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CONCEPTUAL APPROACH TO FORMATION OF THE BASIC CODE FOR NEO-INDUSTRIAL DEVELOPMENT OF THE REGION

The article provides proposals for the conceptual foundations of the code-based approach to the neo-industrial development of the region. The goal of the study is to reveal the essence of the transition to a new type of industrial and economic relations by using the concept of genetic codes of the region which are understood as the system of the hereditary memory of the territory that determines the specifics and characteristics of implementing the neo-industrialization. The authors substantiated the hypothesis on the impact made by genetic codes of the region on the effectiveness of neo-industrialization. They identified the carriers of the codes participating in the transformation of regional heritage in order to stimulate the neo-industrial development of regional economy. The subject matter of the study are the distinctive functioning characteristics that define the codes of the region, the content of which determines the socio-economic specifics of the region and characteristics of innovative, information, value-based and competence-oriented development of the territory. The defining codes generate dynamic codes of the region, which we will view as their derivatives that have a high probability of occurrence, the rate of development and dissemination, as well as the internal forces ensuring the self-development of the region. The scientific contribution is presented by the substantiation of the basic code of neo-industrial development of the region, which represents the evolutionary accumulation of rapid changes in its innovative, information, and value-based and competence-oriented codes that stimulate the generation and practical implementation of new ideas into the activities of economic entities adapted to the cultural and historically established conditions of life. The article presents and describes with the formulas the code-based model of the neo-industrial development of the region. The paper uses methods of system analysis, historical and civilizational approaches, evolutionary-institutional theory, and economic and mathematical methods. It also presents the results of studies conducted in 2011–2016, which reflect the empirical assessment of the importance of information, institutional, innovative, value-based, and competence-oriented codes obtained following the surveys of population, business community, authorities, students, and teaching staff of leading universities in the Ural Federal District. The conclusion provides the recommendations aimed at accelerating the transition to a new type of industrial development of the region. The results of the study can be used in the development of neo-industrialization programs and projects at the federal and regional levels.

Keywords: region, neo-industrial development, hereditary memory of territory, genetic codes, self-development processes, value-based approach, neo-industrial society, value transformation, modernization, regional specialization

Introduction

Currently, there are different approaches to addressing the problems of ensuring the neo-industrial development of Russian regions. Traditionally, the most important role is associated with the historical specialization of the region (old industrial, industrial, agricultural), which is reflected primarily in the structure of GRP and industrial production. However, in reality, the region is affected by a longer and more complex influence, which includes socio-demographic processes, ethical norms, and cultural traditions of the population. The authors propose to consider the transition to a new type of industrial and economic relations by using the concept of genetic codes of the region, which are understood as a system of hereditary memory of the territory that determines the specifics and characteristics of implementing the neo-industrialization, as well as to define the role of various actors who are carriers of these codes in the transformation of the regional heritage in order to stimulate the neo-industrial development of the regional economy.

Existing Theoretical Approaches

The concept of "region" is defined primarily through the elements of the socio-economic system. For example, S. Glazyev views the region as a complex that includes land, air, flora, fauna, and human population, which can be considered in their relationship with each other and together

form a definite and specific part of the Earth's surface [1]. N. Nekrasov adds that the region should be understood as a large territory of the country with more or less homogeneous natural environment, and primarily, a specific direction in the development of productive forces based on a combination of a set of natural resources and corresponding established prospective social infrastructure. V. Smirnov considers that the region is a multi-level structure of interacting elements united into multi-level subsystems to achieve a single goal of improving the effectiveness of socio-economic development [2, P. 66]. A. Granberg defines the region as part of the country's territory that has similar natural, socio-economic, and socio-political environment, as well as a certain degree of integrity, internal unity, sense of community that distinguish it from other parts of the country [3, P. 16]. The authors fully agree with these definitions and believe that the main and defining characteristic of the region is the capability to effectively use and autonomously modify the development resources, continuously improve socio-economic development indicators, while minimizing the consumption of non-renewable resources. However, the authors propose to somewhat expand this concept of the essence of the region by using the code-based approach should be somewhat expanded, which will allow us to substantially expand the framework for searching the ways to address the problems of neo-industrialization.

To identify the basic codes of neo-industrial development of the region, the authors reviewed the definitions of neo-industrialization proposed by such authors as G. Vechkanov [4], V. Ryazanov [5], V. Cherkovets [6], S. Lyubimtsev [7], B. Davydov, P. Evstratov [8], A. Neshitoy [9], A. Kolosovsky [10], O. Romanova and N. Bukhvalov [11], and came to the conclusion that its basis is determined, first of all, by innovative technology and renewed industries, new forms of collaboration and the level of professional training of the population.

The history of industrial development in Russia shows that the specifics of innovation processes are related to the fact that there are a split and polarization of society, and the diversity of values turns not only into a conflict of values, but also into a conflict clash of civilizational types. The civilizational dualism of Russian society (a split over civilizational preferences between innovation-oriented and conservative strata of society) still generates contradictions that hinder the progress of modernization processes and neo-industrial development in general. For example, V. Kemerov, the author of the theory of personal crystallization of sociality, insists that the interrelated individual existence of people creates a fundamental layer of social existence, and the forms of individual existence of people form the nuclear forces for the development of productive sphere of society's life activities and, hence, for the transition to a new evolutionary stage of industrialization.

In the civilizational aspect of the neo-industrial development of society, the need for cultural reflection of values is caused by the fact that its dominant idea is the human being as the cultural value (M. Kagai, D. Likhachev, A. Markov, V. Stepin, et al.). Among the Russian scientists, we can mention the works of T. Zaslavskaya, who studied the socio-cultural aspect in the transformation of Russian society. The change of the value paradigm of contemporary Russian society in the context of socio-cultural transformations caused by modernization was researched by S. Ivanova. Socio-cultural prerequisites for modernization in Russia were studied by E. Orlova. The driving forces for the innovative development of society are analyzed in the works of T. Yakovets. There is a wide range of works in the area of value-based aspects of Russia's national economic security (S. Sulakshin). This sphere included the studies at the intersection of the value-based reference points for the socio-economic and innovative development of Russia represented by the works on the issues of Russia's national idea. It is assumed that the civilizational code of a state consists of two blocks (cultural and social) that include traditions, values, national idea, labor sphere, and state policy.

In foreign works, the formation of a system of values amid the industrial development of society was studied by F. Kluckhohn and F. Strodtbeck. Their studies in the area of cultural variables were developed by H. Lane and J. Distefano. A classification of values and activities was proposed by G. Allport, P. Vernon, and G. Lindsey who identified the most important human types for innovation development (economic, aesthetic, social). The differences in the national business cultures of economically developed, developing, and underdeveloped states were studied by G. Hofstede for their ability to generate new knowledge and launch innovative processes.

The connection between genes and culture of a particular territory was studied by C. Lumsden and E. Wilson, who were the founders of sociogenetics [12]. Italian researchers G. Brunello and M. Langella have discovered that specific social interaction that is typical for industrial regions determines their reaction to economic shocks [13]. Today, the studies of how innovation and entrepreneurship

influence the development of firms, industries and regions, and how these business entities, for their part, contribute to modernization are of particular relevance. At the same time, M. Backman and H. Lööf consider such factors as spatial concentration, sectoral structure, labor market characteristics, enterprise characteristics, research activities and research cooperation [14].

G. Cainelli and R. Ganau study the so-called "related diversification" in the industrial development, when the industrial sectors in the region develop in a coordinated way. This environment the resilience of local systems to external shocks [15]. For J. Begley, C. Collis, and T. Donnelly, the determining factors in the development of industrial sectors, especially engineering, include the availability of a skilled workforce with a high level of education [16]. The study of I. Dhillon, J. Campbell, and R. McKinnon recognizes the health of workforce as an important value [17].

The works of foreign authors also acknowledge the importance of values of the population for ensuring the industrial evolution in the development of the territory. For example, R. Inglehart believes that the transition from traditional values (emphasis on importance of religion, respect of and obedience to authorities, negative attitude to divorce and abortion, and high level of national pride) to secular-rational values (that are contrary to traditional ones) is inherent to the first phase of industrialization [18]. The post-industrialization phase can be described by a departure from survival values (emphasis on economic and physical security and conformism) to self-expression values (emphasis on freedom of expression, political activism, political activism, environmental protection, gender equality, tolerance towards ethnic and sexual minorities). In other words, the effective neo-industrialization requires the transformation or evolution of values from traditional to secular-rational and to self-expression values. In an environment based on other values, the processes of neo-industrialization would not acquire the necessary scale and, in the best case, would remain of local nature.

All of the above studies show that each territory has its own industrial, innovative, value-based, social, and institutional specifics, through the prism of which it perceives the modernizing transformations of revolutionary nature and participates in them by preserving and accumulating the results in the form of a regional record, or industrialization code, and selecting new ways of its implementation.

Conceptual Foundations of Code-Based Approach to Neo-Industrial Development of the Region

The authors believe that the above definitions allow us to view the region not only as a socio-economic system, but also as a socio-economic organism, where occur the so-called "metabolism" caused by the openness of its borders, including through its interactions with the external world; the processes of self-sustenance of its existence through the formation and genesis of socio-economic sources of development and the processes of self-development based on economic reproduction and accumulation of the territory's capital, and preservation of hereditary characteristics of life and economic activities.

The following methodological provisions can be highlighted in the concept of code-based approach to the development of the region:

Provision 1. The region is a socio-economic organism with the following basic components:

— Industrial enterprises exercising the production mission. The Soviet economy had a successful integration of production and science (high-tech production), production and education (factory-based training) [19];

— Society as an aggregate of citizens, which is an active participant in the transition to a new type of industrialization of the regional economy;

— Authorities supporting the implementation of innovative projects and financing the launch of high-tech and science-intensive industries;

Therefore, the basic condition for the viability of the region is the continuous and effective functioning of its basic systems, as well as the development of close interrelations between them.

Provision 2. As any living organism, the region has its own defining codes formed by its basic structures. By defining codes we mean stable codes of the region; they can be characterized by a long period of transformations with a high degree of uncertainty. The authorities are the carriers of institutional codes of the region; the enterprises act as carriers of production codes of the region; and society is the carrier of social codes of the region.

The institutional codes of the region are the legal norms that are typical for the regional economy of a particular territory and form the favorable environment in order to function amid changes and to adapt to new economic and political trends in the development of the state.

The production codes of the region are production technologies and capacities that are typical for the economy of a particular territory and determine the production platform and technological features of its real sector.

The social codes of the region are characteristics of the population that are typical for the regional economy of a particular territory and include the demographic phenomena and processes, as well as the ethical and cultural traditions of the population, Its economic and innovative activities, ability to adapt to changes in the economic reality and function in dynamically changing conditions of life [20].

A particular characteristic of these types of codes of the region is their defining nature which determines, on the one hand, the socio-economic specifics of the region and, on the other hand, the characteristics of innovative, information, value-based and competence-oriented development of economic entities on that territory.

The basis of methodological principles developed by the authors to describe the functioning of defining codes was determined, on the one hand, by the views of Russian scientists, including the researchers of the Ural old industrial region, concerning the identification of the substance and characteristics of the Ural mining factory civilization and, on the other hand, by the ideas of foreign researchers, including E. Mayminas and his followers about the socio-economic genotype of the territory.

For example, P. Bogoslovsky, who was the first to propose the notion of "Ural mining factory civilization," identified a large-scale settlement system, which structurally consisted of more than two hundred factory towns and was not just an industrial economic area, but also a distinctive region where everything was interconnected—the ability to do business with ancient pagan sacrifice; customs of people with the remoteness of forests and inaccessibility of mountains; smelting of pig iron with the amount of snow in narrow rocky valleys. These thoughts of the scientist tell us that this civilization began to emerge long before the emergence of factories, and its legacy has not been exhausted even today, many years after the mining factories, like extinct volcanoes, majestically descended into the depths of the ocean of history [21].

The mining factory civilization was a true state within a state. It was firmly woven into common natural cycles, sewed with roads and tightly linked by rivers, the most important of which was Chusovaya [22, 23].

According to E. Mayminas, the socio-economic genotype of the territory represents an information mechanism of social inheritance and economic transformations, which ensures the reproduction of the structure, principles of functioning, processes of selection, memorization and dissemination of positive experience in a particular economic system that combines the characteristics of its three sides—heredity, variability, and selection [24]. As a result, the socio-economic genotype of the territory is the multi-layered memory of its society that forms the information matrix which is used to reproduce the structure of the economic functioning of that society, as well as to define the ways of interaction between its members, and their relations. In a simplified form, the structure of socio-economic genotype is a system of socio-economic interests of the territory and cultural system of its society.

Therefore, the "defining" codes of the region can be characterized by typicality, heredity, universality, resistance to change, resource intensity, long period of conception.

Provision 3. The defining codes generate dynamic codes of the region, which we will view as their derivatives that have a high probability of occurrence, the rate of development and dissemination, as well as the internal forces ensuring the self-development of the region. In this case, a defect-free combination of defining codes yields cost-effective dynamic codes. For example, E. Banfield proved that the low rates of economic development can largely be explained by cultural systems that emerged in different countries, and the inconsistency of state socio-economic policies with their cultural traditions. L. Guizo, P. Sapienza, and L. Zingales also identified the direct impact of culture on the economy and proved that, in the long run, the economic system and production relations form the culture of the society. At the same time, they noted that the cultural values do not always change in accordance with the economic development of the territory.

We will identify the contents of dynamic codes as follows:

Information codes of the region are information and information technology that ensure the data transmission speed, as well as the access to modern sources generating it.

Innovation codes of the region are innovative solutions that represent breakthrough ideas, often revolutionary in nature, as well as developed and implemented innovative technologies and volumes of innovative products.

Value-based and competence-oriented codes of the region are the values of the population that determine the needs of society for changes and its behavior amid industrial transformations, as well as the knowledge and skills of the population that characterize it as an effective productive force.

As an illustration to information codes, we can note that the process of neo-industrialization in the Western economies is accompanied by the implementation of information and computer technologies to regulate the entire life cycle of products [25, P. 53]. The innovation codes define the innovative solutions even within traditional industries, such as traditional energy sector [26]. We can note that, overall, a national innovation system exists within the national economy [27]. By governing the needs of society, as well as the development of educational potential, the value-based and competence-oriented codes have an impact on the development level and structure of the national economy, as well as on the civilizational development of society and the mentality of the population [28].

Code-Based Model of Neo-Industrial Development of the Region

The conceptual approach described above allows graphically represent a code-based model of the neo-industrial development of the region, which relates to two planes of consideration: region and neo-industrialization by using the identified code types (Fig. 1) and the corresponding code combinations (information–institutional, innovation and production, value-based and competence-oriented, and social) to reinforce their impact and provide synergy aimed at ensuring the transition to a new type of industrialization.

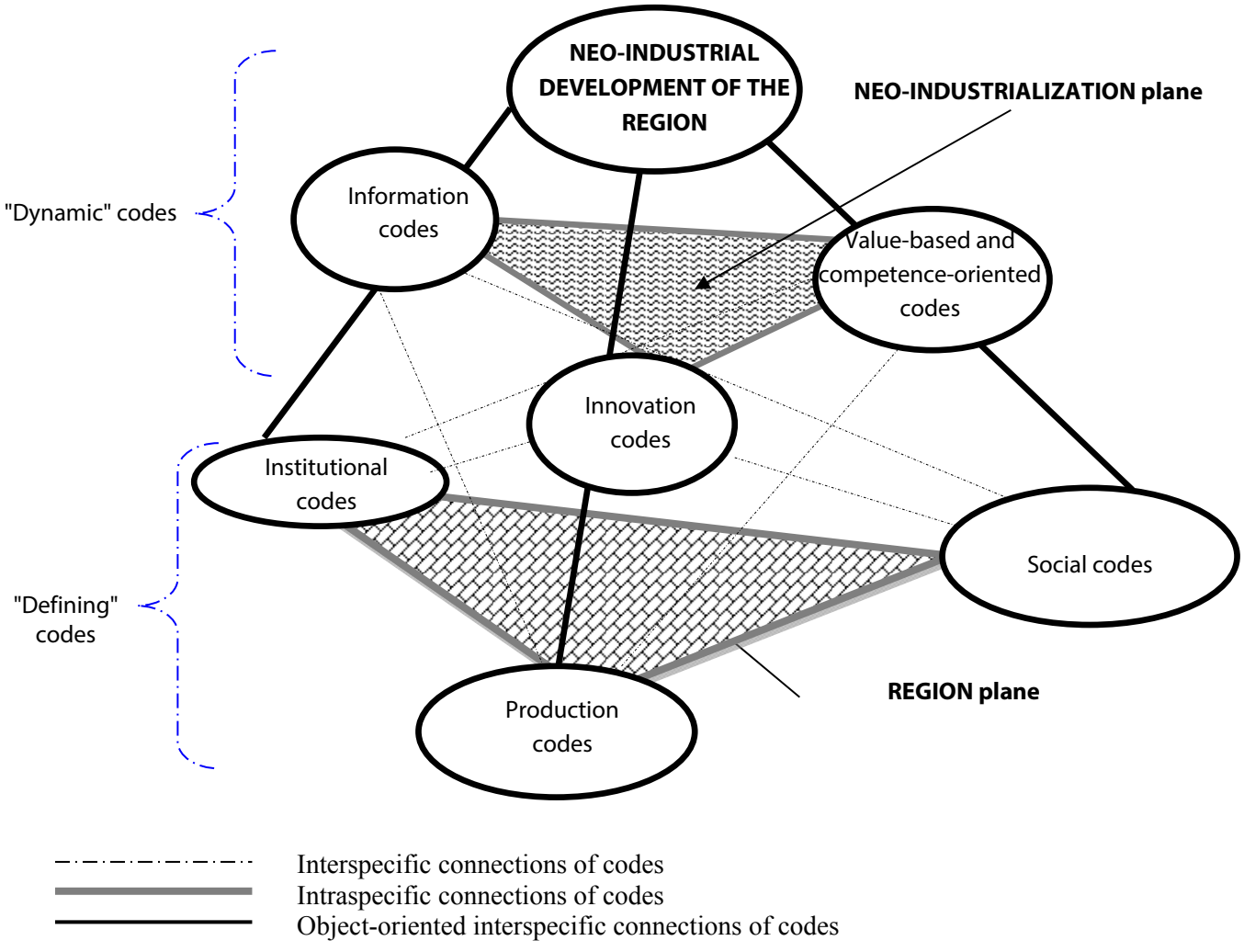

Fig. 1. *Code-based model of neo-industrial development of the region*

Translation

The above model can be described as follows (1):

$$Code\ ID_{region}\ (t_0) = Innovation\ code\ (t_0) + Information\ code\ (t_0) + \\ + Value\text{-}based\ and\ competence\text{-}oriented\ code\ (t_0), \quad (1)$$

where *Code ID* $_{region}$ is the code of industrial development of the region; *Innovation code* (t_0) = *production code*' (t_0) > 0 that reflects the rate of change in the production activities at the time t_0; *information code* (t_0) = *institutional code*' (t_0) > 0 that reflects the rate of change in the decisions of authorities at the time t_0; *value-based and competence-oriented code* (t_0) = *social code*' (t_0) > 0 that reflects the rate of change in the population at the time t_0.

The methodological characteristics of dynamic codes are their ties to the defining codes of the region, cumulative effect of influence on the defining codes of the region, exposure to mutations leading to a rapid increase in depression and length of time required to change the situation in the region.

In this case, the consideration of dynamic component allows to conclude that the basic code of neo-industrial development of the region is evolutionary accumulation of rapid changes in its innovation, information, and value-based and competence-oriented codes, which stimulates the generation and implementation of new ideas into the life of economic agents adapted to historically and culturally established conditions of life, see Formula 2:

$$Code\ NID_{region} = \sum_{i=0}^{-n} NID\left(t_i\right), \quad (2)$$

where the code NID_{region} is the basic code of *neo-industrial development* and code NID_{region} (t_i) = *innovation code*; (t_i) + *information code*; (t_i) + *value-based and competence-oriented code*'(t_i); code NID_{region} (t_i) = = *production code*'' (t_i) + *institutional code*'' (t_i) + *social code*'' (*ti*); t_i is time influence coefficient.

Therefore, to ensure the neo-industrial development of the region, it is necessary to find sources of either a rapid change and accumulation of dynamic neo-industrialization codes, or an accelerated change and accumulation of defining codes of the region.

Empirical Aspects in Assessing the Formation of Basic Code for Neo-Industrial Development of Ural Federal District

Since 2011, the Center for Regional Comparative Studies of the Institute of Economics of the Ural Branch of the Russian Academy of Sciences conducted three sociological studies supported by grants, including "Assessing the Socio-Cultural Impact of Modernization on Formation of Value-Based Attitudes of Local Communities in Industrial Areas" (129 respondents; RFBR project No. 11–06–00438-a) [29], "Assessing the Impact of Value-Based Attitudes of Entrepreneurs on Addressing the Import Substitution Problems in the Region" (208 respondents, RFH grant, project No. 16–02–18006-e) [30], "Managing Value-Oriented Factors in the Development of Entrepreneurial Culture of Youth in Municipal Entities"; RFH grant, project No. 15–32–01281-a2) [31].

Overall, two hundred eight respondents were interviewed as part of an in-depth questionnaire survey. According to the final results of the survey, 50 % respondents were the experts from the sphere of science and education, 30 % were from the business community, 16 % represented the authorities and experts of other categories. Most representatives of the business community were managers (47.5 %) and/or business owners (26 %), and 34.2 % were employees. The business community was mostly represented by small- (60.3 %), but also medium-sized (27 %) and large (12.7 %) companies.

The results were processed by grouping the answers in accordance with provided options, summarizing them, conducting cause-and-effect and the quantitative analysis, and allow to make the following observations and conclusions. A considerable part of two thousand respondents (representatives of business community and authorities, students, the teaching staff of leading universities in the Ural Federal District), and in some cases even the majority of respondents, recognize the relevance of institutional and information codes for neo-industrial development of the region. Each code proposed in the question was considered as relevant by about 25 % of respondents (Table 1). In the section "Institutional codes," they view the financial measures as the most relevant; the relevance of each such measure is recognized by most respondents — assistance in the form of preferential lending (66 % of respondents), subsidies for reimbursement of costs related to import substitution (54.8 %), and financing from state target-oriented programs (57.2 %), etc. This is quite

natural, since the main identified problem was inadequate funding. Also, in the section "Institutional Codes" half of respondents mentioned the relevance of concluding interregional agreements. According to respondents, this includes the assistance in organizing further training of personnel (50 % of respondents), assistance in the certification of import-substituting products, assistance in obtaining a patent for such products, assistance to the participation of enterprises in technological modernization programs (more than 40 % of respondents), and other. Many businessmen note the difficulty of finding the information about the support and business development programs. In the section of "Information Codes," the representatives of the business community mentioned the official recommendations (that they could be issued by the region for submission, for example, to credit institutions), incentives for advertising products, assistance in making press releases, organizing and holding conferences. According to respondents, a relevant instrument is the information support for participating in the tenders for supply of goods.

Table 1

The relevance of individual instruments affecting the codes of the neo-industrial development of the region in the opinion of respondents in case of Ural Federal District, %

Codes	Instruments	Relevance
Institutional	Preferential lending, lending with state guarantee	66.3
	Preferential taxation	58.7
	Financing from state target-oriented programs	57.2
	Subsidies for reimbursement of costs related to import substitution	54.8
	Conclusion of international agreements	49.0
	Conclusion of interregional agreements	35.6
Information	Assistance for participation in technological modernization programs	49.0
	Assistance in obtaining a patent for import-substituting products	43.8
	Information support for participating in tenders for supply of goods	41.8
	Holding exhibition and fair-related events	37.0
	Developing information portal (federal and regional)	36.5
	Assistance in product certification	30.3
Value-based and competence-oriented	Increasing the national economic independence	62.5
	Improving the competitiveness of domestic manufacturers	57.2
	Creating highly productive jobs	56.9
	Diversifying manufacturing and exports	49.8
	Establishing centers of industrial competence	43.3
	Assistance in further training of personnel	39.9

Next, we examined the correlation between the GRP and three basic types of neo-industrial development codes of the region. For example, to estimate the innovation codes of the region, we assessed the dependency of developed advanced manufacturing technologies on the share of the employed population with higher education.

To quantify the information codes of the region, we assessed the dependency of the average per capita monetary income and average per capita consumer spending on the share of the employed population with higher education. The high-tech jobs that are directly related to ICT and digital economy determine to the largest extent the growth of income and spending of the population.

To assess the competence-oriented codes of the region, we considered the dependency of GRP on professional specialization caused by the level of education of the employed population.

The described correlation dependencies built for the period of 2005–2016 in the Urals Federal District are shown in Fig. 2.

All obtained dependences point out to substantial influence of competence-oriented codes on the course of neo-industrial development in the considered region and direct dependency of its results on the values of the population.

The results of empirical research conducted in accordance with R. Inglehart's methodology by interviewing 1,500 students of the last years of studies in leading universities of Yekaterinburg, also show that the young people of the Ural Federal District share predominantly secular-rational values and

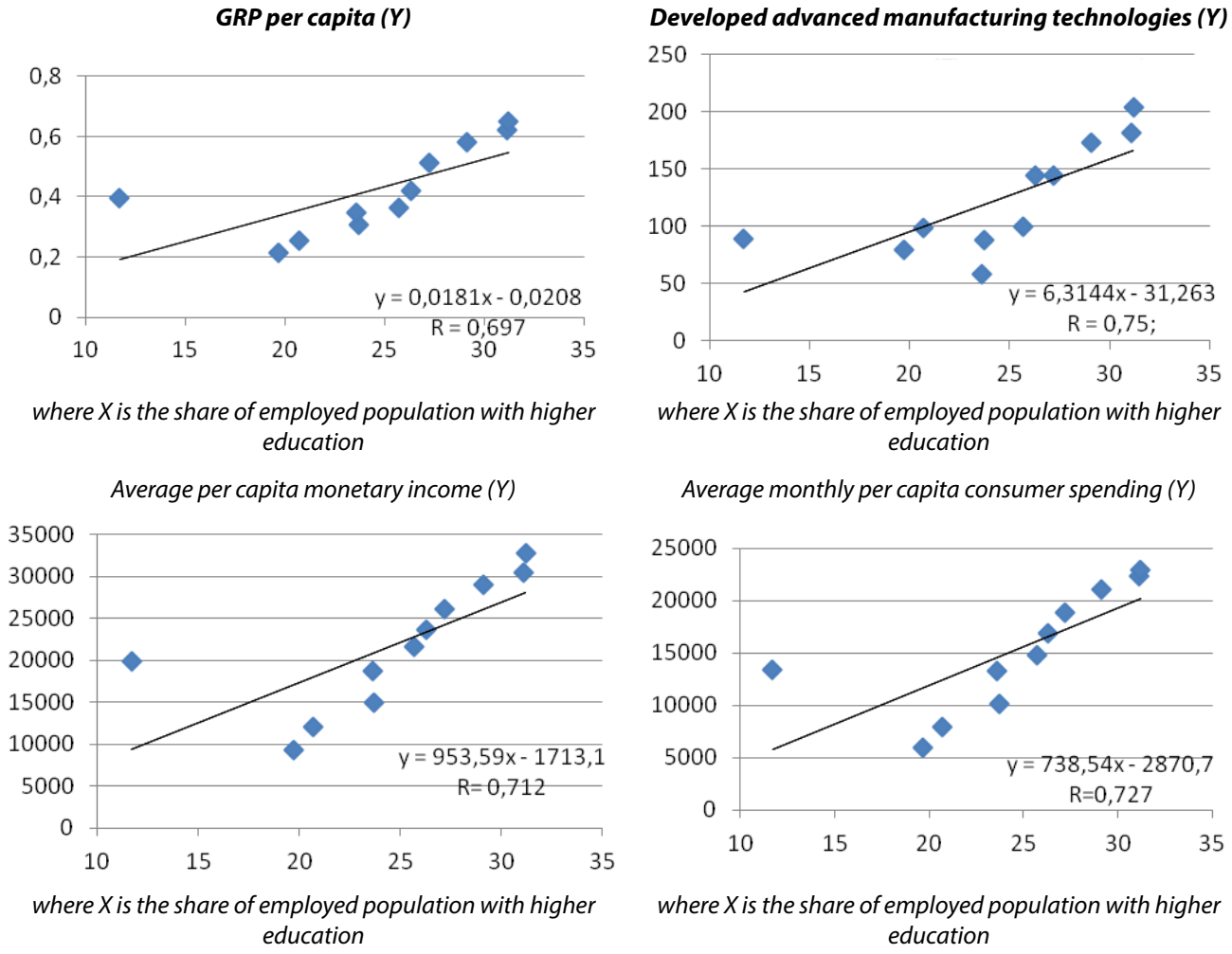

Fig. 2. *The empirical assessment of elements in the code formula for neo-industrial development of the region for 2005–2016, the case of the Ural Federal District*

self-expression values, which indicates that the young generation positively perceives the industrial transformations as an active cell of neo-industrial society and is able not only to live by them, but also to generate them. For example, in general, when answering the question on their sentiment when encountering something new, 79.3 % of respondents Also, we can state that about half of respondents assess the influence of neo-industrialization positively (Table 2).

Table 2

The attitudes to processes of neo-industrialization in the Ural Federal District

Response options	Share of respondents, %
Non-industrialization affects socio-cultural transformation by introducing new positive qualities into culture	11.7
Non-industrialization introduces new technologies in all areas of social development	29.8
Non-industrialization stimulates the development of technology	12.2
Non-industrialization destroys the traditional foundations of society	3.4
Non-industrialization contributes to the emergence of antisocial processes in society	2.9

Therefore, the empirical assessment of identified types of codes of the region indicates that they make a substantial economic, innovation, information, and social impact on the formation of the basic code of the region.

Conclusions and Recommendations

Today, the neo-industrialization is one of the most discussed phenomena defining the vector of innovative development. Despite a large number of publications on this issue, no desired economic results have been achieved so far by using traditional approaches.

An increasingly noticeable role in addressing is played by the civilizational approach, the development of which with regard to the Urals mining factory civilization received a substantial contribution from the works of P.S. Bogoslovsky, a scientist from the city of Perm, as early as at the beginning of 20th century. Its fundamental difference from other approaches was the study of statistical and dynamic processes that are typical for a particular territory. Moreover, the identification of static processes allows to understand the structure, anatomy, and morphology of the studied territory and determine the complex system of its interdependent internal links and proportions. The focus on dynamic processes allows to identify, assess, and measure the trends of the unevenly wavy, cyclical development of the region or the country in general, indicate the periods of recessions and influence their course and results by having the resources available at a particular point of time or making efforts to activate them.

In the context of actively asserted "new" civilizational approach, the authors attempted to develop an original research code paradigm that takes into account the economic past of the territory, its experience, specifics, traditions, culture, and values of society. This paradigm proves that a step towards neo-industrial development is impossible without identifying the internal mechanisms of the territory, determining the patterns of its development, focusing on the invariant core that expresses the socio-economic essence of the studied region and determines its genotype as a predisposition to certain economic, innovation, industrial, and other phenomena. Also, its further development may allow us to get closer to answering the question posed as early as 1776 by A. Smith, "What determines that some territories lag behind and other prosper, and why some regions are economically progressing, while others are prone to crises" at the genetic level.

With their approach, the authors found that any regional mechanism has its own socio-economic code profile, which depends on the dominant social stratum and determines the opportunities and limits for generating, selecting, and implementing potential options of socio-economic solutions. Therefore, the selection of a solution for ensuring the transition to a new type of industrial relations in the region should be based on its defining codes, the formation of which stimulates or hinders this process.

As generalized recommendations to form the information code of neo-industrial development of the region, the authors propose to generate a stable information signal for enterprises and population on the long-term nature and the need for innovative transformations, including those caused by the current policy of import substitution amid economic sanctions. As long as the industrial businesses and the population have an approving attitude for the policy of import substitution (89.9 %) and the willingness to wait (up to 10 years) for its results in order to increase the economic independence of Russia, the authorities have a certain time cushion. Therefore, the first task is not just to preserve this credit of trust, but also to strengthen it through comprehensive and consistent measures aimed at facilitating the information and organizational and institutional support for innovative development in priority industries.

To form the institutional and innovation codes for non-industrial development of the region, the authors propose to create an atmosphere of interregional collaboration for industrial businesses and entrepreneurs. It is necessary to translate the alternative version of outpacing behavior amid the growing competition by using the intellectual component and by deepening the specialization of the production process, improving the quality, technology, and professionalism. This requires to strengthen the attitude of industrial enterprises in favor of modernization and innovative development, including among other things a closer and more focused collaboration both within the business community, including the interregional collaboration, and with other spheres, such as, science and education.

To build a value-based and competence-oriented code for neo-industrial development of the region, the authors propose to revise the approaches to training and retraining of personnel [32]. The initial condition for creating high-tech jobs should be the education system, which comes as the main long-term factor that determines the success of neo-industrialization. What we need is a well-adjusted system of conditions for its development, ranging from the long-term state economic policy, which set the task of creating and modernizing highly productive jobs and the efforts of regional and municipal

authorities to implement the task through appropriate strategies, including the availability of required infrastructure with a clearly defined role of science and universities as translators of innovative renewal, to the attitudes of individuals in favor of innovative development.

The approach proposed by the authors allows each region to identify its unique combination of industrial, innovation, value-based, social, institutional, and other specifics determined by territorial memory, which represents a specific code record on the progress of industrialization or the so-called "genetic code" of its implementation, the consideration of which governs to some extent the development of neo-industrialization processes.

The approach proposed by the authors is directly related to the transformation of existing and the launch of new interspecific, intraspecific and object-oriented interspecific code interactions in the region focused on vector change in the course of its neo-industrial development.

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