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ASSESSMENT OF ECONOMIC EFFICIENCY OF INNOVATIVE ACTIVITY OF INDUSTRIAL ENTERPRISES

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ABSTRACT
In the effective implementation of innovative activities, it is widely revealed that the activity of technological exchange, which explains the processes of sale and purchase of new technologies, manifests itself as a technological investment, and also recommends the development of technological parks.
KEY WORDS: ***assessment, economic efficiency, innovative activity, industrial enterprises.***

The organizational aspect of innovation is seen as both the beginning and the end of every innovation management. In it, the main goals and tasks of the project are focused on these indicators, taking into account that effective influence on increasing the life cycle of products and services, occupying the main markets, expanding investment activity and increasing the employment of the population are important elements of innovative activity (Figure 1.4). Accordingly, the methodology for evaluating the economic efficiency of innovative activities of industrial enterprises is aimed at solving these issues (Figure 1.5): justification of scientific research tasks; determining the criteria and indicators for evaluating economic efficiency; assessment of the impact of innovative activity on the efficiency of the industrial enterprise and selection of effective methods of its implementation .

The criteria for evaluating the innovative activity of industrial enterprises are as follows: the level of scientific potential of the industrial enterprise; level of access to information and scientific achievements; competitive developments that ensure the achievement of the goal of the industrial enterprise.

Table 1
Classification of economic performance indicators of innovative activity of industrial enterprises[1]

No	Indicator name	Pointer expression	The optimal point of the indicator
		The level of scientific potential of the enterprise	
1.	Coefficient of level of scientific potential of industrial enterprises	$k_{Is} = \frac{X_{If}}{JX_{Ich}}$ here, k_{Is} - scientific potential level coefficient; X_{If} - cost of innovative activities, million soms; JX_{Ich} - total production costs, million soms.	≤0.75 _ _
2.	Coefficient of introduction of own research and development	$k_{O'zIshJq} = \frac{M_{JqO'zIsh}}{JM_{AoO'zIsh}}$ $k_{O'zIshJq}$ - coefficient of introduction of own research and development; $M_{JqO'zIsh}$ - amount and number of introduced own developments; $JM_{AoO'zIsh}$ - total amount, number of self-developed projects.	< 0.60
3.	Coefficient of implementation of the results of own research and development	$k_{O'zIshTq} = \frac{M_{JqO'zIsh}}{JM_{JqIsh}}$ $k_{O'zIshTq}$ - coefficient of implementation of the results of own research and development; $M_{JqO'zIsh}$ - amount and number of introduced own developments; JM_{JqIsh} - the total number of introduced developments.	< 0.50
		Level of modernization and labor productivity	

[1]It was developed based on the author's research.

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No	Indicator name	Pointer expression	The optimal point of the indicator
4.	The rate of renewal of techniques and technologies	$k_{Tty} = \frac{Q_{ytt}}{Q_{tt}}$ k_{Tty} - coefficient of renewal of techniques and technologies; Q_{ytt} - the cost of new equipment and technologies launched this year, million soums; Q_{tt} - total value of equipment and technologies, million soms.	< 0.60 _
5.	Coefficient of obsolescence of techniques and technologies	$k_{Tte} = \frac{Q_{tte}}{Q_{ttb}}$ k_{Tte} - coefficient of obsolescence of techniques and technologies; Q_{tte} - depreciation cost of equipment and technologies, million soms; Q_{tte} - initial cost of equipment and technologies, million soms.	< 0.50 _
6.	Fund return ratio	$k_{Fq} = \frac{Q_{ichm}}{Q_{aichf}}$ k_{Fq} - fund return coefficient; Q_{aichf} - the initial value of the main production funds, million soums; Q_{ichm} - volume of manufactured products, million soms.	< 0.65 _
7.	Coefficient of armed with stock	$k_{Fbq} = \frac{Q_{aichf}}{S_i}$ k_{Fbq} - coefficient of armed with the fund; Q_{aichf} - the initial value of the main production funds, million soums; S_i - number of employees, people.	<45
8.	Labor productivity coefficient	$k_{Mu} = \frac{Q_{ichm}}{S_i}$ k_{Mu} - labor productivity coefficient; Q_{ichm} - volume of produced products, million soums; S_i - number of employees, people.	< 0.60 _
		Level of product competitiveness	
9.	Coefficient of product competitiveness	$k_{mr} = \frac{Q_{tym} - Q_{tpm}}{Q_{tym}}$ k_{mr} - coefficient of product competitiveness; Q_{tym} - volume of products in high demand, million soums; Q_{tpm} - volume of products in low demand, million soms.	< 0.55
10 .	Product refresh rate	$k_{my} = \frac{Q_{tym}}{Q_{Ishym}}$ k_{my} - product renewal coefficient; Q_{tym} - volume of products in high demand, million soums; Q_{Ishym} - volume of newly produced products, million soms	< 0.80
11.	New product adoption rate	$k_{yo'zl} = \frac{Rt.m.}{R\,r.}$ $k_{yo'zl}$- Coefficient of assimilation of new products; $Rt.m$- income from the sale of new products and products manufactured using innovative technologies; $R\,r$.- income from the sale of all products.	K ≥ 0.45 to 0.50 - leadership strategy ; K ≤ 0.45 to 0.40 is of the follower strategy .

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The level of innovative development			
12.	Coefficient of innovation development	$k_{inn.o'zl} = \frac{Pinv.loy.}{Cinv.xar.}$ $k_{inn.o'zl}$- Coefficient of adoption of innovative products; $Pinv.loy.$ −investment in research and education of projects value ; $Cinv.xar.$- the total value of other investment costs;	K ≥ 0.50 to 0.60 _
13.	Provision of cocktail resources with ITI and IFYu	$k_{t.ish.h.} = \frac{Lt.ish.}{Wish.h.}$ $k_{t.ish.h.}$- coefficient of employees used in research and development; $Lt.ish$ −the number of people employed in the field of research and development; $Wish.h.$- average number of employees;	K ≥ 0.20 to 0.25 - the company is leading strategy chooses ; K from 0.20 to 0.15 - the company is a follower strategy chooses _

Based on the above, taking into account the specific characteristics of the oil and gas industry (capital, fund and labor capacity), which is the object of research, in our opinion, the indicators of the economic efficiency of the innovative activity of industrial enterprises should be determined by the scientific potential of the enterprise, modernization and labor productivity, and the level of product competitiveness. Similarly, it can be classified into four criteria representing the level of innovative development (Table 1.1).

Indicators of the level of scientific potential of the enterprise. The level of scientific potential of industrial enterprises explains the introduction and implementation of their scientific research developments. In this case, the level of scientific potential of enterprises can be determined in the form of the ratio of the costs of innovative activities to the total production costs. It is expressed as follows:

$$k_{Is} = \frac{X_{If}}{JX_{Ich}} \quad (1.1)$$

where: k_{Is} - scientific potential level coefficient;

X_{If} - cost of innovative activities, million soms;

JX_{Ich} - total production costs, million soms.

This indicator can be normative, planned and real. If necessary, this indicator can be used to evaluate the company's potential among competing companies. The innovative potential of the enterprise is determined depending on the level of indicators. In it, the levels of innovative activity are created on the basis of a set of indicators showing the internal socio-economic and financial situation of the enterprise, and it also determines the direction of the enterprise's strategy (Table 1.2).

The innovative activity of industrial enterprises can be evaluated by the coefficient reflecting the share of **introduced developments** in the total amount of their own **research and development .** It will have the following expression form:

$$k_{O'zIshJq} = \frac{M_{JqO'zIsh}}{JM_{AoO'zIsh}} \quad (1.2)$$

where, $k_{O'zIshJq}$- coefficient of introduction of own research and development;

$M_{JqO'zIsh}$- amount and number of introduced own developments;

$JM_{AoO'zIsh}$ - total amount, number of self-developed projects.

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Table 1.2
Types and level of innovative potential of the enterprise

Indicators of innovative potential and means of covering costs	Brief description of the level of innovative potential of the enterprise	The strategy of developing the innovative potential of the enterprise
High level		
Private means S (1;1;1)	The private means of the enterprise are provided at a high level, there is no need for external support of the enterprise.	in the market and competitive market **:** - does not spare any cost in the adoption of new technologies - correctly assesses the innovative potential and correctly directs the company's strategy for its future
Middle level		
Uses private equity and long-term loans S (0 ;1;1)	The private means of the enterprise are not provided at a high level, the enterprise needs external support.	**Follow-up strategy:** - due to the correct assessment of the competitive environment in the adoption of new technologies, he does not avoid covering expenses on credit
Lower level		
It uses private funds and long-term loans and an external partner S (0 ; 0 ; 1)	Due to the high lack of private funds of the enterprise, the enterprise has a need for external support, and also prefers to build external cooperation in exchange for having debt.	**Adoptive strategy:** - In order to maintain the stability of enterprises in the competitive environment, they work based on the strategies of other developed enterprises.
The lowest level		
The state of its private funds is unregulated and it uses long-term loans and an external partner S (0 ; 0 ; 0)	The company is slow to regulate the level of use of tools and takes advantage of the opportunity to improve the health of its company, and does not care about the increase in the share of shareholders.	**Black Swan Strategy:** It is a crisis strategy, and like any other strategy, it involves risk.

Source: Kadyrov A.M., Kadyrov U. Innovative potential razvitiya promyshlennyx predpriyati respubliki v usloviyax rynka //"Novoe kachestvo ekonomicheskogo rosta: innovatsii, konkurentosposobnost, investitsii". Materialy Respublikanskoy nauchno-prakticheskoy conference. 1 volume. -T.: Maliya, 2008.-p.53-54.

This indicator can be used to justify and evaluate the scientific level of innovative activity of industrial enterprises. To evaluate the innovative activity of industrial enterprises and to determine the reasonable relationship between purchased and own research and development, the ratio of own development to the total amount of implemented research and development can be used. It has the following expression form:

$$k_{O'zIshTq} = \frac{M_{JqO'zIsh}}{JM_{JqIsh}} \quad (1.3)$$

here, $k_{O'zIshTq}$ - the coefficient of implementation of the results of own research and development;

$M_{JqO'zIsh}$ - amount and number of introduced own developments;

JM_{JqIsh} - the total number of introduced developments.

own research and development $k_{O'zIshTq}$ with the help of the indicator , it is possible to think about the rate and level of scientific research development in enterprises . If the high value of this coefficient is close to one, the innovative activity of the industrial enterprise is high. On the contrary, if the coefficient is lower than 0.5, it indicates the low activity of the enterprise in the development and introduction of innovations.

In addition to this, if we emphasize the importance of developing and implementing one's own innovative developments, it is of great importance to identify and justify the scientific and research developments being adopted and implemented by other enterprises.

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