (2015). Strukturnye sdvigi v promyshlennom proizvodstve tihookeanskih regionov Rossii

[Structural Shifts in the Industrial Production of the Pacific Regions of Russia]. Bulletin of the Trans-Baikal State University: Biological Sciences, 1 (60), 98-106.

Nayden S.N. and Motrich E.L. (2014) Formirovanie postoyannogo naseleniya v opornyh gorodah Primorskogo kraya i yuzhnoy zony Dalnego Vostoka [Forming Permanent Population in Basic Cities of Primorsky Krai and Southern Zone of the Far East]. Government and Management in the Russian East, 4 (69), 8-16.

Osipov V.A. and Krasova E.V. (2015). Features of Forming of a Manpower in Strategically Important cities of the Far East of Russia (on the Example of Vladivostok). Mediterranean Journal of Social Sciences, 6(5),108-117.

Primorsky kray. Sotsialno-ekonomicheskie pokazateli: Statisticheskiy ezhegodnik [Primorski Krai. Social and Economic Indicators: Statistical Annual]. (2016). Vladivostok: Primorskstat, pp. 321.

Prognoz dolgosrochnogo sotsialno-ekonomicheskogo razvitiya Rossiyskoy Federatsii na period do 2030 goda (razrabotan Minekonomrazvitiya Rossii) [Forecast of the Long-Term Social and Economic Development of the Russian Federation for the Period of Up To 2030]. Official Website of the Consultant Plus Company. (n. d.). Date View September 17, 2017
http://www.consultant.ru/document/cons_doc_LAW_144190/4c3674f211a65e5503e9bf95e11221a4bd7fda7e.

Regiony Rossii. Sotsialno-ekonomicheskie pokazateli – 2016. Nauka i innovatsii [Regions of Russia. Social and Economic Indicators – 2016. Science and Innovations]. Official Website of the Federal State Statistics Service of the Russian Federation. (n. d.). Date View September 17, 2017
http://www.gks.ru/bgd/regl/b16_14p/Main.htm.

Statistika naseleniya Rossii [Statistics of the Russian Population]. Official Website of the Federal State Statistics Service of the Russian Federation. (n. d.). Date View September 17, 2017
http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/population.

Statistika proizvoditelnosti truda [Statistics of Labor Efficiency] [Electronic resource]. Official Website of the Federal State Statistics Service of the Russian Federation. (n. d.). Date View September 17, 2017
http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/efficiency.

Strategiya sotsialno-ekonomicheskogo razvitiya Dalnego Vostoka i Baykalskogo regiona na period do 2025 goda (utverzhdena Rasporyazheniem Pravitelstva Rossiyskoy Federatsii ot 28 dekabrya 2009 g. N. 2094-r) [Strategy of Social and Economic Development of the Far East and the Baikal Region for the Period Up To 2025 (Approved by Order of the Government of the Russian Federation dated December 28, 2009 No. 2094-r)]. (n. d.). Date View September 17, 2017 http://www.city-strategy.ru/UserFiles/Files/Strategy DVFO_2025.pdf.

Tokareva V.V. (2007). Razvitie chelovecheskogo kapitala na subregionalnom urovne (v malyh gorodah Rossii) [Development of Human Capital on the Subregional Level (in Russian Towns)]: monograph. Ministry of Agriculture of the Russian Federation, Michurinsk State Agrarian University Federal State Educational Institution of Higher Professional Education, Michurinsk-naukograd RF.

Tonkih A.I. (2015). Povyshenie effektivnosti investitsionnogo obespecheniya ugolnoy promyshlennosti Dalnevostochnogo ekonomicheskogo regiona [Improving the Efficiency of Investing Mining Industry of the Far Eastern Economic Region]. Mining Information and Analytical Bulletin (Research and Technical Journal), 8, 11-53.

Vorozhbit O.Yu. (2012). Razvitie rybohozyaystvennoy deyatel'nosti na Dalnem Vostoke Rossii [Development of Fishing Activity in the Russian Far East]. Territory of New Opportunities. Bulletin of the Vladivostok State University of Economics and Service, 3, 129-139.

Zausaev V.K. and Kruchak N.A. (2015). Territorii operezhayushego razvitiya i demograficheskie protsessy [Territories of Rapid Development and Demographic Processes]. Asian and Pacific Region: Economy, Policy and Law, 1 (34), 23-32.

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