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Mavrulov Ravshan Nematjonovich

CONTENTS

DEVELOPMENT OF AN IMPROVED METHODOLOGY FOR ASSESSING THE PERFORMANCE OF SMALL BUSINESS ENTITIES

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Abstract. This article develops an improved methodology for assessing the performance of small business entities. The proposed approach goes beyond the separate recording of final financial results and provides for the assessment, within a unified calculation framework, of value creation intensity, production capacity utilization, the effect of the cost structure on value, asset-use efficiency, stability and growth potential, the degree of coverage of value losses, and value created through labor. The methodology is based on a six-stage mechanism comprising the formation of indicators, their normalization to a 0-1 range, weighting, calculation of partial indices, determination of the 0-100-point IKB integral score, and transformation of the result into a management decision. A five-level authorial identification scale is proposed for the economic interpretation of the final results.

Keywords: small business, assessment methodology, value creation, normalization, weighting, partial index, integral assessment, IKB, economic diagnostics, management decision.

Annotatsiya. Ushbu maqolada kichik biznes subyektlari faoliyatini baholashning takomillashtirilgan metodologiyasi ishlab chiqilgan. Taklif etilayotgan yondashuv yakuniy moliyaviy natijalarni alohida qayd etish bilan cheklanmaydi va yagona hisob-kitob tizimi doirasida qiymat yaratish intensivligi, ishlab chiqarish quvvatlaridan foydalanish darajasi, xarajatlar tarkibining qiymatga ta'siri, aktivlardan foydalanish samaradorligi, barqarorlik va o'sish salohiyati, qiymat yo'qotishlarini qoplash darajasi hamda mehnat orqali yaratilgan qiymatni baholashni nazarda tutadi. Metodologiya ko'rsatkichlarni shakllantirish, ularni 0-1 oralig'ida normallashtirish, vaznlash, xususiy indekslarni hisoblash, 0-100 ballik IKB integral bahosini aniqlash va natijani boshqaruv qaroriga aylantirishni o'z ichiga oluvchi olti bosqichli mexanizmga asoslanadi. Yakuniy natijalarni iqtisodiy talqin qilish uchun mualliflik besh darajali identifikatsiya shkalasi taklif etilgan.

Kalit so'zlar: kichik biznes, baholash metodologiyasi, qiymat yaratish, normallashtirish, vaznlash, xususiy indeks, integral baholash, IKB, iqtisodiy diagnostika, boshqaruv qarori.

Аннотация. В статье разработана усовершенствованная методология оценки деятельности субъектов малого бизнеса. Предлагаемый подход выходит за рамки раздельного учета конечных финансовых результатов и предусматривает оценку в рамках единой расчетной системы интенсивности создания стоимости, уровня использования производственных мощностей, влияния структуры затрат на стоимость, эффективности использования активов, устойчивости и потенциала роста, степени покрытия потерь стоимости, а также стоимости, создаваемой трудом. Методология основана на шестиступенчатом механизме, включающем формирование показателей, их нормализацию в диапазоне 0-1, взвешивание, расчет частных индексов, определение интегральной оценки IKB по шкале 0-100 баллов и преобразование результата в управленческое решение. Для экономической интерпретации итоговых результатов предложена авторская пятиуровневая шкала идентификации.

Ключевые слова: малый бизнес, методология оценки, создание стоимости, нормализация, взвешивание, частный индекс, интегральная оценка, IKB, экономическая диагностика, управленческое решение.

INTRODUCTION

Assessing the performance of small business entities is an important component of economic management, since the quality of such assessment determines how accurately the enterprise's actual condition, internal capabilities, and available reserves for further development can be identified. In practice, assessment often relies on final financial indicators such as profit, profitability, revenue, or costs. However, such an approach does not fully reflect the process of value creation within the enterprise, the degree of production capacity

utilization, the extent to which assets generate income, the efficient or inefficient structure of costs, or the mechanism through which economic losses arise.

Therefore, when assessing small business performance, it is necessary to examine not only the final result but also the factors that shape that result within a unified methodological framework. In this context, profit, costs, production and sales volumes, capacity utilization, asset efficiency, stability, value losses, and value created through labor should be interpreted as interrelated indicators.

LITERATURE REVIEW

The scientific literature on business performance assessment places particular emphasis on combining financial and non-financial criteria. R. S. Kaplan and D. P. Norton argue that corporate performance should not be limited to financial indicators alone, but should also be linked to internal processes, customers, development, and learning dimensions [1; 2]. This view represents one of the key methodological principles of multi-criteria assessment systems.

Studies led by A. Neely emphasize that a performance measurement system should establish a close relationship between corporate strategy, performance indicators, and management decisions [3; 4]. N. Venkatraman and V. Ramanujam demonstrate the advantage of considering financial indicators together with operational results when assessing business performance [5]. These approaches substantiate the need to move from a single-indicator model toward a multi-criteria diagnostic system.

Within the resource-based approach, J. Barney emphasizes that a firm's sustainable advantage depends on the value of its resources and its ability to use them efficiently [6]. P. F. Drucker links performance with management, innovation, and the rational use of resources [7]. M. E. Porter, in turn, substantiates the close relationship between value creation, competitiveness, and the internal processes of an enterprise [8].

These scientific approaches provide an important theoretical foundation for the multi-criteria assessment of small business performance. At the same time, under small-business conditions, integrating production capacity, asset efficiency, cost structure, economic losses, stability, and value created through labor into a single calculation chain requires a separate methodological solution. The proposed approach is intended to address precisely this gap.

RESEARCH METHODOLOGY

The study employs a systems approach, logical generalization, the index method, min-max normalization, weighting, and integral assessment. The improved methodology consists of six consecutive stages, each of which prepares the result of the preceding calculation for subsequent diagnostics and management decision-making.

Table 1. Main Stages of the Improved Methodology¹

Stage	Methodological content	Result
Stage 1	Identification and systematization of assessment indicators	Indicators of value creation, capacity, costs, assets, stability, losses, and labor efficiency are formed.
Stage 2	Normalization of indicators	Indicators measured in different units are converted to the 0-1 range.
Stage 3	Determination of indicator weight coefficients	The share of each indicator in the overall assessment is determined; the conditions $w_j \geq 0$ and $\sum w_j = 1$ are maintained.
Stage 4	Calculation of partial performance indices	Profit, costs, volume, assets, capacity, losses, and labor resources are assessed in an interrelated manner.
Stage 5	Calculation of the overall integral score	A 0-100-point IKB score is formed on the basis of the weighted sum of normalized indices.
Stage 6	Identification of the result and formulation of a management decision	The integral result is divided into five levels, and an appropriate management direction is assigned to each level.

At the first stage of the methodology, seven main assessment areas are formed: value creation intensity, capacity utilization efficiency, the impact of the cost structure on value, comprehensive asset-use efficiency, stability and growth potential, the degree of coverage of value losses, and value creation through labor.

¹ Compiled by the author.

At the second stage, indicators expressed in different units of measurement are normalized to the 0-1 range. For stimulating indicators, $Z_j = (x_j - x_{\min}) / (x_{\max} - x_{\min})$ is applied, while for limiting indicators, $Z_j = (x_{\max} - x_j) / (x_{\max} - x_{\min})$ is used. As a result, a higher Z value represents a favorable economic condition for all indicators.

At the third stage, the share of each indicator in the overall assessment is expressed through the weight coefficient w_j . The conditions $w_j \geq 0$ and $\sum w_j = 1$ are maintained. The exact values of the weights are calibrated according to the economic significance of the indicators and the results of empirical testing; unjustified fixed values are not set in advance.

ANALYSIS AND RESULTS

The computational core of the improved methodology is formed by partial performance indices. These indices reflect different but interrelated economic aspects of enterprise activity. Their systematic application makes it possible not only to record the enterprise's result, but also to identify the factors that shaped that result.

Table 2. Partial Performance Indices and Their Economic Interpretation²

Assessment area	Formula	Economic interpretation
Value creation intensity	$I_{qi} = (F/X) \times (Q_{fakt}/Q_{reja}) \times (1 - X/T)$	Combines profit, plan-versus-actual discipline, and the share of costs.
Capacity utilization efficiency	$K_{qf} = (Q_{fakt}/Q_{maks}) \times (T/X) \times (F/T)$	Links the technical utilization of capacity with the economic result.
Impact of the cost structure on value	$I_{xt} = (1 - X/T) \times (X_{samarali}/X) \times (Q_{fakt}/Q_{reja})$	Assesses the share of efficient costs and production discipline.
Comprehensive asset-use efficiency	$I_{as} = (T/A) \times (F/A) \times (Q_{fakt}/Q_{maks})$	Combines asset turnover, profitability, and capacity utilization.
Stability and growth potential	$I_{qb/o} = (1/n) \sum [(Q_t - Q_{t-1}) / Q_{t-1}] \times (F_t / A_t)$	Assesses the growth rate and return on assets through the time factor.
Degree of coverage of value losses	$I_{qy} = F/Y$	Shows the ability of profit to cover total economic losses.
Value creation through labor	$I_{qis} = (F + X_{tej}) / L$	Determines the value created per employee.

The value creation intensity index (I_{qi}) combines the ratio of profit to costs, plan-versus-actual discipline, and the share of costs in revenue. An increase in the index indicates that the enterprise is creating value with a higher margin, production closer to the planned level, and relatively more efficient costs. When the index declines, it becomes possible to diagnose separately whether profitability, plan fulfillment, or the cost share is the main constraining factor.

The capacity utilization efficiency index (K_{qf}) links the technical utilization of capacity with the economic result. Q_{fakt}/Q_{maks} reflects capacity utilization, T/X reflects the ability of costs to generate revenue, and F/T reflects profitability. Therefore, even when production capacity is highly utilized, the index does not automatically become high if profitability is low.

The index of the impact of the cost structure on value (I_{xt}) assesses not only the total amount of costs but also their composition. The $X_{samarali}/X$ ratio represents the share of costs that directly contribute to value creation. This makes it possible to identify the economic impact of inefficient costs such as defects, excessive logistics, idle time, and rework.

The comprehensive asset-use efficiency index (I_{as}) combines asset turnover, return on assets, and production capacity utilization in a single expression. Since assets are limited in small businesses, it is important to determine how much revenue and profit each unit of assets generates. A low index value may indicate the presence of excessive or inefficiently used assets.

The stability and growth potential index ($I_{qb/o}$) links the growth rate and return on assets through the time factor. The degree of coverage of value losses (I_{qy}) reflects the ability of profit to cover total economic losses. The value creation through labor index (I_{qis}) links profit and saved costs to the number of employees, thereby showing the amount of economic value created per employee.

After the partial indices have been normalized and their weights determined, they are combined into an overall integral assessment. The general formula for the integral assessment is as follows:

² Compiled by the author.

$$IKB = 100 \times \Sigma(w_j \times Z_j), 0 \leq IKB \leq 100 \quad (1)$$

Here, IKB is the overall integral score; Z_j is the normalized partial index; and w_j is the indicator weight. The multiplier 100 converts the integral result from the 0–1 range to a 0–100-point scale. Thus, the 0–100 range of IKB is not an external statistical benchmark, but the result of a mathematical transformation of normalized and weighted indices.

Table 3. Authorial Identification Scale for the IKB Integral Score³

IKB range	Level	Economic interpretation	Management direction
0-20	Very low	Value creation capacity is limited and losses are high	Reorganize processes and eliminate sources of loss
21-40	Low	Value is created, but resource efficiency is insufficient	Optimize costs and capacity
41-60	Moderate	Operations are relatively stable, but internal reserves remain	Mobilize internal reserves and improve weak indices
61-80	Good	Core processes are efficient and stable	Strengthen existing advantages
81-100	Very high	Value creation and resource utilization are high	Innovative expansion and scaling of best practices

The analysis shows that the main advantage of the proposed methodology lies not in the calculation of separate indicators, but in their integration into a single logical chain: indicator selection → normalization → weighting → calculation of partial indices → integral assessment → identification → management decision. Such a chain makes it possible to assess value creation and economic losses simultaneously, identify weak links, and connect the final result to a specific management action.

The methodology does not assign fixed values to the weight coefficients until they have been calibrated using empirical data. Therefore, the approach can be adapted to different industries and enterprises. Similarly, the 0–100-point identification scale is interpreted as a flexible management tool that may be recalibrated as the empirical database expands.

CONCLUSION AND SUGGESTIONS

1. Assessing small business performance solely through final financial indicators does not fully reveal the mechanism of value creation and economic losses.
2. The improved methodology is based on the interrelated assessment of profit, costs, production volume, capacity, assets, stability, losses, and labor resources.
3. Normalizing indicators measured in different units to the 0–1 range makes it possible to compare them within a unified integral system.
4. Calibrating weight coefficients on the basis of the economic significance of indicators and empirical testing increases the practical adaptability of the methodology.
5. Seven partial performance indices enable in-depth diagnostics of different aspects of enterprise activity and identification of weak links.
6. The formula $IKB = 100 \times \Sigma(w_j \times Z_j)$ combines normalized partial indices into a unified 0–100-point integral score.
7. The five-level authorial identification scale links the integral result with the level of economic condition and the corresponding management decision.
8. When the methodology is applied more broadly in practice, it is advisable to periodically recalibrate the weight coefficients and identification thresholds on the basis of new empirical data.

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