

# ASPECTS OF IMPROVING THE MECHANISM OF INNOVATION MOTIVATION ACTIVITIES AT INDUSTRIAL ENTERPRISES

Nabieva Saidahon Abduvahabovna<sup>1</sup>,

<sup>1</sup>PhD student, Tashkent State Technical University, Tashkent, Republic of Uzbekistan

**Abstract**— The article discusses the issues of improving the mechanism of motivation for innovation in industrial enterprises. The author provides a classification of the motivations of innovation activities in industrial enterprises. According to the author, depending on the level of the economic system, there will be various groups of motivations that encourage innovative transformations within these systems. The study revealed that the most important incentive motive for changing the level of innovation activity is an increase in the level of competition in commodity markets.

**Index Terms**— innovation, innovation, mechanism, motivation, economy, potential.

## 1. Introduction

World practice shows that the development and introduction of innovations is not only a way to improve the competitiveness of an enterprise, but also an important stimulus for the economic development of a country. The growth of their competitiveness, however, there is the emergence of resistance to innovation.

## 2. Literature review

Among foreign scientists, M. Dodgson [1], G. Grossi [2], Y. Shumpeter [3], J. Henri [4], F. Westley [5], A. Afuax [6], S. Popadiyuk [7] and others are widely covered with the issues of modern theory of innovation management, strategies and the use of innovative management technologies in ensuring the competitiveness of small businesses.

Among the CIS scientists: I. Afonin [8], E. Theoretical and methodological problems of innovation management in the works of A. Bazilevich [9], G. Gamidov [10], P. Zavlin [11], N. Kochetkov [12] and other scientists have been studied. and practical issues of analysis, in particular, the innovative potential and its types, classification, structure and structure, concept of the author's concept and other problems V. Barangheeva, V. Gunina, G. Jitsa, D. Kokurina, O. Korobeynikov [13], V. Moseyko, R. Fatkhutdinova, I. Shlyakhto and others.

The work of scientists such as A. Trifilova [14], T. Gileva [15], I. Shlyakhto, V. Abramov to evaluate the problems of formation of innovative potential in direct industrial enterprises, as well as influence of various factors in its development

Taking into account the national

peculiarities, the scientific and theoretical bases for the development of innovation potential in the economy of Uzbekistan, in particular, direct industrial enterprises, are being collected by B. Khodiev, S. Gulomov, Sh. Zaynutdinov, M. Makhbova, R. Nurimbetov, Sh. Mirsaidova's [16] works are widely covered.

Also, Sh. Mustafakulov [17], a researcher from a group of republics, analyzed the existing methods of evaluating the socio-economic and innovative potential of the regions, Kh. Mukhitdinov's [18] institutional approach to the analysis of innovation potential development and development, U. Gofurov's [19] contribution to the introduction of innovation ideas into practice. I. Umarov, S. Saidkarimova, Sh. Oblakulova [20] analyzed the innovation potential of industrial enterprises.

Almost all of the modern economic theories have been recognized as the source of innovation. Innovation potential is a key source of growth not only for a single economic entity, but also for the whole system.

The concept of "Innovative Capacity" has been actively entering science since the late 1970s. It was developed and developed in the methodological and theoretical studies of a number of scientists. Until now, however, this concept has not yet been developed in the world. Each scientist or specialist interprets innovative capabilities in a specific direction, taking into account the characteristics of his or her country.

Today, the lack of universal theory of innovation has led to its many concepts and meanings. However, many approaches are based on ideas of "innovation" and "change."

Despite the fact that many of the innovations of innovation emphasize the various

aspects of innovation, the following selection reflects the consistency of the nature of innovations.

One of the first economists to describe the concept of innovation is Jozef Schumpeter. He used the notions "creative" and "new combinations", and he meant:

- ⊙ To upgrade new product or product quality;
- ⊙ Creation of new production methods;
- ⊙ to attract new markets;
- ⊙ To attract new markets for raw materials and semi-finished products;
- ⊙ Organizational change.

The process of producing innovations described by Jürgen Hunschild and Klaus Brokhoff, an innovative researcher from Germany, is critical to understanding the concept of innovation. It is important that Brokhoff's idea of the origin of the idea, the invention itself, and the process of forming the product ready to sell.

At these stages, he described the concept of innovation as the basis for understanding innovation, while creating inventions and products. Each step involves the process of accepting or declining the idea, the technological conformity, and the proposed economic achievement.

### 3. Analysis and results

To achieve the goals and obtain certain results in the innovation sphere, it is necessary to stimulate the enterprise to make the necessary changes. In turn, the solution of the set task should begin with the consideration of the term "motivation". In various sources, motivation is interpreted as the process of encouraging oneself and others to act in order to achieve personal goals and the goals of the organization. Obviously, this point of view does not allow to reveal the essence of the process of motivating an enterprise or organization, i.e. systems are more complex than the motivation of the individual (employee). Depending on the level of the economic system, there will be various groups of motives that encourage innovative transformations within these systems.

Innovative activity of the enterprise is due to the emergence of normative and legislative acts of state structures. In this case, the change in norms, quotas, tax rates established by the state, forces enterprises to make the appropriate changes. So, for example, the tightening of environmental legislation entails corresponding changes in technical and technological systems to ensure the implementation of the changed standards. Thirdly, the motivation of innovative transformations at the level of the national economy, as well as the creation of conditions for stimulating innovative activity of enterprises. It is extremely difficult to isolate the entire set of motives that induce innovative transformations at the level of the entire economy, but,

in our opinion, the following main motives can be distinguished: the provision of technological, informational, food, etc. independence will also depend on innovation in the national economy.

Innovation in modern conditions the formation of the knowledge economy is the main factor ensuring economic growth. From this we can conclude that the more active and intensive the innovation activity in industry, the higher the level of economic development and, accordingly, the level of the revenue part of the state budget that can be used to solve both current and future problems and challenges. It is obvious that without the support and implementation of innovative transformations it is extremely difficult to ensure the solution of this problem, especially in the long term.

It should be noted the need to develop measures to stimulate innovation at all levels, only in this case, we should expect certain results in the innovation sphere of activity. As noted by Razykova G.Kh. "Creating favorable conditions for the development of innovations will allow modernizing the technological base and drastically raising the competitiveness of the national economy" [3.6, p.17]. Obviously, if an environment is created in the economy that is favorable for innovation processes, and at the enterprise level, there is no corresponding work to stimulate innovation, then positive results should not be expected. Again, if both the enterprise and the employees of enterprises are focused on the implementation of innovation activities, but there is no corresponding environment in the economy that promotes innovative transformations, the result will be the same. In other words, first, a system of measures should be developed to stimulate innovation at the level of the economy as a whole; secondly, work should be carried out to create a system for stimulating innovation activity at the level of the enterprise or organization; thirdly, the motivation of managers of specific employees to effective and efficient innovation.

At the same time, it should be noted that the proposed classification of innovative motives according to the level of consideration of economic systems is far from the only one, and there are other points of view on the solution of this issue in the scientific literature. So, in particular, a number of researchers indicate that the incentives for innovation for innovative enterprises can be divided into internal and external. It should be noted the validity of this approach to the consideration of the motivations of innovative processes at different levels. The motives of innovative activity can be divided into having an objective and subjective nature. It is obvious that such a division is applicable not only to complex economic systems, but also to an individual worker, the activation of which depends on the state of the external, in relation to him, environment, and on his desire to engage in

such activities.

Investigating the driving forces of innovative transformations, one cannot but touch upon the factors that influence the innovative activity. It should be said about the relationship of motives and factors that determine innovative transformations. Motives initiate (induce, compel) innovative activity, and factors are elements without which it is impossible or difficult. We can give the following example: the strongest competition in the consumer goods markets with foreign companies encourages (motivates) many domestic enterprises to implement innovative changes, but the lack of financial resources makes it difficult for these enterprises to carry out innovative activities. At the same time, a number of domestic enterprises have enough financial resources, but there are no motives, in the form of competition, for the implementation of innovation transformations.

In this regard, the impact on innovation activity and the intensity of the innovative activities of industrial enterprises cannot be realized without identifying the reasons, motivations that force organizations to carry out scientific and technological transformations.

The motivation for innovation is a set of needs and motives that motivate the manufacturer to be active in the direction of creating and selling innovations or buying and using them in the business process. With this in mind, there are three levels of motivation in the work:

- the macro level, which unites the motivation of innovative transformations at the level of the national economy that form the environment of innovative activity of enterprises;

- meso-level, the motivation of innovation at the level of industries and sectors of the economy can be defined as their ability to sustainable development in the face of increasing competition;

- the micro level, the motivation of innovation at the level of the enterprise and the employee, is defined as its ability to carry out profitable economic activity in a competitive market, which is ensured by the effective use of organizational, economic, social, scientific, technological, marketing and other means of doing business.

Taking into account the above approaches, we propose to identify the following main reasons for the changes in the level of innovative activity of industrial enterprises:

- the most important incentive factor contributing to changes in the level of innovative activity is the growing level of competition in commodity markets. There is a directly proportional dependence - the higher the level of competition, the greater the desire to implement innovations, and vice versa, the lower the level of competition, the lower the desire to implement innovations. It is competition that forces commodity producers to make certain changes in

their activities, innovations in order to occupy a more favorable position in the market compared to competitors. In this case, the company seeks to occupy a leading position in the market through active innovation activities and the implementation of effective innovations that provide competitive advantages;

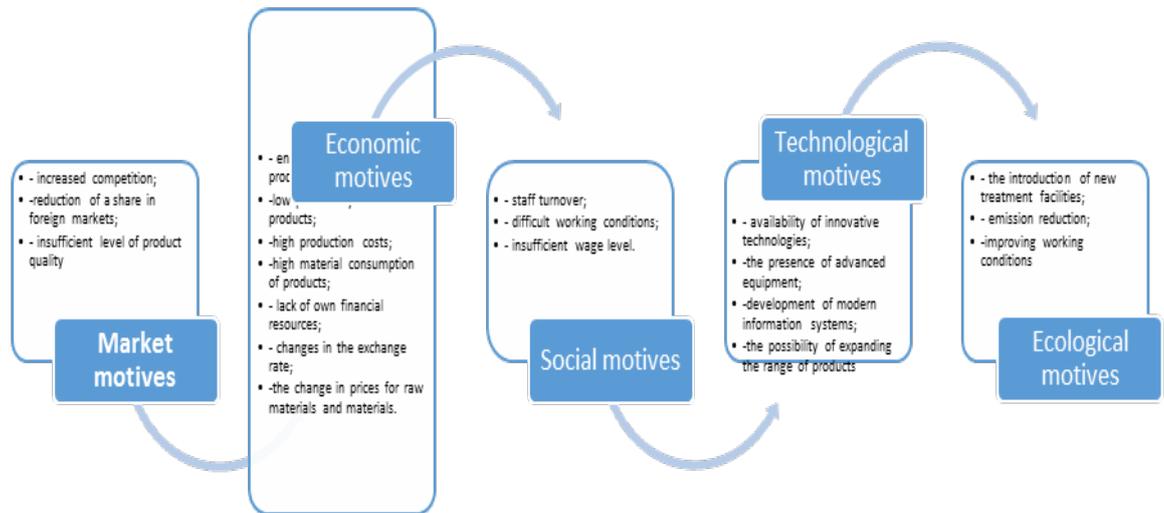
- Another equally important reason for the innovative activity is the desire of enterprises and organizations to obtain high rates of return. Innovations as a result of innovation activity allow enterprises - the initiators of their implementation to temporarily occupy a monopoly position in the market (before the moment of implementation of this innovation by other enterprises), i.e. there is a possibility of price regulation and, as a result, obtaining additional profits;

- innovation and the resulting innovation as a result of its implementation are one of the main means allowing to increase the scale of the enterprise's activities. It is product innovation that opens up new areas of activity for manufacturers, new niches in commodity markets. At the same time, the growth of the production scale in this case is limited only by the size of the newly created market, and the growth of the enterprise itself does not encounter opposition from competitors. At the same time, process-innovations make it possible to impart to existing products characteristics that ensure an increase in their consumer appeal (price reduction, quality improvement, new consumer properties, etc.), which makes it possible to increase sales, and, consequently, production i.e. change the scale of the enterprise, and, consequently, the amount of profit.

Based on the analysis and synthesis of research results of domestic and foreign scientists, a classification of the motives of innovation activity has been developed (Table 1).

Obviously, at different levels of consideration, different groups of factors that impede and stimulate innovative transformations will affect economic systems. Considering that innovations are implemented by enterprises and organizations, and the state in relation to the economy only creates the conditions for their implementation, in this work we limit ourselves to considering the factors affecting the innovation sphere at the level of the enterprise and the individual employee.

Since the effectiveness and efficiency of a set of activities related to the generation of innovation, which will form the basis for future innovation, depends on the employee or group of employees on whom these functions are implemented, it can be concluded that the most important factor affecting the flow of innovation at the level of the individual employee, there will be the ability of this employee to carry out similar activities.



**Fig.1. Classification of motives for innovation activities in industrial enterprises**

Based on the analysis of research results of foreign scientists, we can cite the following set of factors that hinder and facilitate the innovation activities of enterprises. It should be noted as a positive moment of this table that a wide range of factors affecting the innovation sphere is taken into account, and as a negative moment it is necessary to point out the lack of division of the above mentioned factors depending on the level of the economic system under consideration. Obviously, innovative transformations at different levels will be affected by different groups of factors (Fig. 1.).

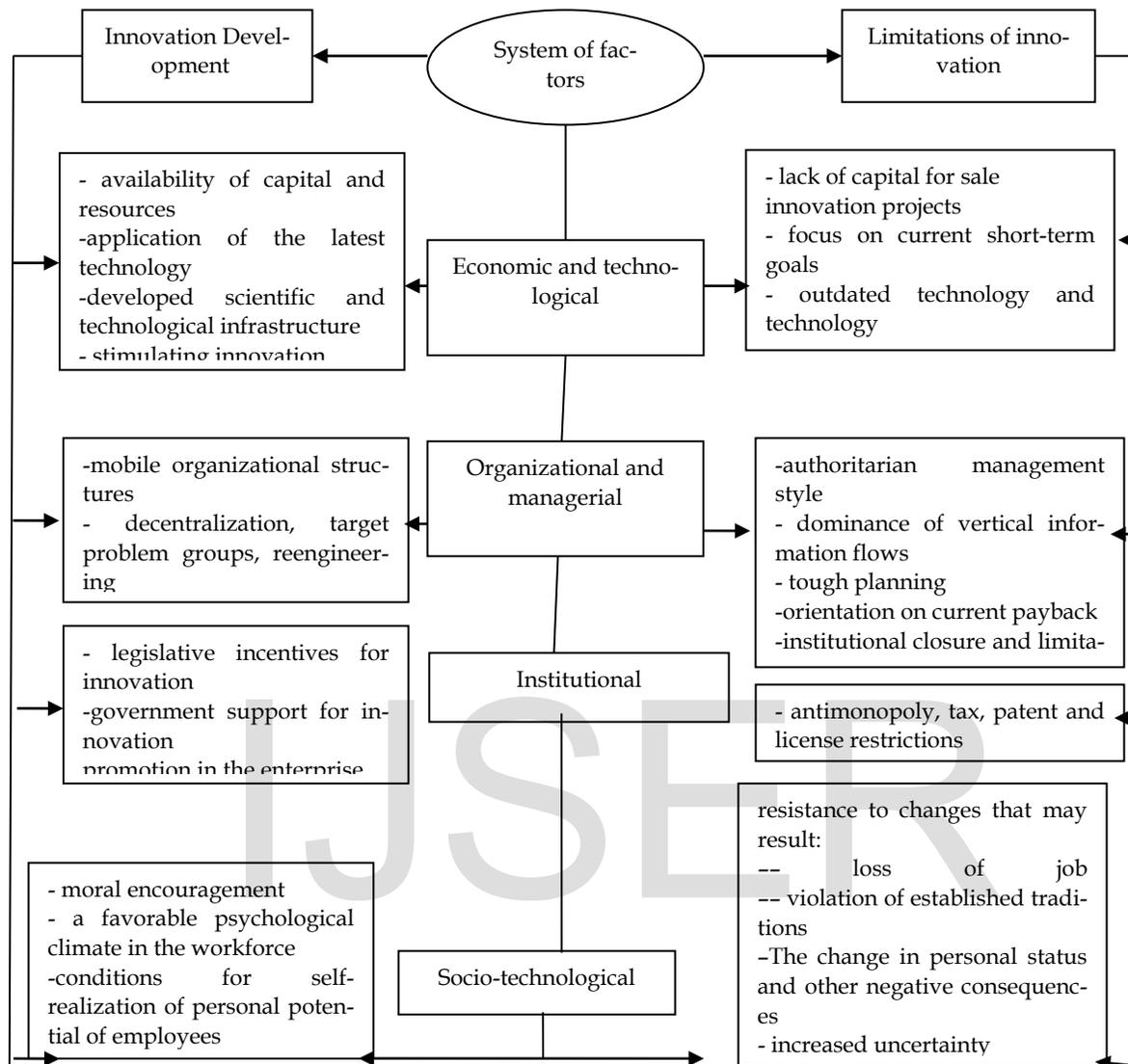
Different authors identify various problems and factors that influence the innovative activity of industrial enterprises and the innovative projects that are being implemented, which should be the basis for building effective systems of motivation for this activity. (Fig.2)

It is necessary to improve the system of strengthening human resources, rational use of available labor resources, retraining of workers with a long working life and also training new generation, who know the laws of a market economy, well-oriented in the current situation.

The introduction of an assessment of human resources in the enterprise will make it possible to achieve a qualitative change in the structure of personnel, increase flexibility in the use of labor and enhance innovation in industrial enterprises, including through the rotation of jobs. Assessment of human resources will allow

identifying the most innovatively active workers, and depending on the personal contribution of each employee to the increase in innovation activity and the fulfillment of performance indicators, performance and quality will allow to calculate the amount of bonuses to a specific employee.

Thus, to build a mechanism for influencing the innovation activity of enterprises, it is necessary, firstly, to identify the list of fundamental factors that actively influence the innovation activity of enterprises, secondly, to determine how their change will affect the innovation activity of enterprises, thirdly, to outline the list measures to change the impact of a factor in order to obtain the necessary results in the innovation sphere.



**Fig. 2. Factors of industrial enterprise innovation**

Nowadays, speaking of a modern developing enterprise, one cannot but touch upon the issue of its logistics system, which has a direct impact on the efficiency of the enterprise as a whole and the successful implementation of its production plans.

Logistics in a broad sense encompasses all processes that serve to move enterprise resources in time and space, in other words, logistics is the planning, management and control of the storage and transportation of material flows inside and outside the enterprise.

Properly built logistics system ensures successful planning of production and sales of products, leads to savings in the resource base, reduction of working time losses, well-built relationship between the activities of organizational units and, as a result, provides an increase in profits.

Today, the domestic integrated logistics business is at the beginning of the journey. So, NHC "Uzbekneftegaz" has not yet clearly developed logistics strategy. If in the USA and Western Europe the share of logistical costs in the price of goods is only 11-12%, in the NHC "Uzbekneftegaz" - more than 25%. In the oil and gas industry of the republic, the share of operating costs is 28-30% in general, which is significantly higher than in advanced foreign companies. [1]

Moreover, in the logistics system of the Uzbekneftegaz NHC a number of features are observed:

- insufficient technical support;
  - poor logistics infrastructure at the level of joint-stock companies and as a result of the holding as a whole;
  - lack of rational supply chain management;
  - lack of personnel in the area of improving the efficiency of warehouse and warehouse complex management.
- [2]

In this regard, it is necessary to optimize the work of the entire logistics system, from the logistics and production, to the sale of oil.

As practice shows, the process of improving the logistics system should be considered as a set of measures, including the improvement of each link in the logistics chain:

- 1) the general logistic system of the company (the development of logistic management technology taking into account the specifics of activities)
- 2) the process of supply (the formation of a procurement plan, the development of methods for calculating the optimal level of stocks of raw materials and materials);
- 3) transport logistics (development of cost-effective routes for the delivery of products to consumers, development of methods for managing the transportation of goods);
- 4) production logistics (drawing up plans and production schedules, optimizing the system for the movement of goods in the enterprise);
- 5) warehouse logistics (creation of a warehouse management system, selection and justification of a warehouse automation method, development of a warehouse inventory management method);
- 6) distribution logistics and sales (development of criteria for evaluating existing customers and schemes of interaction with them, development and implementation of criteria for analyzing and forecasting demand for products). A prerequisite for the coordinated work of all links of the logistics chain is the availability of modern information systems that are able to quickly and economically bring the right signal to the desired point.

In view of this, the application of modern information management concepts, which allow to plan and manage all the resources of an enterprise, becomes relevant.

#### 4. Foreign experience

In foreign practice, corporate information system ERP - Enterprise Resource Planning (enterprise resource planning) has become widespread.

Enterprise Resource Planning System is an integrated enterprise management system and production, allowing you to create a unified environment for the automation of planning, accounting, control and analysis of all major business operations of the enterprise. ERP-systems are introduced in order to unite all divisions of the company and all necessary functions in one computer system, which will improve operational decision making based on real-time data access, thus optimizing business processes. The system automates tasks embedded in the execution of business processes, while eliminating multiple errors in entering information, loss of documents, duplication of operations, etc.

ERP systems in the global market for software services used in the oil and gas sector are characterized by the following:

- more than 20 years experience in this sector;
- over 70% of all integrated oil and gas companies in the world use these systems;
- 75% of companies in the top twenty upstream mining companies use these systems;
- 90% of companies in the top twenty downstream (processing) companies use these systems. [1]

What does the use of ERP-system in the logistics of oil and gas companies?

A feature of oil and gas companies is that the output material flow is oil (gas). In the process of its production the most costly moment is the construction of wells. The use of a systematic approach in the process of well construction caters to the full construction cycle for approximately 20 days, which, in turn, entails an increase in the number of wells put into operation and, accordingly, an increase in oil production. In the future, this leads to a reduction in the number of drilling crews (savings in labor costs), a reduction in the cost of oil production and, as a result, an increase in profits. [1]

Also among the factors that motivate companies in the oil and gas sector to develop ERP systems is the need to increase the volume of proven reserves, intensify the operation of operating wells, optimize gas transportation and processing.

Moreover, the consolidation of oil and gas companies into vertically integrated holding companies, such as the Uzbekneftegaz National Holding Company, requires the introduction of unified management standards, office management, reporting, which allow to achieve the ERP system. The work for export also has a high rate of development of information technologies in the industry: the requirements of foreign contractors and investors are a good incentive for the development of integrated information systems. [26-27]

An important factor in the use of the ERP system in the system of the oil and gas industry of Uzbekistan is that

it has great potential for maintaining parallel accounting both in accordance with IFRS (International Financial Reporting Standards) and in accordance with the standards in force in Uzbekistan. This will allow us to comply with comprehensive national accounting standards, comply with the reporting requirements in the oil and gas industry, ensure the effectiveness of budget control, as well as the accuracy and transparency of financial reporting. [24]

However, the implementation of the ERP system is not an easy task, involving a change in internal procedures in the company, reengineering of business processes, as well as significant changes in the work of its employees. Due to the complexity of the project, the timing of the implementation of such systems for such companies as the Uzbekneftegaz National Holding Company is quite long (2-3 years). The cost of development and implementation can range from 20 thousand USD to several million USD. On average, the payback period for an ERP project is 1-3 years. [22-23]

Foreign experience in the use of ERP-system gives positive results. According to a survey conducted by the Panorama Consulting Group in July 2015 among oil and gas companies, the results of implementing an ERP system are that information becomes more accessible in a company. This is noted by 42% of respondents, 13% of companies noted that the use of ERP-system allowed them to improve the interaction of all departments and parts of the business, 8% were able to optimize interaction with customers using such solutions, 4% increase productivity, 7% reduce costs remuneration. [28]

In general, 94% of companies that have applied the ERP-system, achieved positive results from the implementation.

In Russia, the total number of users of ERP-systems in the oil and gas industry today exceeds 15 thousand and will grow steadily in the coming years.

If we turn to the Russian experience of implementing ERP-systems, in particular in a number of Gazprom subsidiaries, we can cite figures that speak for themselves. The introduction has allowed a 10% reduction in the cost of the acquisition of inventory. After the introduction of a common directory of organizations, data on receivables collected across the company. Only saving time is 40 hours a week, and the receivables themselves have decreased by 35% due to the reflection of obligations in real time. It has become possible for management to obtain up-to-date information on the needs of workshops and departments of the enterprise in materials and equipment, as a result of which inventories have decreased by 22%. [25]

## 5. Conclusion

Thus, the introduction of modern integrated information systems into the practice of the activities of the Uzbekneftegaz National Holding Company will allow:

1) to increase the level of administration, reduce bureaucratic costs, improve the quality of decisions;

2) reduce all types of logistics costs, freeing up financial resources for the long-term development of the industry;

3) reduce operating costs by increasing the financial capacity for the current operations of the company.

## References:

1. Dodgson M. The management of technological innovation: An international and strategic approach. Oxford University Press, 2000, 248p.;
2. Grossi G. Promoting Innovation in a big business. Long range planning. Vol. 23, N1, 1990, 240p.;
3. Schumpeter I. Theory of Economic Development / I. Schumpeter. -M.: Direct Media, 2007. 400 pp.;
4. Henry, J. and Walker, D. Managing Innovation, London: Sage Publications, 1991, 367p.;
5. Westley, F., Mintzberg, H. Visionary leadership and strategic management, Strategic Management Journal, 1995, P. 32.;
6. Afuah A. Innovation management: Strategies, Implementation, and Profit. New York: Oxford University Press 1998.;
7. Popadiuk S. and Choo C.W. innovation and knowledge creation: how are these concepts related? International Journal Information Management, 26, 2006, pp. 302-312.
8. Afonin I. Century Management of enterprise development: strategic management, innovation, investment, prices: studies. allowance. / I. V. Afonin. - M.: Dashkov and 2002. - 314 p.;
9. Bazilevich A.I. Innovative management of an enterprise: textbook for university students enrolled in economics and management / A.I. Bazilevich; under. Ed. V.Ya. Gorfinkel. - M.: UNITY-DANA, 2009. - 231 p.;
10. Hamidov G.S. Basics of innovation and innovation activity / G.S.Gamidov, V.G. Kolosov, N.O. Osmanov. SPb.: Polytechnic, 2000. - 323 p.;
11. Zavlin P.N. Innovative activity in modern conditions / P.N. Zavlin // Finmarket Information Agency. - 2005. - March 24, 2008.;
12. Kochetkov S. V. Managing the Development of the Innovation Potential of Industrial Enterprises / S.V. Kochetkov. - Abstract of doctoral dissertation on economics.; Lapteva E.A. Problems of assessing the innovative potential of industrial enterprises // Management of economic systems. - 2014. - № 8.;
13. Korobeynikov O.P. The role of innovation in the formation of an enterprise strategy // Management in Russia and abroad. 2000. - № 3 [Electronic resource]. URL: <http://www.mevriz.ru/articles/2000/3/856.html> (access date 03/21/2019);
14. Trifilova A. A. Evaluation of the effectiveness of innovative development of the enterprise. - M.: Finance and Statistics, 2005. - 304 p. ; 162.
15. Gileva, TA, Innovative Potential of an Enterprise: Structure, Assessment, Formation, / T. A. Gileva, A. R. Nizayev // Current Issues of Management in Social and Economic Systems: Interuniversity collection of scientific papers. Part II. - Ufa. USGAT. 2006. - p. 213-218. ;
16. Mirsaidova Sh.A., Goldman Y.D. Innovation management - T.: TDIU. Darslick 2011. 286-b.;
17. Sh.N.Zainutdinov. Innovation of the United States of America The Development Strategy // //

- "Innovative Technological Innovation" or the electronic journal. No. September 1, 2011;
18. S. Mustafakulov. Compilation of Audit-Communiqué on Socio-Economic Innovation and Innovative Taxation // Financial and Banking Business, October 3, 2016 5-16.
19. Mukhitdinov Kh.T. Institutional Approach to the Innovation Salad of Formation Promotion // Itisatiot v Finance, No. 2, 2012, pp. 2-6.
20. U. G'ofurov. Fundamentals of Small Business Business in Innovation Funding Amalieta zhory // Itqisodiyot va moliya, №2, 2012, 17-23 pp.
21. I.Umarov, S.Saidkarimova, Sh.Oblogulova. Innovation of Sociality Indicators Analysis of Industrial Enterprises // "It's Innovation of Technological Innovation" Ilmi Electron Journal. # 4, July-August, 2015.
22. Mirzamahmudov J., Rakhmatullaev H. [and others]. Improving the management system in the oil and gas sector of the Republic of Uzbekistan / Mirzamakhmudov J., Rakhmatullaev H. // Center for Economic Research. - 2014. - №12.
23. Golikov E.A., Purlik V.M. Basics of Logistics and Business Logistics: Monograph. - M.: Publishing House Ros. econ Acad., 2015.
24. B.D., Zhuchenko I.A. Logistic bases of management of material and cash flows. (Problems, searches, solutions). - M.: Oil and gas, 2014.
25. Tarakhtiyeva G.K. Innovation-oriented approach to the development of industry of the Republic of Uzbekistan // Collection of scientific papers "The implementation of the anti-crisis program - the further development of the national economy and increase its competitiveness." – Moscow: Moscow Institute of Humanities and Economics, 2010. - p. 291-292.
26. Tashpulatov T. The development of innovation in the industry of the Republic of Uzbekistan. Author. diss. Ph.D. - Tashkent, 2004.
27. Tretyak V.P. Enterprise clusters. M.: Avgust Borg, 2006. - 132 p.
28. Ferova I.S. The cluster approach: from concept to regional industrial policy: Monograph. - Krasnoyarsk: Krasnoyarsk State University, 2005. - 106 p.