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COMPOSITION OF INDICATORS FOR ASSESSING THE INNOVATIVE POTENTIAL OF CONSTRUCTION ORGANIZATIONS

Abstract: *In this research paper argues the composition of indicators combined in three blocks, and the algorithm for their calculation. The formation of an innovative industry cluster requires the application of the innovative potential of construction organizations.*

Key words: *construction, cluster approach, innovative development, innovative potential of construction organizations.*

Language: *English*

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Introduction

Innovative development of the industry is an objectively necessary solution, which in modern conditions is planned to be implemented on a cluster basis, combining the industry ministry with its regional divisions, higher educational institutions and professional colleges for the construction industry, as well as design and construction organizations and enterprises.

The study considers the initial stage of the formation of an innovative production cluster. Based on this, and also taking into account the accepted principles of the formation of the cluster, the selection of indicators characterizing the innovative potential of the construction company was made.

Materials And Methods

This selection took into account the availability of source information, the simplicity of calculating indicators, and ensuring a sufficient level of objectivity in assessing the innovative potential of a construction enterprise. Of course, at the subsequent stages of the development of the cluster, the composition of indicators for assessing the potential can be clarified. To assess innovative potential, more than ten indicators are proposed, grouped in three blocks, shown in the table. The model for determining the indicator of innovative potential of business entities allows you to interconnect all the factors affecting the innovative potential of the enterprise, and accordingly determine the possibilities of its innovative development.

Table 1. Indicators for assessing the innovative potential of business entities in the construction industry

№	Title of the block and indicators
	Block A. External indicators
1	Competitiveness of QS
2	Dynamics of the volume of work performed
	Block B. Indicators of organizational and managerial activities and economic results

3	The growth in the proportion of qualified personnel in the QS
4	Growth in the share of intangible assets in the total value of fixed capital
5	Dynamics of labor productivity (output)
6	Profitability dynamics
	Block C. Indicators of production and technical activities
7	Uniformity (rhythm) of construction
8	Deviations in terms of construction
9	Dynamics of the economic effect of introducing innovations
10	Quality of construction work
11	Compliance with safety and labor regulations

For block A, it is proposed to take into account two indicators: competitiveness of the construction; organization dynamics of the volume of work performed.

It should be noted that one of the most important indicators of the availability of innovative potential is certainly the competitiveness indicator, which reflects the ability of business entities to compete in the market, in which the independent actions of each of them exclude or limit the ability to unilaterally affect the general conditions for the circulation of goods on the corresponding construction products . The competitiveness of the construction organization can be reflected in many indicators: sales of finished products, sales of services, net profit, etc.

We believe that the most adequate assessment indicator of the competitiveness of a construction organization is the effectiveness of participation in tenders. It is proposed to determine this indicator by the formula:

$$n_1 = \frac{D_{т.и} - D_{T_C}}{D_{T_C}}$$

where,

$D_{t_1 H}$ the proportion of the volume of construction and installation works for the analyzed period on tender objects;

$D_{t_1 C}$ - also for the same period last year;

The dynamics of the volume of work performed to a certain extent depends on the market conditions for construction products and is determined by the formula:

$$n_2 = \frac{Q_N - Q_c}{Q_c}$$

where,

Q_N и Q_c - the volume of construction and installation work, respectively, in the analyzed period and the same period last year.

To account for organizational and managerial activities and economic results (block B), it is proposed to use indicators:

- the dynamics of growth in the number of highly qualified personnel.
- the growth of the share of intangible assets in percentage terms in the total value of fixed capital;
-dynamics of labor productivity (output);
- the dynamics of profitability.

Thus, the innovative potential of block “B” and block “C” is determined. According to the full version of the methodology, the Ministry of Construction of the Republic of Uzbekistan addresses.

Following the determination of the numerical value of the above indicators for all three blocks, their value is determined taking into account the significance coefficient within each block according to the following formula:

$$N_i = n_i Z_i$$

where,

n_i – initial value of the i-th indicator;

Z_i - the coefficient of significance of the i-th indicator within each block. Each coefficient has a value in fractions of a unit and is determined by experts. Moreover, the sum of the coefficients within the block is equal to unity.

$0 \le Z_i \le 1.0$

The next calculation step is to determine the total indicator of innovation potential for each block according to the formula:

$$n_{бл\gamma} = \tau i \sum N\gamma$$

where,

τi - block significance factor. It is determined by the expert method. In this case, the coefficient takes a value within unity, and the sum of all the coefficients of all blocks is taken equal to unity.

Following this, the total value of the indicators of innovative potential is determined by the formula:

$$n_{инт} = \sum_{a}^{c} n_{бл\gamma}$$

Similarly, you can determine the integral indicator of the innovative potential of a construction organization for the analyzed period (for 1 quarter, 2 quarters, 3 quarters, a year).

Thus, the proposed methodology for calculating the innovative potential of a construction organization makes it possible to assess this potential quite simply and with a certain level of objectivity.

Conclusion

The experts can be employees of the Ministry of Construction and specialists from universities, research and large design organizations.

It should be noted that the coefficients determined by expert expert means can and should be periodically audited. Moreover, the significance of a single primary indicator or the importance of a block can change over time in accordance with changes in the external environment and the emergence of new requirements for the innovative potential of a construction organization.

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