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## PUBLIC ADMINISTRATION OF INNOVATION ACTIVITY IN THE SUBSOIL USE OF KAZAKHSTAN

*Purpose of research – theoretical and methodological approaches study to the directions development of innovation activity public administration in the subsoil use of Kazakhstan in modern conditions. In order to improve the existing methodological approaches to the natural resource exploiting sector innovation activities development of the national economy of Kazakhstan, the innovation activity public administration of subsoil use in Kazakhstan principles and criteria have been developed and improved. Subsoil use is of particular significance to ensure the country's innovation and sustainable development and is considered to be one of the most important directions of national economic policy. Based on the proposed model of subsoil use public administration, a set of measures can be developed and implemented that will allow solving both current and strategic tasks of sustainable development of the mineral extractive industry of Kazakhstan. The integrated use of all proposed approaches in the developed model will increase the subsoil use industries' competitiveness, stabilize the environmental situation and improve the quality level and degree of raw materials processing. In conclusion, priority directions and ways of developing innovation activities public administration of the mineral resource sector of the economy are proposed, on the basis of which the sustainable development of the country's subsoil use can be realized.*

**Keywords:** subsoil use, public administration, innovation activity, minerals, resources, sustainable development, policy, model, factors, efficiency.

**Кілт сөздер:** жер қойнауын пайдалану, мемлекеттік реттеу, инновациялық қызмет, минералдар, ресурстар, тұрақты даму, саясат, үлгі, факторлар, тиімділік.

**Ключевые слова:** недропользование, государственное управление, инновационная деятельность, полезные ископаемые, ресурсы, устойчивое развитие, политика, модель, факторы, эффективность.

JEL classification: P48, Q38, Q58

**Introduction.** In modern conditions, the state role problem in the country's economic development continues to cause controversy and discussions. A number of scientists consider the public administration weakening as a direct path to spontaneous market forces anarchy and, accordingly, to the collapse of statehood, while others, on the contrary, consider the market transition with the simultaneous maximum reduction of the regulatory role of the state as the only means of salvation. In our opinion, the proponents of both points of view allow extremes. A modern, in fact, a corporate economy without an effective mechanism for its interaction with the state, its legislative and executive authorities is impossible. Moreover, such a mechanism has become one of the essential features of a highly developed democratic society. This interaction finds its practical embodiment in various forms and

directions. The developed countries' experience shows that the current system of relations between the economy and the state has gone through a long and difficult path of formation and development.

If at the world economic system formation initial stage, the emerging entrepreneurial class had its main task in freeing itself from the strict guardianship of the state, affirming the principles of free competition and free market. In recent years, the state's regulatory and control role in the social and economic fields has been continuously expanded. The fact that is integrally inherent in a modern highly organized society is that the economy and the state do not deny, but complement each other, which requires a certain development in the subsoil use industries of Kazakhstan.

**Literature review.** The innovation activities subsoil use public administration issues to increase

its competitiveness in the economy of Kazakhstan have always been the modern scientists and practitioners attention focus.

Kantorovich L.V., Shumpeter I., Kondratyev N.D., Mensh G., Kleinknecht A., and other foreign scientists [1-5] analyzed the formation and innovation administration formation in the economy; generalized the innovative development basic principles; developed concepts of cyclical innovations and economic development, and the public administration innovative process.

Russian scientists such as S. Glazyev, L. Bushuev, V. Emelyanov [6-8] have extensively studied the the innovation process role in the economy and subsoil use, including the global crisis, major disasters and other economic, technological, and social changes.

However, although scientists are very concerned about the subsoil use public administration innovation activities, scientific and practical innovations in the subsoil use field in Kazakhstan have not yet been fully studied.

This article’s study choice, the goals and objectives, in addition to insufficient research in the innovative industries development field and the economic diversification current state, also depend on these issues’ relevance and importance.

**Main part.** Public administration is aimed at start-up entrepreneurs assisting in priority sectors, creating equal competition conditions for all, and orienting economic activity in accordance with the whole society’s interests. The legislative bodies adopt, in accordance with the Constitution, binding laws and regulations. The main regulatory law for subsoil use is the Code of the Republic of Kazakhstan “On Subsoil and Subsoil Use” [9]. The Government and the relevant local executive authorities develop and implement common economic, industrial, agricultural, scientific and technical, financial, social and environmental policies, as well as coordinate the fuel and energy development, defense and social industries, transport and communications and their

innovative development. In the middle and the end of the XX century, the public administration role in the economy significantly increased.

In a market economy, such administrative levers as the establishment of social and environmental standards, rules of the land, water and nature management, banking, antimonopoly regulation and freedom of competition, protection of property and legitimate income remain in the hands of the state; state orders for the supply of the most important types of raw materials, fuel and food to centralized funds, the facilities construction and the research and development work implementation that determine structural shifts, the balance of the economy and the country’s defense capability, which must be used to stimulate innovation [10; 11]. In the republic, construction and expansion of an enterprise, lease of land plots, and work on subsoil use are not allowed without the approval of the Competent Authority.

The current mineral resource republic base condition indicates the need for the further subsoil use innovative system development, including the insufficiently effective state subsoil fund management system transformation. There is also a necessity to make great changes to the hydrocarbons resource base established reproduction mechanisms, which do not consider the economic situation that has developed in the republic recently. The public administration and control existing system in the strategic mineral use and reproduction leads to accelerate the best reserves development in terms of quality, new deposits’ commissioning low rates, development projects violations of developed fields, reserve preparation’s insufficient rates and other negative trends that reduce the country’ subsoil use and the innovation system’s efficiency of the Republic of Kazakhstan [12, 13].

The PEST analysis shown in table 1 is aimed at identifying political, economic, social, and technological factors and their impact on innovation activities in subsoil use.

Table 1

**PEST analysis of subsoil use innovation activity\***

Political factors	Economic development
1. Public administration in subsoil use 2. Innovation activity regulation 3. Legislative framework 4. Antimonopoly regulation and competitive environment	1. Prices for energy resources and their processing products 2. Inflation rate and inflation expectations 3. Refinancing rate of the National Bank 4. The exchange the national currency rate against world currencies

Social factors	New technologies development
1. Social policy 2. Demographic policy 3. Unemployment rate 4. Income and expenses of the population structure	1. State technical policy 2. Innovations and new technologies development 3. R&D development 4. Patent environment

\* *Compiled by the authors*

The budgetary efficiency of the mineral resources innovation system is based on the fact that the raw materials sector is connected by complex and diverse relationships with the state budget, being the main source of its revenue and the recipient of public funds, influencing the budgets' formation and execution at all levels. Ensuring the effectiveness of these relationships is the most important state task and the main policy goal aimed at achieving the mineral resources innovation system budgetary efficiency.

The main principles of this policy are the following:

- sustainable perspective – early and reasonable state determination of the necessary forecast volumes of direct budget revenues from the innovative sector in subsoil use enterprises;
- comprehensive assessment – the record of current and prospective results from the activities of the subsoil use innovative sector, reducing future costs in related industries;
- balance – compliance of the innovation sector capitalization growth and the budget revenues volume provided by it;
- consistency and purposefulness in the public funds use, as well as investments carried out under the state control.

The minerals innovation system state investment policy provides for solving the tasks the investments volume increasing and changing their structure. State support for investments measures in the subsoil use innovative system provide [14]:

- comprehensive insurance programs support, reducing entrepreneurial and non-commercial investment risks assistance;

- business climate improvement, clear and stable rules creation of companies' economic activity, primarily on the basis of a predictable and balanced taxation regime and a regulatory framework that protects and guarantees respect for the investors' rights;

- state price (tariff) regulation improvement in the natural monopolies field;

- depreciation policy improvement;

- licensing policy improvement, unreasonable administrative barriers elimination;

- minerals innovative facilities creation in the extraction, processing, and transportation regulatory framework improvement in the investors' (including foreign ones) participation field;
- leasing relations development.

The subsoil use public administration model depends on a number of factors that are noted: the rational subsoil use of resources, the complex nature of mineral resources use, the environmental ecology preservation (Figure 1).

This model can be represented in the form of a mathematical formula:

$$Y = f(x_1, x_2, \dots, x_n), \quad (1)$$

where  $x_1, x_2, \dots, x_n$  – factors of subsoil use public administration;

$n$  – the number of factors.

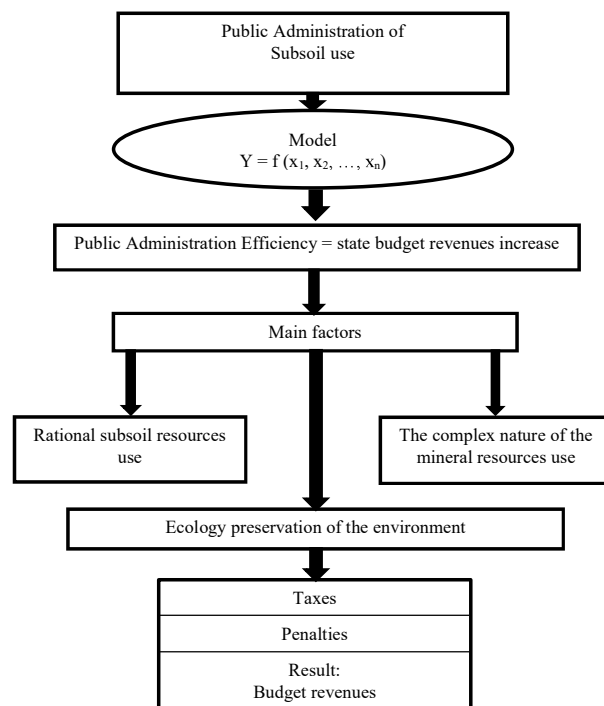


Figure 1. Model of public administration of subsoil use innovation activity in the Republic of Kazakhstan\*

\* Compiled by the authors

The economic efficiency of public administration of subsoil use innovation activity can be expressed in the form of a formula:

$$F(t) = dl(y_1, \dots, y_m), \quad (2)$$

where  $F(t)$  – state budget revenues from the country's subsoil use;

$dl(y_1, \dots, y_m)$  – state budget revenues increase due to taxes, fines and other revenues to the country's budget.

The state investment policy provides for the support by the subjects of Kazakhstan of innovative investment projects related to the production, processing, and raw materials transportation, the special economic conditions creation that cause the production and employment growth in the respective regions territories.

An important state industrial policy direction is product development in the Republic of Kazakhstan of modern subsoil use innovative equipment, technologies, and materials. It is intended to continue the subsoil use domestic equipment production state support the forms and methods improvement in compliance with the budget efficiency policy principles. According to the national innovation policy key concepts, actively maintain leading for-

eign companies cooperation in various forms is required, whether it is the joint ventures organization on the territory of the Republic of Kazakhstan or in terms based on advanced foreign technologies innovative industries development. An important reserve for domestic companies investment attractiveness increasing can be their expansion and integration. Promising investment projects should be encouraged primarily by commercial and non-commercial risks assurances providing and subsidizing the interest rate on loans from the Republican budget for the innovative projects implementation.

The subsoil use enterprises innovative products' competitiveness increasing will provide the innovation and production modernization activation sources' formation, their products demand/income increase, and a significant increase in the revenue side of budgets. The subsoil use innovative system state support can be carried out by subsidizing interest rates on loans attracted to finance certain activities of targeted programs.

Subsoil use field and state mineral fund administration state innovation policy goal, fulfilled in accordance with minerals and subsoil use field state policy provisions and principles, should be the hydrocarbons mineral base and other types of

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minerals reproduction and rational subsoil use of Kazakhstan supply ensuring sustainable economic state development.

**Conclusion.** The subsoil use innovation system development key components of the Republic of Kazakhstan economy include:

- developed structural policy in the subsoil use innovative sector, including the natural monopolies reform, aimed at building competitive relations in the subsoil use sectors of the Republic of Kazakhstan;
- price (tariff), tax and customs regulation interrelated measures;
- a civilized legal framework and institutions formation and implementation in practice for the innovative resources' development;
- public administration mechanisms' creation

and development for the scientific base, production, and innovative resources' sale creation.

Public administration of subsoil use innovative development provides for:

- the regulatory and legal frameworks, and the commodity market participants activities rules development;
- resource purchase and sale transactions transparency increasing, developing a trade licensing system as a price liberalization condition in the relevant minerals sectors;
- Kazakhstan's minerals sector anti-monopoly regulation and control improvement; to prevent the monopoly of individual commodity market segments;
- the integrated monitoring and control system improvement in the innovative subsoil use system.

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**ҚАЗАҚСТАННЫҢ ЖЕР ҚОЙНАУЫН ПАЙДАЛАНУДАҒЫ  
ИННОВАЦИЯЛЫҚ ҚЫЗМЕТТІ МЕМЛЕКЕТТІК БАСҚАРУ**

**Аңдатпа**

Зерттеу мақсаты – Қазақстанның жер қойнауын пайдаланудың инновациялық қызметін қазіргі жағдайда мемлекеттік реттеу бағыттарын дайындаудың теориялық және әдіснамалық тәсілдерін зерттеу. Қазақстан халық шаруашылығының табиғатты пайдаланылатын секторының инновациялық қызметін дамытудың қолданыстағы әдіснамалық тәсілдерін жетілдіру мақсатында Қазақстанның жер қойнауын пайдаланудың инновациялық қызметін мемлекеттік реттеудің қағидаттары мен өлшемдері әзірленді және дамытылды. Жер қойнауын пайдалану инновациялық қызметті дамытуда және елдің тұрақты дамуын қамтамасыз етуде ерекше маңызы бар мемлекеттік экономикалық саясаттың маңызды бағыттарының бірі ретінде қарастырылады. Жер қойнауын пайдалануды мемлекеттік реттеудің ұсынылып отырған моделін негізге ала отырып, оларды іске асыру Қазақстанның өндіруші емес өнеркәсібін тұрақты дамытудың ағымдағы және стратегиялық міндеттерін шешуге мүмкіндік беретін шаралар кешені әзірленуі және іске асырылуы мүмкін. Әзірленген модельде ұсынылған барлық тәсілдерді кешенді пайдалану жер қойнауын пайдалану салаларының бәсекеге қабілеттілігін арттыруға, экологиялық жағдайды тұрақтандыруға және шикізат ресурстарын өндеудің сапалық деңгейі мен дәрежесін арттыруға мүмкіндік береді. Қорытындыда экономиканың минералдық-шикізат секторын мемлекеттік реттеудің инновациялық қызметін дамытудың басым бағыттары мен жолдары ұсынылады, олардың негізінде елдің жер қойнауын пайдалануды тұрақты дамыту жүзеге асырылуы мүмкін.

**ГОСУДАРСТВЕННОЕ УПРАВЛЕНИЕ ИННОВАЦИОННОЙ ДЕЯТЕЛЬНОСТИ  
В НЕДРОПОЛЬЗОВАНИИ КАЗАХСТАНА**

**Аннотация**

Цель исследования – исследование теоретических и методологических подходов к выработке направлений государственного управления инновационной деятельностью недропользования Казахстана в современных условиях. С целью совершенствования существующих методологических подходов к развитию инновационной деятельности природоэксплуатирующего сектора народного хозяйства Казахстана разработаны и развиты принципы и критерии государственного управления инновационной деятельностью недропользования Казахстана. Оригинальность / ценность исследования – недропользование рассматривается как одно из важнейших направлений государственной экономической политики, которое имеет особое значение в развитии инновационной деятельности и обеспечении устойчивого развития страны. Исходя из предлагаемой модели государственного управления недропользования может быть выработан и реализован комплекс мер, которые позволят решить, как текущие, так и стратегические задачи устойчивого развития недродобывающей промышленности Казахстана. Комплексное использование всех подходов, предложенных в разработанной модели, позволит повысить конкурентоспособность отраслей недропользования, стабилизировать экологическую ситуацию и повысить качественный уровень и степень переработки сырьевых ресурсов. В заключении предлагаются приоритетные направления и пути развития инновационной деятельности государственного управления минерально-сырьевого сектора экономики, на базе которых может осуществиться устойчивое развитие недропользования страны.

