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North-Arctic Specificity of the Subject of Economic Research (Methodological Aspects)

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Abstract. The North-Arctic topic of economic research covers a wide range of issues. The author believes that if we look at this topic from the standpoint of the methodology of constructing the subject of research, we cannot help but notice the growing importance of the axiological and evaluative aspects of studying the North. This kind of priority is conditioned by the increasing influence of natural conditions on socio-economic activity and the need for scientific explanation of transitions from natural to social. The methodology of practical activity in the conditions of the North traditionally reflects the difficulties of choosing the ways of organizing production and social activity here. At present, this is supplemented by the ambiguity of the reaction of the northern regions to the emergence of new circumstances that significantly affect the national economy, such as the need to urgently ensure the technological sovereignty of our country and strengthen its military-industrial complex. Therefore, the method of mobilization management becomes very relevant for the North of Russia, and especially for its Arctic zone. The scientific and practical aspects of the methodology of North-Arctic activities have a common methodological attitude: the transition from the position “the more the better” to the position “good quality is more important than large quantity”. Moreover, in the Arctic, the need for a transition “from the maximum necessary to the realistically possible” is increasingly realized.


Keywords: *methodology, economic topics, characteristics of the North, specifics, assessment, adaptation*

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Introduction

The author is aware of the depth of philosophical explanation of the methodology of cognition, and therefore speaks only about its individual aspects in order to outline the specific aspects of socio-economic development in extreme and difficult natural and climatic conditions. The idea of the article is to pose the question of what forms the basis of the North-Arctic theme of economic science and what new knowledge can be obtained. The answer is contained in the interpretation of the North as an object of research, the positioning of a researcher in relation to this object, the formation of a problem approach taking into account the characteristics of “northernness”, the definition of the subject essence of research and national economic programs. Cognitive activity in this case is focused on the peculiarities and circumstances caused by various transformations of political and economic relations, Northern practices of adaptation to such changes deserve special attention, as they significantly influence economic thinking and emphasize the need to overcome economic determinism.

Two approaches to the formation of the Northern Arctic theme

1. Application of already known scientific results in solving specific scientific, technical and socio-economic problems of the North. In this case, the achievements of specific science (physics, biology, economics, etc.) are purposefully applied to the needs of the northern territories. Here, the methods of construction of available knowledge are used.

2. Focused study of what is inherent in the North itself. Here we are talking about obtaining new knowledge about the specific properties and qualities of northern natural and economic objects and processes, when they (properties and qualities) influence the formulation of completely new (search) topics that enrich the content of a particular branch of knowledge and science as a whole.

The specific characteristics of “northernness” include:

- *natural* — climatic discomfort, climate change (global warming), lack of ultraviolet radiation, polar days and nights, increased geomagnetic activity, permafrost, swampiness, abundance of snow, complex ice conditions, weak potential for restoration of tundra and taiga biocenoses;
- *economic and geographical* — transport remoteness, focal and linear forms of population settlement and production location, seasonality of economic rhythms, increased importance of ecological and economic functions of geosystems;
- *economic* — type of accelerated reproduction of fixed capital, high role of natural resource rent in the formation of investments and consumption funds, relatively high specific production and transport costs;
- *social* — poly-ethnicity and ethno-culture, specific lifestyle, special methods of public health protection, etc.

The listed characteristics of the North are stable; they serve as a basis for comparing northern objects with similar non-northern ones. According to the rules of cognitive methodology, they should be attributed to the subject of research.

The methodology of cognition includes one of the important elements of scientific work, namely, the positioning of a researcher in relation to the object of study. The author believes that the North can be considered as:

- **springboard** for obtaining scientific knowledge and experience in overcoming difficulties;
- **testing ground**, for example, for new technology;
- set of **objects** for the development of which new knowledge and technologies are generated;
- set of **subjects** organizing their activities with regard to complex conditions and circumstances [2, Lazhentsev V.N., pp. 26–31].

Methodological aspects

From a methodological point of view, let us consider four questions.

1. Under what conditions can economic research be regarded as North-Arctic research?

There are two possible answers to this question:

- *certainly*, if we are talking about social and economic processes in the territories officially classified as the Far North and equated areas;
- *only on the condition of assessing the characteristics of “northernness”*, which are considered, on the one hand, (as already mentioned) as a subject of research, and on the other hand, as a factor that significantly influences the organization of social and economic activity. For example, the properties and qualities of permafrost are a special subject of cryology (the key word is “essence”); it (permafrost) can also be taken into account as a factor in the development of production and life support (the key word is “influence”). Economic science in this case studies influence.

2. How is the “problem field” of the North-Arctic topics formed? It is formed according to the principle of “counter movement” (Fig. 1)². Other methodological techniques are also used to understand the essence of the North-Arctic problems, for example, methods of expert and interactive surveys of scientists and practitioners on a given topic [4, Lukin Yu.F., pp. 171–185]. Let us pay attention to the opinions of experts on the relationship between the Arctic and the Far North, which show the desire of many scientists and representatives of regional authorities to expand the Arctic Zone of the Russian Federation so that the “Arctic” itself, as a physical and geographical reality, is displaced from the Arctic issues. In this regard, we note that the designation of high-latitude territories with two words “Arctic” and “North” should not create a false understanding of

² The idea of “counter movement” belongs to T.E. Dmitrieva (ISE and EPS Komi Scientific Center of the Ural Branch of the Russian Academy of Sciences) [3, Dmitrieva T.E., pp. 71–83].

their separate existence. The North has a complex internal zonal and azonal structure, in which the Arctic zone is currently actualized. Let us remind that *arktikos* means “northern” in Greek.

Characteristics of the North and their impact on life and economy		Objects of study and management	Economic evaluation of characteristics and regulation mechanism	
Characteristics	Impact		Evaluation	Mechanism
Climate discomfort	Threats to human health, additional costs	Household, settlement, enterprise, social community, economic complex, district, etc. 	Geographical and economic expertise and diagnostics of norms and standards	Compensation of additional costs, special regime of capital reproduction
Economic remoteness	Slow and expensive. “Time and money!”		Calculation of working capital and transportation costs	Creation of insurance reserves, state participation in the creation of infrastructure
High natural resource potential	Strict subordination of life of the population and regional management with natural resource corporations		Socio-economic assessment of natural resource capital	Methods of capitalization of natural resources, mechanism of extraction and distribution of natural resource rent, state control over corporations
Ethnicity	Threat of destruction of traditional economy and livelihoods			Legal protection of the traditional economy and way of life of the indigenous population

Fig. 1. Formation of the “problem field” of the North-Arctic topics of socio-economic research.

3. What changes are taking place in the study of the problems of socio-economic development of the North? The topic of the natural-historical formation and development of northern societies with their ethnic and spiritual characteristics of economic activity certainly remains relevant. Traditionally, there is an economic analysis, the meaning of which can be designated by the question: “What do we have and what should be done for the harmonious and sustainable development of the northern territories?” The answers to this question are dominated by judgments about improving financial and economic relations, competition, norms and rules of economic behavior. At the same time, there are attempts to combine market priorities with public interests and scientific and technological progress, when the main question is “How should we do it?”, that is, with a focus on improving production and social technologies, mechanisms for regulating economic activity [5, Lazhentsev V.N., pp. 35–43] (Fig. 2).

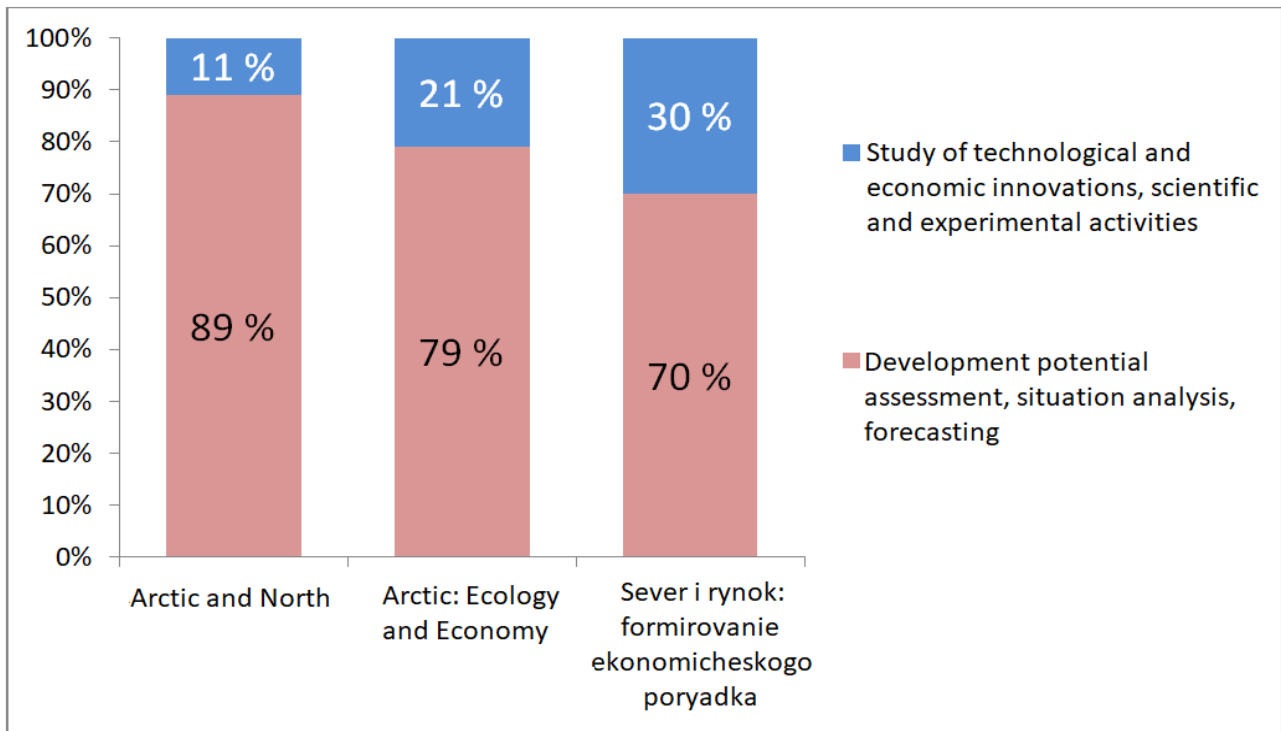


Fig. 2. Two blocks of publications in three scientific journals on the problems of the Arctic and the North.

Classical methods of structural-functional and problem-situational analysis of the economy have always been and still remain. However, in the study of northern regions, these methods should be complemented by a normative-evaluative approach to the organization of economic activity and life support systems, taking into account climatic and other conditions.

4. What theories are most important in the development of research programs on North-Arctic topics? Such theories include (the author whose works form the basis of this theory is indicated in brackets for orientation): philosophy of economy (Yu.M. Osipov); evolutionary theory and a set of concepts of economic sociodynamics, mixed economy, social clusterism and philosophy of cooperation (V.M. Polterovich); theory of economic mechanism (L.I. Abalkin); doctrine of geosystems (V.B. Sochava); theory of formation of industrial-territorial complexes (N.N. Kolosovskiy) and program-targeted TPCs (M.K. Bandman); geographical expertology (K.P. Kosmachev); theory of development of research programs (Imre Lakatos) (Table 1).

Table 1

Key methodological provisions most relevant for the North-Arctic economic research topics

Theory	Position most significant for the methodology of studying the Arctic and the North
Philosophy of economy	Knowledge about economic management is closely connected with general cultural and general natural knowledge
Evolutionary theory and the philosophy of cooperation	Increasing role of cooperative institutions is a natural result of technological, cultural and institutional evolution
Theory of economic mechanism	Economic mechanism is a system of economic relations and other driving forces of social development
Doctrine of geosystems	Not only nature and society are systemic "in themselves", but in unity they form natural-social systems of various geographical dimensions
Theory of formation of industrial-	Individual elements of production in combination become

territorial complexes	local technical and economic complexes, and within the boundaries of relatively large territories (large economic regions) — complexes of productive forces of society
Theory of program-targeted TPC	Large investment projects for the formation of national economic complexes on a limited territory can be implemented more effectively on the basis of program-targeted planning
Geographical expertology	Checking general concepts, rules, norms and standards for reliability and compliance with local characteristics of economic activity allows reducing the extent of economic risks significantly
Theory of development of research programs	Program integrates internal structural elements of research (axioms, hypotheses, theories) on an interdisciplinary basis

Beyond the brackets of a number of economic theories indicated in the table are the concepts and theories relating directly to the North. The author did not intend to include them in this article. However, let us pay attention to the attempt to formulate such a theory as a new one. It is based on “four new research priorities in studying the process of developing the North and the Arctic: analysis of local institutional capital; special attention to conflicts and contradictions in the process of developing the territory’s natural resources; attention to the evolution of the settlement system; uniqueness of interaction of large and small forms of developing this territory” [6, Zamyatina N.Yu., Pilyasov A.N., p. 5]. From the perspective of the methodology of the cognitive process, this claim for novelty should be tested. At first glance, it seems that it is impossible to disagree with the indicated priorities. At the same time, the priorities themselves are designated: either as an action of the researcher (analysis, attention) or as a property of the studied objects (peculiarity of interaction). The former refers to the methodology of activity, the latter — to the theory of the ideal image. The same authors presented the methodology (but not the theory) of studying the Russian North more convincingly in the form of conceptual baggage of domestic, European and North American regional science with the identification of the features of each of these sources [7, Pilyasov A.N., Zamyatina N.Yu., pp. 57–76]. The conceptual approach to the problems of the development of the North, indeed, explains a lot, including the diversity of opinions regarding its peculiarities [8, Lazhentsev V.N., pp. 4–14].

Practical aspects of the methodology

1. What follows from the assessment of historical experience? There are many things, but the main one is that the northern territories were not only developed, but also thoroughly inhabited (developed). Areas of sustainable economic activity were formed. Such areas should be considered as the main objects of economic science and regional policy.

Of methodological interest is the historical assessment of the ratio of state and private capital, which was given by V.A. Lamin, corresponding member of the Russian Academy of Sciences, in relation to the northern projects at the end of the 18th — beginning of the 19th centuries. He writes: “Domestic merchants and entrepreneurs, the first generation of whom Peter I nurtured at the expense of the state treasury, were still state fosterers a hundred years later. Due to the ine-

radicable thirst to live in luxury, in a royal way, spending an impermissibly large share of profits on themselves, which was destructive to the business, they did not have any significant working capital, sufficient for the implementation of large trade and entrepreneurial projects. Whenever there was a need for such funds, they turned to the state treasury with a shamelessly outstretched hand for privileges, benefits and direct financial support” [9, p. 38]. This narrative continues to this day, which is especially clearly manifested in the formation of investments in Arctic projects.

Some historical lessons have a clearly expressed methodological nature, for example, it is unprofitable to save money on the infrastructural development of territories (*“a miser pays twice”*).

2. What follows from the assessment of the historical experience of studying the problems of the North in the economic institutes of the USSR Academy of Sciences? The organization of academic research centers and institutes in the North of Russia was a consequence of the active participation of the USSR Academy of Sciences in the scientific substantiation of the rational distribution of productive forces and the creation of new industrial bases on the periphery of our country. It is useful for research economists working in northern academic institutes to know that their predecessors directly carried out technical and economic calculations on options for solving specific national economic problems. There is no doubt that pre-project economic analysis is socially useful and corresponds to modern technologies of strategic planning.

3. Is it relevant to analyze the norms and standards of economic and social activity in the conditions of the North in the market economy? There is no clear answer to this question. For example, the coefficients of increase in the cost of construction and installation works (CIW) in the zones of the North of Russia were established in 1984, and their scientific analysis was carried out in 1985, that is, 38 years ago [10, Dmitrieva T.E., pp. 14–28]. The methods of scientific expertise of the coefficients of CIW could still serve as a guideline in design and construction, as well as the coefficients to the norms of construction duration. However, it should be taken into account that the organization and technology of construction are improving, so the expertise of construction norms and rules is necessary [11, Varfolomeev Yu.A., Arbutov Yu.A., pp. 29–42]. It is also relevant to the issue of accelerated depreciation of fixed assets; the climate determines the rate of wear of machines and mechanisms operated outdoors. It is desirable to conduct more frequent expertise of tariffs for heat and electricity and take into account not only the differences in economic and geographical location, but also the structure of energy sources.

The situation related to regional coefficients and seniority allowances to wages can be assessed differently. They have been discussed since the Soviet times, when labor incentives in the North could not be imagined otherwise than through allowances. In market conditions, the importance of regional coefficients and seniority allowances has been preserved only in the budgetary sphere; in the production sector, they are formal in nature and do not affect the formation of the wage fund. Another matter is the norm “activated days for outdoor workers”. For example, in the Komi Republic, the accounted losses of working time in the winter period in fact amount to

3–13%, and according to hygienic requirements from 10 to 35%. Such a gap requires scientific expertise and administrative verification (either the climate has changed significantly, or the activation norm is not observed). The same can be said about “physiological requirements for energy and nutrients”. Some standards, such as “insulated clothing sets”, “seasonal stocks of goods”, “financing and lending for northern deliveries”, are mainly under the jurisdiction of the company’s management. If the company considers it necessary to review the production and social standards of its activities, it can organize it at its own expense.

A special discussion about Arctic standards: should they be established to distinguish the Arctic from other territories of the Far North? Can, for example, the territories of the Arkhangelsk Oblast (the cities of Arkhangelsk and Novodvinsk; Onezhskiy and Primorskiy municipal districts), classified as part of the Arctic Zone of the Russian Federation, claim additional Arctic allowances, if they are not even included in the list of regions of the Far North?

Let us pay attention to another methodological aspect: standard indicators are a kind of indicators reflecting the economic essence of the “northernness” of certain processes. Thus, space can be measured by the indicators “goods in transit”, “turnover rate”, “transport costs” and displayed on the map by isochrones and isocosts.

4. What does mobilization economy mean in relation to the North? The problems of mobilization economy have become a reaction to the ongoing changes in the world order, the emergence of major threats to the national economy, local military conflicts. The situation is very complicated, but it does not serve as a reason for radical political and economic changes in our country. Its constructive resolution can be achieved through national economic programs that eliminate Russia’s disadvantaged position in the high-tech market and strengthen the domestic Russian market space.

The author believes that it is reasonable to solve the following four problems in the regions of the North of Russia using mobilization economic methods:

- deficit in some types of non-ferrous and rare metals for the sake of the technological sovereignty of the Russian Federation;
- ensuring bio-resource and economic balance in reindeer herding;
- restoration of agriculture in the taiga zone;
- real and qualitative implementation of the program for resettling part of the population from the regions of the Far North.

The author’s position in the methodological link “North — researcher of the North”

Each researcher strives to show his positive attitude to the North, to reliably determine the factors and conditions of its socio-economic development. It is the attitude that largely predetermines the methodology of the research process. If we position the author’s works in the methodological link “North — researcher of the North” in the sequence noted at the beginning of the article (bridgehead, testing ground, object, subject), it turns out that the North for the author is, first

of all, a bridgehead for studying the problems of territorial development ³, when the problem is identified within the framework of the methodology of economic geography.

The economic and geographical foundations for the development of the North include:

- systemic reproduction of human and natural resource potential within the boundaries of territorial and economic systems;
- priority of development of already developed territories with historical and cultural centers of relatively sustainable life;
- active participation of northern economies in strengthening the market space of Russia by including natural resources in the technological complexes of the Russian manufacturing industry.

The economic and geographical methodology is reflected in the typology of territorial and economic systems of the North and the definition of the problems of development of each type of system. At the same time, it is concluded that natural-economic zones (the Arctic, the Far North, the Near North) are not economic systems. In our opinion, the systemic nature of the "North" is most clearly manifested in local economic entities and in their place and role in the composition of meridional structures — areas of regional (territorial, republican) rank and large economic districts. Such a judgment does not exclude systemic solutions and model approaches to the development and justification of management decisions common to northern zones [12, Chizhova L.A., Tutygin A.G., pp. 209–214].

←————→		Counter movement		←————→	
Subject of study	Object	Stages of knowledge	Researcher's actions		
Local development	↓ Northern TES ↑	Observation	Surprise and doubt		
Adapted (northern) arrangement		Scientific explanation	Formulation of an idea and formation of a "problem field"		
Optimal functioning		Design	Preparation of programs and projects		
Dialectics of long-term development		Use of scientific results	Development of methods of "implementation"		
					←————→

Fig. 3. Methodological approach to the study of northern territorial-economic systems.

Among the cognition procedures presented in Fig. 3, the key position is occupied by "scientific explanation" as it is much more difficult to understand the existing economic reality than to develop a forecast or project for the future. Scientific explanation is based on understanding the meaning of what is happening and possibility of interpreting it taking into account cause-and-effect relations. Economic reality is surrounded by a wall of commercial and state secrecy, which

³ The author attempted to substantiate the meaning of the scientific concepts: "territorial-economic system (TES)" — a set of administrative centers and their resources, united by common interests of location and joint activities to create favorable living conditions for the population; "territorial development" — a process of balanced and effective use and reproduction of natural, material, technical and social resources within the boundaries of local and regional economic systems; "territorial management" — the activities of local government bodies and regional government authorities regarding the formation and rational use of personal, communal, municipal and sub-federal property for the benefit of society as a whole.

significantly complicates the analysis of deviations of existing reproduction proportions from the optimal ones. The excessive preoccupation with statistical indicators is no less of an obstacle: they often predetermine the structure of scientific texts, i.e. they describe what is available from statistical reference books. At the same time, there is a danger of misdirecting statistical indicators without further validation; they show something, but not what is required for scientific explanation.

The economic and geographical approach to the study of the North to some extent made it possible to understand the essence of interdisciplinarity. It consists in the conjugation of the main concepts of each scientific discipline included in the corresponding research project, and the targeted use of various analytical methods. In studying the economy of the Northern regions, interdisciplinary synthesis concerns the methodology and results of physical and socio-economic geography, statistics, regional economics, sociology and history. If we take into account our emphasis on the characteristics of “northernness”, then medical geography and economic climatology should be added to the above. As shown by I.I. Matvienko [13, pp. 153–166], the health protection of small-numbered peoples has once again become particularly relevant. Of course, it is necessary to take care of the health of all northerners, which is one of the subjects of research within the framework of economic climatology. This science is also becoming essential for assessing the conditions of functioning of material and technical complexes [14, Porfiryev B.N., Eliseev D.O., pp. 30–43].

Conclusion

The essence of the considered methodological aspects of the North-Arctic economic topics consists in: 1) methods for assessing the influence of the characteristics of “northernness” on the organization of economic activity; 2) organizing economic activity in accordance with scientific recommendations on how to do it, i.e. with a focus on improving production and social technologies, economic mechanisms for adaptation to the conditions of the North. The effectiveness of the methodology increases if the organization of research work and the organization of practical work complement each other. This is achieved by the unity of the subject matter of research programs and programs for solving national economic problems. Such unity is not formed automatically. Therefore, from time to time, it is necessary to conduct a comprehensive examination of scientific theories and hypotheses, norms and standards of practical activity for their compliance with existing reality. This is especially important, since the experience of studying the regions of the North shows the presence of prerequisites for a significant restructuring of economic thinking and socio-economic policy under the influence of local practices.

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