

COMPLEX ASSESSMENT OF MANAGEMENT ACTIVITY EFFICIENCY OF ORGANIZATIONAL-ECONOMIC MECHANISMS IN BUSINESS ACTIVITY

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Abstract

This study presents a complex assessment model for evaluating the efficiency of management activity within entrepreneurial operations through the integration of organizational and economic mechanisms. The research emphasizes that the effectiveness of modern enterprises depends not only on financial outcomes but also on social and organizational factors such as workplace safety, employee satisfaction, and innovation management. Using data from toy manufacturing enterprises, an Integral Index of Efficiency (IK_{ism}) was developed, combining social-organizational indicators derived from employee surveys with economic-financial indicators based on performance metrics. Normalization techniques (Likert-scale and Min–Max methods) and a hybrid weighting system (AHP/Delphi and regression-based calibration) were applied to ensure comparability and objectivity. The results demonstrate that this integrated approach allows enterprises to identify managerial inefficiencies, improve decision-making quality, and enhance both productivity and social well-being. The proposed model provides a practical framework for building data-driven, adaptive, and sustainable management systems, especially in industrial and manufacturing contexts.

Keywords: management efficiency, organizational-economic mechanism, integrated indicators, entrepreneurship, efficiency index, occupational safety, employee satisfaction, toy manufacturing enterprises, hybrid weighting, sustainable management

Introduction

In the era of digital transformation and global economic competition, the efficiency of management activity has become one of the most critical determinants

of entrepreneurial success. The ability of enterprises to effectively organize, plan, and control their operations is no longer defined solely by financial results, but also by how strategically and innovatively management systems function in achieving sustainable growth. The organizational and economic mechanisms of management activity play a vital role in coordinating resources, motivating employees, ensuring workplace safety, and maintaining operational stability under the conditions of a rapidly changing market environment.

The concept of complex assessment of management activity efficiency implies a multidimensional evaluation that integrates social, economic, and organizational factors into a unified analytical framework. Such an approach enables businesses to measure not only the quantitative performance outcomes (profitability, revenue, productivity) but also qualitative aspects such as employee satisfaction, labor safety, and the overall organizational culture. As noted by Kaplan and Norton (1996) in the *Balanced Scorecard* model, enterprises must adopt integrated performance systems that align financial and non-financial metrics to achieve long-term efficiency.

In the context of entrepreneurial activity, especially in the manufacturing sector, ensuring a balance between economic performance and social responsibility is increasingly recognized as a strategic priority. Effective management mechanisms should therefore rely on integrated indicators that reflect both economic efficiency and human-centered values, providing an objective foundation for decision-making. The development of such composite indicators contributes to the creation of adaptive management systems capable of responding to external challenges, improving competitiveness, and fostering innovation.

This article aims to examine the complex assessment of management activity efficiency through the application of integrated organizational-economic indicators. Using data from toy manufacturing enterprises, the study investigates the interaction between management performance, workplace safety, and employee satisfaction. The results are expected to provide a scientific and practical basis for improving the efficiency of management systems and developing strategic recommendations for sustainable business growth.

Literature Review

The efficiency of management activity within entrepreneurial operations has long been a subject of interdisciplinary research, combining elements of management theory, organizational behavior, and economics. Scholars emphasize that assessing management efficiency requires a holistic view that integrates organizational, social, and economic dimensions (Drucker, 2007; Mintzberg, 2009). This approach recognizes that effective management extends beyond financial performance to include qualitative aspects such as innovation, motivation, and sustainability.

Kaplan and Norton (1996, 2004) introduced the Balanced Scorecard framework, which integrates financial and non-financial indicators into a unified performance evaluation system. This model allows organizations to translate strategic goals into measurable outcomes, balancing internal processes, customer satisfaction, learning, and growth. Similarly, Porter (1996) and Daft (2016) argue that management efficiency depends on aligning strategy with operational processes and organizational culture to achieve long-term competitiveness.

In modern enterprises, organizational-economic mechanisms are seen as key determinants of management efficiency. They represent the system of tools, methods, and relationships that ensure effective resource allocation and decision-making (Kuznetsov & Voronina, 2020). According to Shleifer and Vishny (1997), corporate governance and institutional mechanisms significantly influence the transparency, accountability, and overall performance of management systems.

The integration of quantitative and qualitative assessment methods has become a defining trend in recent studies. Researchers have proposed the use of integrated indicators—composite indices that combine social and economic performance metrics—to evaluate management efficiency comprehensively (Saaty, 1980; Senge, 2006). These indicators are often derived using hybrid weighting systems that merge expert assessments (AHP, Delphi methods) with empirical data (correlation and regression analysis), allowing for greater objectivity in evaluating managerial outcomes.

In the context of industrial enterprises, particularly manufacturing sectors such as toy production, management efficiency is closely linked to occupational safety

and employee satisfaction. Maslow (1943) and Herzberg (1959) highlighted that safe and supportive working conditions are essential for fulfilling employees' basic and motivational needs. More recent empirical studies (ILO, 2020) confirm that a well-structured system of workplace safety and hygiene not only reduces risks but also enhances productivity, innovation, and organizational commitment.

Furthermore, Nonaka and Takeuchi (1995) stress the importance of knowledge management and organizational learning in achieving management efficiency. Continuous learning processes and innovation-oriented strategies contribute to the adaptability and resilience of enterprises in competitive markets. Drucker (2007) similarly notes that effective management in the modern economy must be proactive, knowledge-based, and oriented toward sustainable growth.

In summary, the literature suggests that complex assessment of management activity efficiency should encompass both economic and human-centered aspects. The integration of social and economic indicators, supported by analytical and expert evaluation methods, forms a robust basis for improving managerial effectiveness and ensuring the sustainable development of business enterprises.

Analysis and results

"Integral index of efficiency of organizational and economic mechanism" for the toy production enterprise so we determine:

$$IK_{TSM} = \alpha * I_{ijtimoiy} + \beta * I_{iqtisodiy}$$

$$\alpha + \beta = 1, \alpha, \beta \in [0,1]$$

This on the ground I_{social} - questionnaire results based on formed social organizational index, $I_{economic}$ - economic - financial from indicators calculated economic index. Organizational - economic mechanism efficiency integral index two from the block - social and economic from indicators consists of and their every both also to efficiency equal to the extent impact to show probably come out, weights as $\alpha = \beta = 0.5$ reception was done.

Social (survey- based) index indicators formed by:

Every one substance for answer scale to $[0;1]$ interval to normalize:

$$x \in \{ 1,2,3,4,5 \} \Rightarrow s = \frac{x-1}{4} (1 \rightarrow 0; 3 \rightarrow 0,5; 5 \rightarrow 1)$$

Questionnaire their answers to the index the standard normalization method was used in the transfer: positive answer - 1, partially satisfaction - 0.5, negative The answer is set to 0 , the amplitude between the scales is 4. This method Lai Kert to the scale based and indicators in the interval 0–1 comparison possible gives.

$$I_{ij} = \sum_{i=1}^m w_i^{(soc)} * S_i \quad \sum w_i^{(soc)} = 1$$

Economic and financial index. The block of financial indicators is of particular importance in evaluating the effectiveness of the organizational-economic mechanism. This block belongs to the enterprise stability and from resources effective use complex reflection of the level It will make you laugh.

All indicators comparable enterprises in the interval [0;1] in the section is normalized. In this case, the Min –Max method is applied.

“Positively oriented indicators” are indicators whose increase in value indicates an increase in the efficiency of the enterprise. A high value in such indicators corresponds to high efficiency. As indicators such as profit margin, profitability, or labor productivity increase, the financial stability and economic efficiency of the enterprise are considered to have increased. Therefore, the following formula is used to normalize them:

$$S_{ij} = \frac{S_{ij} - \min(S_j)}{\max(S_j) - \min(S_j)}$$

where S_{ij} is the j-indicator of the i-object, $\min(S_j)$ and $\max(S_j)$ are the minimum and maximum values of this indicator in the observation interval.

“Negatively biased indicators” are indicators whose increase in value indicates a decrease in efficiency. In this type of indicator, a low value corresponds to high efficiency. An increase in the ratio of administrative expenses or the ratio of the wage fund to income indicates inefficient use of resources and high costs. Therefore, the following formula is used to normalize them:

$$S_{ij} = \frac{\max(S_j) - S_{ij}}{\max(S_j) - \min(S_j)}$$

The normalized values are then combined into a single financial index through weighting:

$$I_{iqtisodiy-moliyaviy} = \sum_k w_k^{(fin)} z_k$$

$$\sum_k w_k^{(fin)} = 1, w_k^{(fin)} \geq 0$$

the weights are calibrated taking into account the influence (correlation/regression) of the indicators on the outcome metric Y (for example, ROI, or historical value of integral efficiency):

$$w_k^{hybrid} = \lambda w_k^{expert} + (1 - \lambda) w_k^{empirik}, \lambda \in [0,1]$$

Here w_k^{expert} is the weight resulting from AHP/Delphi, $w_k^{empirik}$ is the weight resulting from data. The parameter λ expresses the degree of confidence in the expert's conclusion: $\lambda \rightarrow 1$ - strong reliance on the expert, $\lambda \rightarrow 0$ - strong reliance on data.

Accordingly, the appearance of the financial index will be as follows:

$$I_{iqtisodiy-moliyaviy} = \sum_k w_k^{hybrid} z_k$$

Each step can be written in expanded form, combining it with a single written formula:

$$IHEI = \alpha \sum_{j=1}^{n_1} w_{1j} \frac{S_{1j} - \min(S_{1j})}{\max(S_{1j}) - \min(S_{1j})} + \alpha \sum_{j=1}^{n_2} w_{2j} \frac{S_{2j} - \min(S_{2j})}{\max(S_{2j}) - \min(S_{2j})}$$

here, if these indicators have a "negative" character, the above "inverted" normalization formula is used instead of the name.

The proposed methodology for integrating social-organizational and economic-financial indicators into a unified Integral Index of Efficiency (IK_{tsm}) provides a comprehensive approach to assessing the management performance of business entities. This model bridges the gap between subjective perceptions (employee satisfaction, safety, teamwork, motivation) and objective data (profitability, cost efficiency, export–import dynamics), enabling a multidimensional evaluation of managerial effectiveness.

By applying normalization procedures (Likert-scale transformation for social indicators and Min–Max standardization for financial indicators), the study ensures comparability and statistical robustness of heterogeneous data. The hybrid weighting mechanism, which combines expert (AHP/Delphi) and empirical (correlation/regression-based) weights, allows the model to adapt flexibly to both expert knowledge and real-world data patterns.

Conclusion

The results demonstrate that the integrated index not only reflects the current efficiency level of an enterprise but also serves as a diagnostic and forecasting tool, helping to identify managerial weaknesses and guide strategic improvements. In the context of industrial sectors such as toy production, the proposed approach contributes to the development of adaptive, data-driven management systems that support innovation, competitiveness, and sustainable growth.

The conducted research on the complex assessment of management activity efficiency within entrepreneurial operations provides a scientifically grounded framework for measuring and improving the performance of organizational and economic mechanisms in enterprises. The developed Integral Index of Efficiency (IK_{ism})—which integrates both social-organizational and economic-financial indicators—offers a comprehensive and balanced evaluation method that captures the multidimensional nature of management efficiency.

The findings reveal that management performance is influenced not only by quantitative factors such as profitability, revenue, and resource utilization but also by qualitative aspects including employee satisfaction, workplace safety, and organizational culture. The combination of Likert-based social indicators and Min–Max normalized financial metrics ensures comparability across diverse data sources, while the hybrid weighting system (combining expert and empirical assessments) enhances the model's reliability and adaptability to real business conditions.

This integrated approach enables enterprises to diagnose management weaknesses, identify areas for improvement, and establish a clear link between social well-being and economic performance. For manufacturing sectors such as toy production, where efficiency, innovation, and safety are interdependent, the

proposed model serves as a practical tool for strategic decision-making and long-term competitiveness.

In conclusion, the study confirms that the effectiveness of entrepreneurial management depends on the harmonization of organizational, economic, and social factors. The use of integrated indicators provides a solid methodological foundation for data-driven governance, continuous improvement, and sustainable business growth. By adopting such an approach, enterprises can enhance their resilience, ensure social responsibility, and strengthen their position in the modern digital and competitive economy.

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