INDICATORS FOR ASSESSING PRODUCTION POTENTIAL

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Annotation

The article is based on the fact that the assessment of the production potential of enterprises is one of the most important aspects of effective production development. Production potential is divided into four stages, and each stage is described separately. The use of the developed methodology for a comprehensive assessment of the production potential of grain processing enterprises allows enterprise managers to take a systematic approach to the assessment process.

Keywords: Evaluation indicators, technological resources, vulnerability level, financial resources, depreciation rate, working capital, rationalization level, production resources, production capacity, information sources.

Annotatsiya

Mazkur maqola korxonalarning ishlab chiqarish salohiyatini baholash samarali ishlab chiqarish rivojlanishi uchun eng muhim jihatlardan biri ekanligini asos qilib oladi. Ishlab chiqarish salohiyati to‘rt bosqichga bo‘linib, har bir bosqich alohida tavsiflangan. Donni qayta ishlash korxonalarining ishlab chiqarish salohiyatini har tomonlama baholash uchun ishlab chiqilgan metodikadan foydalanish korxona rahbarlariga baholash jarayoniga tizimli yondashuvni qo‘llash imkonini beradi.

Kalit so‘zlar: Baholash ko‘rsatkichlari, texnologik resurslar, zaiflik darajasi, moliyaviy resurslar, amortizatsiya darajasi, aylanma mablag‘lar, ratsionalizatsiya darajasi, ishlab chiqarish resurslari, ishlab chiqarish quvvati, axborot manbalari.

Аннотация

Статья основана на том, что оценка производственного потенциала предприятий является одной из важнейших с точки зрения эффективного развития производства. Производственный потенциал разделен на четыре этапа, и каждый этап описывается отдельно. Использование разработанной методики комплексной оценки производственного потенциала предприятий зернопереработки позволяет руководителям предприятий комплексно подходить к процессу оценки.

Ключевые слова: Показатели оценки, технологические ресурсы, уровень уязвимости, финансовые ресурсы, норма амортизации, оборотный капитал, уровень рационализации, производственные ресурсы, производственная мощность, источники информации.

INTRODUCTION

It is known that currently, managers are faced with problems associated with global changes in the innovative development of enterprises, including social, technological, and economic structural changes. This, in turn, requires a deep study of many unexplored management strategies in the development of enterprises and the processes leading to development on a global scale. In response to global changes, economists, leading experts, and practicing managers are developing innovative strategies for the development of enterprises that can influence such structural changes.

In the current economic climate, the production capacity of grain processing enterprises plays a decisive role not only in ensuring the viability of enterprises but also in ensuring the effective functioning and competitiveness of the entire industry. In this regard, the assessment of the existing production capacities of grain processing enterprises should help enterprises develop strategic development maps, determine methods and mechanisms for managing the production capacities of enterprises, and ensure the rational use of available resources to increase financial and economic growth efficiency.

METHODOLOGY

The article employs the least squares method, economic-statistical analysis, logical reasoning, complex approach, comparative analysis, econometric modeling, and forecasting to analyze the financial and economic indicators of grain processing enterprises.

MATERIAL AND METHODS

When analyzing the economic potential of enterprises, the focus is not solely on the material assets of the enterprise, which are part of the active section of the balance sheet. Instead, a systematic approach and comprehensive analysis are required, incorporating labor resources alongside material assets to provide a full and detailed assessment of the enterprise's economic position.

In literature on analysis during the planned economy era, it was assumed that the material goods (resources) and labor resources of the enterprise were considered as a unified set of all resources. Their analysis was conducted as an evaluation of the entirety of the wealth (resources). However, in the current market conditions, where economic liberalization principles prevail, economic processes include not only material and labor resources but also intangible assets.

Table 1

Estimated indicators of the constituent elements of production potential

Components	Evaluation indicators
Technological resources	Production automation coefficient
	Continuity coefficient
	Degree of invalidity

Components	Evaluation indicators
Financial resources	Depreciation share
	Working capital
	Absolute liquidity ratio
Human Resources Department	The level of specialization of workers
	Degree of rationalization
	Employee dissatisfaction
Production sources	Production resources
	Productivity coefficient
	Production capacity
Sources of information	Significance level of information
	The level of value of information resources
	Information automation factor

To compare the actual and planned results of the enterprise's production activities, it is necessary to determine the target values. To assess the production potential for each component, the target indicators and their levels of impact need to be evaluated.

The investments currently attracted and utilized in the Uzbek economy are primarily directed toward the purchase of new equipment, technical and technological modernization of enterprises, and the construction of new facilities. This can be interpreted as laying the groundwork for the future development of the country's economy.

In the study of socio-economic processes, empirical formulas derived from data collected during economic optimal modeling tests are widely used. One of the most effective methods for generating empirical formulas is the least squares method (LSM). The LSM is particularly effective in examining functions for extremum and constructing unknown functions through approximation or smoothing.

This method is applied to analyze the relationship between two variables, xxx and yyy. Suppose that the sequence of xxx values is the result of nnn observations. For these observations, corresponding yyy values are also determined.

If the points derived from these xxx and yyy values scatter around a certain line in the coordinate system, an approximate function in the form of an nnn-degree polynomial can be obtained:

y=a0+a1x+a2x2+a3x3+⋯+anxny = a_0 + a_1x + a_2x^2 + a_3x^3 + \dots + a_nx^ny=a0+a1x+a2x2+a3x3+⋯+anxn

Here, a0,a1,a2,a3,…,ana_0, a_1, a_2, a_3, \dots, a_na0,a1,a2,a3,…,an are unknown parameters. To determine these parameters, a system of normal equations is used, allowing the functional connection between the variables to be established accurately.

RESULTS AND DISCUSSION

In our country today, improving socio-economic policy and ensuring the effective and rational use of the economic potential of industrial enterprises in production are becoming increasingly important. Alongside efforts to enhance the economic potential

of enterprises, special attention is being paid to the deep industrial processing of agricultural and mineral raw materials for the production of finished goods, as well as the accelerated development of modern high-tech industries.

Table 2

Economic indicators of enterprises in terms of product value at current prices

Product value at current price (billion soums)			
Years	Namangan	Uchkurgan	Pop
2013	26,21	39,3	2,89
2014	30,93	45,8	14,42
2015	35,71	49,8	19,77
2016	39,17	47,7	21,56
2017	34,02	58,1	23,14
2018	38,57	64,8	24,04
2019	39,02	72,2	27,64
2020	49,93	81,7	26,79
2021	67,22	110,6	33,01
2022	82,51	159,6	39,37
2023	96,13	192,5	42,51

$$y = -0,0006t^6 + 0,0032t^5 + 0,1879t^4 - 2,3971t^3 + 9,5901t^2 - 9,9959t + 28,784$$

$$y = -0,0008t^6 + 0,0314t^5 - 0,4856t^4 + 3,8903t^3 - 17,376t^2 + 43,102t - 26,328$$

The planned value of the production potential of enterprises is determined based on current market conditions and reflects their capabilities over an extended period. The resource component of the production potential of an enterprise outlines the resources that can be utilized under favorable market conditions and emphasizes their rational and efficient use.It is appropriate to conduct an econometric analysis of changes in the value of products at the current price of grain processing enterprises,

$R^2 = 0,9897$ ($\alpha = 0,05$ бўлганда $t_{jad} = 2,11$ ва $F_{jad} = 2,272$)

A reliable and adequate regression equation according to the criteria is:

$$y_{uch} = 0,0019t^6 - 0,0443t^5 + 0,3373t^4 - 0,3715t^3 - 6,1715t^2 + +27,671t + 17,297 \quad (1.1)$$

here: y_{uch} - product value at the current price (Uchkurgon Don JSC), *t*- time (years).

The econometric model of the change in product value at the current price for the Namangan grain processing enterprise is as follows:

$R^2 = 0,9941$

$$y_{Nam} = -0,0006t^6 + 0,0032t^5 + 0,1879t^4 - 2,3971t^3 + 9,5901t^2 - -9,9959t + +28,784 \quad (1.2)$$

Here: y_{Nam} - Product value at the current price (Namangan Don JSC), *t*- time

(years).

The econometric analysis of the change in product value at the current price for a cereal processing enterprise is represented by the following model:

$R^2 = 0,9937$

$$y_{Pop} = -0,0008t^6 + 0,0314t^5 - 0,4856t^4 + 3,8908t^3 - -17,376t^2 + 43,102t - 26,328 \quad (1.3)$$

Here: y_{Pop} - Product value at current price (Pop grain AJ), t- time (years).

Based on the results of a tabular analysis of the economic indicators of grain processing enterprises, the data for three enterprises over the period 2013–2023 were analyzed econometrically. The analysis of the differences between the actual values of economic indicators and the model values reveals that the economic indicators of the Namangan and Pop grain processing enterprises have predominantly negative values. This suggests that the production potential of these enterprises is low, they are not operating at full capacity, and there is a need to diversify production.

Table 3

Analysis of economic indicators of grain processing enterprises of Namangan region

Product value at current price (billion soums)									
Years	Namangan grain			Uchkurgan grain			Pop grain		
	True value	Model value	difference	True value	Model value	difference	True value	Model value	difference
2013	26,21	26,17	0,04	39,3	38,3	1	2,89	2,83	0,06
2014	30,93	31,05	-0,12	45,8	49,08	-3,28	14,42	14,68	-0,26
2015	35,71	35,94	-0,23	49,8	42,68	7,12	19,77	19,35	0,42
2016	39,17	37,75	1,42	47,7	54,23	-6,53	21,56	21,61	-0,05
2017	34,02	36,98	-2,96	58,1	56,98	1,12	23,14	23,19	-0,05
2018	38,57	36,69	1,88	64,8	62,22	2,58	24,04	24,56	-0,52
2019	39,02	40,86	-1,84	72,2	70,01	2,19	27,64	26,03	1,61
2020	49,93	52,47	-2,54	81,7	81,51	0,19	26,79	28,44	-1,65
2021	67,22	71,04	-3,82	110,6	102,51	8,09	33,01	33,12	-0,11
2022	82,51	89,74	-7,23	159,6	148,36	11,24	39,37	41,39	-2,02
2023	96,13	102,04	-5,91	192,5	183,17	9,33	42,51	43,38	-0,87

According to Table 3, the actual production volume of the Namangan Grain Processing Plant in 2013, 2016, and 2018 exceeded the values estimated by the econometric model by 0.04 billion soums, 1.42 billion soums, and 1.88 billion soums, respectively.

This positive outcome can be attributed to the timely provision of raw materials during the reporting period, enabling the enterprise to operate at full capacity.

CONCLUSIONS AND SUGGESTIONS

The primary reasons for the negative results observed in the enterprise's activities during the periods under review can be attributed to the obsolescence of equipment currently in use, insufficient raw materials, and the uncompetitive quality of products caused by a lack of modernization.

A critical aspect of an effective approach to assessing the potential of an enterprise is reflected in the formation and fluctuation of the actual price of the enterprise's products during their implementation. In the context of a modern market economy, analyzing the changes in the actual price of products as a key indicator plays a significant role in implementing an effective and profitable strategy for determining an enterprise's production potential.

In conclusion, analyzing and evaluating the production potential of enterprises, strategically managing financial investments, and planning from the perspective of enterprise management are crucial. Additionally, assessing the value of an enterprise as a profitable industrial property object is essential for its long-term sustainability and competitiveness.

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