

Article

Assessing Enterprise Economic Potential for Sustainable Industrial Competitiveness: Evidence from the Building Materials Industry in Uzbekistan

Bakhodir Khoshbakov^{1*}

1. Termez University of Economics and Service, Termez, Uzbekistan

*Correspondence: baxodir_xushbakov@tues.uz, ORCID: 0009-0006-7566-6976

Abstract: The efficient utilization of enterprise economic potential has become increasingly important for improving industrial competitiveness and supporting sustainable economic development, particularly in emerging economies experiencing rapid industrial transformation. Although previous studies have examined technological capability, financial performance, labour productivity, and innovation separately, limited empirical evidence exists regarding their integrated contribution to enterprise competitiveness within the building materials industry. The empirical analysis focuses on three representative building materials enterprises operating in the Surkhandarya region of Uzbekistan during 2019–2025. Using enterprise-level operational data and regional industrial statistics, the study applies a composite assessment framework to evaluate differences in economic potential utilization across enterprises. Comparative analysis is employed to identify strengths and weaknesses within each capability dimension and to determine the principal constraints affecting enterprise competitiveness.

Keywords: enterprise economic potential; industrial competitiveness; building materials industry; technological capability; innovation; composite assessment.

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1. Introduction

Industrial competitiveness has become one of the principal drivers of sustainable economic growth in the twenty-first century. Accelerating technological progress, digital transformation, globalization of production networks, and increasing competitive pressure require industrial enterprises to improve not only production capacity but also the efficiency with which available resources are utilized. Under these conditions, enterprise economic potential has emerged as a strategic concept because it reflects the ability of firms to transform technological, financial, human, managerial, and innovation resources into sustainable competitive advantages [1].

The construction sector is one of the strategic branches of the economy of the Republic of Uzbekistan, and its sustainable development largely depends on the production capacity and economic efficiency of enterprises operating in the building materials industry. At a presentation chaired by the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, on 19 May 2025 regarding the development of the building materials industry, it was noted that nearly 10,000 enterprises are currently

operating in the sector [2]. During the first quarter of 2025, industrial output increased by 8%, while exports grew by 11%. Furthermore, by the end of the year, it is planned to implement 312 investment projects worth USD 2.4 billion, create 16,000 new jobs, increase industrial production to UZS 53 trillion, and raise exports to USD 1.2 billion.

As a continuation of these reforms, the Resolution of the President of the Republic of Uzbekistan No. RP-365, dated 1 December 2025, "On Measures for the Development of the Building Materials Industry," established ambitious targets for advancing the sector to a new stage of development. In particular, the Resolution sets the objectives of increasing the volume of building materials production to UZS 62 trillion, expanding exports to USD 1.5 billion, promoting the production of high value-added products, increasing the share of energy-efficient and environmentally friendly building materials, and strengthening the integration of science and industry [3].

Achieving these ambitious objectives largely depends on how efficiently the existing economic potential of building materials enterprises is utilized. The effective use of production capacities, fixed assets, financial resources, labour resources, and innovation capabilities directly determines production output, product cost, export performance, investment attractiveness, and the overall competitiveness of enterprises. In economic literature, the concept has evolved from a narrow resource-oriented interpretation toward a broader framework encompassing technological capability, financial sustainability, human capital, managerial effectiveness, innovation, and organizational development [4].

One of the earliest systematic approaches considers enterprise economic potential as the aggregate of production resources available to an enterprise. However, subsequent studies have demonstrated that enterprises possessing similar resource endowments frequently achieve different economic outcomes because of variations in resource utilization efficiency, managerial competence, and innovation capacity. Consequently, contemporary scholars increasingly interpret economic potential not merely as the availability of resources but as the enterprise's ability to transform these resources into sustainable economic performance [5].

Keleynikova, Aluqayev, and Ibragimov argue that "labour, production, financial, and innovation potential constitute the fundamental components of enterprise economic potential. Their research demonstrates that the formation and development of economic potential depend on enterprise specialization, production scale, and the stage of the organizational life cycle". Furthermore, the authors emphasize the growing importance of organizational potential as an independent component of economic potential, arguing that corporate reputation, brand recognition, organizational effectiveness, and customer loyalty have become significant determinants of enterprise competitiveness under modern market conditions [6]. Accordingly, they propose interpreting enterprise economic potential as a comprehensive and dynamic system rather than merely a collection of tangible resources. Recent studies further suggest that "enterprise competitiveness depends on the continuous development of production and technical potential. Production modernization, technological renewal, and effective resource allocation significantly improve operational efficiency while increasing enterprises' resilience to market uncertainty". Therefore, the assessment of enterprise economic potential has gradually shifted from measuring available resources toward evaluating how efficiently enterprises transform these resources into sustainable economic outcomes.

Although previous studies have significantly advanced the understanding of enterprise economic potential, several limitations remain.

First, most existing research concentrates on individual components such as production efficiency, innovation capability, or financial performance rather than examining their combined influence on enterprise competitiveness [7].

Second, empirical studies specifically investigating building materials enterprises remain relatively limited despite the strategic importance of this industry for national industrial development. Existing research mainly discusses modernization strategies or innovation development, whereas integrated assessment models capable of evaluating enterprise economic potential remain underdeveloped.

Third, very few studies have examined enterprise economic potential in the context of Uzbekistan using a multidimensional framework that simultaneously incorporates technological, financial, labour, managerial, and innovation capabilities. This gap is particularly important because the country's industrial policy increasingly emphasizes productivity growth, export expansion, and the production of high value-added construction materials [8].

Accordingly, this study develops a comprehensive framework for assessing the economic potential of building materials enterprises by integrating technological, financial, labour, managerial, and innovation dimensions. The proposed framework contributes to the literature by providing empirical evidence from Uzbekistan and identifying practical directions for improving enterprise competitiveness and supporting sustainable industrial development.

2. Materials and Methods

This study employs a quantitative comparative case study approach to assess the economic potential of enterprises operating in Uzbekistan's building materials industry. The research focuses on three representative enterprises located in the Surkhandarya region during the period 2019–2025. The selected enterprises differ in production capacity, technological development, financial performance, and innovation activities, providing an appropriate basis for comparative assessment.

Unlike studies that investigate causal relationships using econometric techniques, this research adopts a multidimensional assessment approach. Enterprise economic potential is evaluated as a comprehensive construct consisting of technological, financial, labour, managerial, and innovation capabilities. The purpose is to determine the level of economic potential utilization across enterprises and identify the dimensions requiring further improvement.

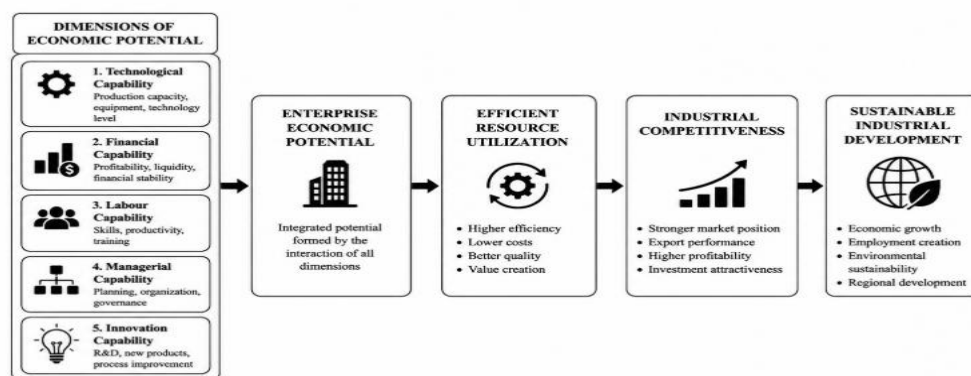


Figure 1. Conceptual framework of enterprise economic potential

Figure 1 illustrates the conceptual framework developed for this study. The framework conceptualizes enterprise economic potential as a multidimensional construct comprising five interrelated dimensions: technological capability, financial capability, labour capability, managerial capability, and innovation capability. These dimensions collectively influence the overall economic potential of an enterprise, which subsequently determines the efficiency of resource utilization. Improved resource utilization enhances industrial competitiveness by increasing productivity, profitability, export performance, and investment attractiveness, ultimately contributing to sustainable industrial development. The framework also acknowledges the influence of

external contextual factors, including government policies, market conditions, technological progress, and institutional support, which may affect the relationship between enterprise economic potential and industrial competitiveness. This conceptual framework provides the theoretical basis for selecting the assessment indicators and developing the composite evaluation methodology employed in this study.

3. Results and Discussion

Technological capability represents one of the most important determinants of enterprise economic potential because it directly influences production efficiency, product quality, resource utilization, and long-term competitiveness. In the building materials industry, where production is highly capital-intensive, continuous modernization of production facilities and efficient utilization of installed capacity are essential for achieving sustainable industrial growth.

Table 1. Technological Capability Indicators of Selected Building Materials Enterprises in the Surkhandarya Region (2019–2025)

Enterprise / Indicator	2019	2020	2021	2022	2023	2024	2025
Fabullo Story Servis LLC							
Fixed Asset Renewal Coefficient	0.18	0.17	0.11	0.14	0.16	0.19	0.14
Fixed Asset Retirement Coefficient	0.07	0.08	0.08	0.08	0.08	0.08	0.08
Fixed Asset Serviceability Coefficient	0.93	0.92	0.92	0.92	0.92	0.92	0.92
Production Capacity Utilization Coefficient	0.61	0.60	0.65	0.55	0.58	0.63	0.67
Overall Technological Capability Utilization Coefficient	0.45	0.44	0.44	0.42	0.44	0.46	0.45
Surxon Inert Stroy LLC							
Fixed Asset Renewal Coefficient	0.17	0.18	0.16	0.15	0.17	0.19	0.21
Fixed Asset Retirement Coefficient	0.06	0.08	0.09	0.09	0.09	0.08	0.09
Fixed Asset Serviceability Coefficient	0.94	0.92	0.91	0.91	0.92	0.92	0.91
Production Capacity Utilization Coefficient	0.38	0.30	0.60	0.35	0.45	0.65	0.68
Overall Technological Capability Utilization Coefficient	0.39	0.37	0.44	0.38	0.41	0.46	0.47
Komfort MDF Sifat LLC							
Fixed Asset Renewal Coefficient	0.15	0.19	0.17	0.18	0.19	0.18	0.22
Fixed Asset Retirement Coefficient	0.12	0.18	0.17	0.19	0.05	0.16	0.17
Fixed Asset Serviceability Coefficient	0.88	0.82	0.83	0.81	0.95	0.84	0.83
Production Capacity Utilization Coefficient	0.77	0.80	0.85	0.85	0.70	0.87	0.84
Overall Technological Capability Utilization Coefficient	0.48	0.50	0.51	0.51	0.47	0.51	0.52

Table 1 presents the technological capability indicators of the three selected enterprises operating in the Surkhandarya region during 2019–2025. The assessment includes the fixed asset renewal coefficient, fixed asset retirement coefficient, fixed asset serviceability coefficient, production capacity utilization coefficient, and the overall technological capability utilization coefficient. These indicators provide a comprehensive evaluation of the condition of production assets and the efficiency with which enterprises utilize their technological resources [9].

The results reveal noticeable differences in technological capability among the enterprises. Komfort MDF Sifat LLC demonstrated the strongest technological performance throughout the study period. Its overall technological capability utilization coefficient increased from 0.48 in 2019 to 0.52 in 2025, while production capacity utilization consistently remained at a relatively high level, fluctuating between 0.77 and 0.87. In addition, the enterprise maintained a stable fixed asset renewal coefficient and a high serviceability coefficient, indicating continuous modernization of production facilities and effective maintenance of existing assets. These results suggest that sustained investment in production technology has strengthened the enterprise's operational efficiency and competitive position [10].

Surxon Inert Stroy LLC experienced the most significant improvement during the study period. Its technological capability utilization coefficient increased from 0.39 in 2019 to 0.47 in 2025, accompanied by a substantial increase in production capacity utilization from 0.38 to 0.68. Similarly, the fixed asset renewal coefficient improved from 0.17 to 0.21, reflecting continuous investment in production facilities and gradual technological upgrading. These findings indicate that modernization activities contributed to improved production efficiency and enhanced the enterprise's technological potential [11].

By contrast, Fabullo Story Servis LLC demonstrated relatively stable but comparatively moderate technological performance. Although the serviceability coefficient remained consistently high (approximately 0.92–0.93), indicating that most production assets remained operational, the overall technological capability utilization coefficient fluctuated within a narrow range of 0.42–0.46. Production capacity utilization improved gradually from 0.61 in 2019 to 0.67 in 2025, suggesting incremental improvements rather than substantial technological transformation [12].

A comparison of the three enterprises indicates that technological capability depends not only on maintaining production assets but also on continuously renewing equipment and improving production capacity utilization. Enterprises that invested more actively in modernization achieved higher technological capability scores and demonstrated stronger production performance. These findings support the conceptual framework proposed in this study, which considers technological capability as a core component of enterprise economic potential and a prerequisite for sustainable industrial competitiveness [13].

From a managerial perspective, the results suggest that further improvements in technological capability should focus on accelerating equipment modernization, expanding digital production technologies, increasing production capacity utilization, and improving investment efficiency. Such measures would strengthen enterprise economic potential while supporting the broader objectives of industrial modernization and export competitiveness within Uzbekistan's building materials industry [14].

The activities of the enterprises examined in this study also demonstrate that changes in overall economic potential were directly influenced by the performance of financial, labour, managerial, and innovation capabilities.

Table 2. Economic Potential Utilization Indicators of Selected Industrial Enterprises in the Surkhandarya Region¹

Indicators	2019	2020	2021	2022	2023	2024	2025
Fabullo Story Servis LLC							
Technological Capability	0.45	0.44	0.44	0.42	0.44	0.46	0.45
Financial Capability	0.45	0.43	0.44	0.46	0.44	0.48	0.43
Labour Capability	0.73	0.74	0.77	0.79	0.72	0.80	0.77
Managerial Capability	0.93	0.92	0.93	0.92	0.93	0.93	0.94
Innovation Capability	0.40	0.40	0.41	0.40	0.41	0.40	0.42
Overall Economic Potential	0.59	0.58	0.60	0.60	0.59	0.61	0.60
Surxon Inert Stroy LLC							
Technological Capability	0.39	0.37	0.44	0.38	0.41	0.46	0.47
Financial Capability	0.40	0.41	0.42	0.44	0.44	0.43	0.48
Labour Capability	0.83	0.85	0.81	0.83	0.84	0.89	0.87
Managerial Capability	0.91	0.90	0.90	0.92	0.89	0.91	0.93
Innovation Capability	0.39	0.39	0.41	0.42	0.41	0.40	0.43
Overall Economic Potential	0.58	0.58	0.59	0.59	0.60	0.62	0.64
Komfort MDF Sifat LLC							
Technological Capability	0.48	0.50	0.51	0.51	0.47	0.51	0.54
Financial Capability	0.45	0.45	0.46	0.48	0.47	0.44	0.49
Labour Capability	0.91	0.84	0.86	0.90	0.84	0.82	0.84
Managerial Capability	0.91	0.90	0.89	0.90	0.91	0.91	0.91
Innovation Capability	0.40	0.42	0.43	0.43	0.44	0.43	0.47
Overall Economic Potential	0.63	0.62	0.63	0.64	0.63	0.62	0.65

The data presented in Table 2 indicate that the utilization levels of the individual components of economic potential varied across Fabullo Story Servis LLC, Surxon Inert Stroy LLC, and Komfort MDF Sifat LLC during the period 2019–2025.

For Fabullo Story Servis LLC, the overall economic potential utilization coefficient increased slightly from 0.59 in 2019 to 0.60 in 2025, indicating relatively stable development throughout the study period. Among all capability dimensions, managerial capability recorded the highest performance, remaining consistently between 0.92 and 0.94, which reflects the effectiveness of the enterprise's management system. Meanwhile, technological capability remained within the range of 0.42–0.46, while innovation capability fluctuated between 0.40 and 0.42, suggesting that limited technological upgrading and innovation activities constrained further improvements in overall economic potential. Labour capability improved from 0.73 in 2019 to 0.77 in 2025, indicating more efficient utilization of human resources. Nevertheless, the relatively modest progress in technological and innovation capability continued to limit the enterprise's overall economic potential [15].

In Surxon Inert Stroy LLC, the overall economic potential utilization coefficient increased from 0.58 in 2019 to 0.64 in 2025, representing the strongest improvement among the three enterprises. This growth was primarily driven by increases in technological capability (from 0.39 to 0.47), financial capability (from 0.40 to 0.48), and innovation capability (from 0.39 to 0.43). Labour capability remained consistently high throughout the observation period, reflecting the effective utilization of human capital. As a result, improvements in technological, financial, and innovation capability, together

¹ Author's calculations based on data from Fabullo Story Servis LLC, Surxon Inert Stroy LLC, and Komfort MDF Sifat LLC.

with strong labour and managerial capability, contributed significantly to the continuous growth of the enterprise's overall economic potential [16].

For Komfort MDF Sifat LLC, labour capability declined from 0.91 in 2019 to 0.84 in 2025, indicating a gradual reduction in the efficiency of human resource utilization. However, this decline was largely offset by improvements in other capability dimensions. Technological capability increased from 0.48 to 0.54, while innovation capability rose from 0.40 to 0.47, demonstrating the positive effects of modernization and innovation activities. Consequently, despite the decline in labour capability, the enterprise maintained the highest overall economic potential among the sampled enterprises, increasing slightly from 0.63 in 2019 to 0.65 in 2025.

Overall, the results demonstrate that the overall economic potential of the selected enterprises depends on the interaction among its constituent capability dimensions. Although managerial capability and labour capability consistently exhibited relatively high utilization levels across all enterprises, technological, financial, and particularly innovation capability remained comparatively underdeveloped. These findings suggest that further improvements in enterprise economic potential require accelerated technological modernization, stronger innovation activities, greater investment capacity, and wider adoption of digital technologies. Strengthening these areas would enhance enterprise competitiveness while supporting the sustainable development of Uzbekistan's building materials industry. Based on the findings of the present study, a SMART analysis can be developed to formulate targeted strategies for improving the efficiency of economic potential utilization in industrial enterprises, as presented in Table 3.

Table 3. SMART Framework for Improving the Efficiency of Economic Potential Utilization in Industrial Enterprises².

SMART Criterion	Analytical Focus	Evidence from the Assessment Indicators	Strategic Objective
S – Specific	Identify the key constraints and priority areas for improving enterprise economic potential.	Technological capability (0.37–0.54) and innovation capability (0.39–0.47) remain the weakest dimensions.	Strengthen technological modernization and innovation activities.
M- Measurable	Evaluate progress using quantifiable performance indicators.	Overall economic potential ranges from 0.58–0.65, while labour capability ranges from 0.72–0.91.	Increase technological capability to ≥ 0.55 , innovation capability to ≥ 0.50 , and overall economic potential to ≥ 0.65 .
A – Achievable	Assess the feasibility of achieving the proposed objectives.	Positive growth trends are evident in Surxon Inert Stroy LLC and Komfort MDF Sifat LLC.	The proposed targets are attainable through investment, modernization, and organizational improvement.
R – Relevant	Ensure that the proposed objectives contribute to	Technological lag and insufficient	Improve export capacity, productivity,

² Compiled by the author

	industrial development priorities.	investment remain major challenges.	and enterprise competitiveness.
T – Time-bound	Establish a realistic implementation timeframe.	The analysis covers enterprise performance during 2019–2025.	Achieve an overall economic potential coefficient of 0.65–0.70 during 2025–2026.

The empirical results indicate that the selected enterprises generally demonstrate a satisfactory level of economic potential utilization and possess considerable opportunities for further development. Nevertheless, the dynamic trends observed over recent years reveal structural imbalances among the constituent dimensions of economic potential, particularly in technological and innovation capability. The SMART analysis confirms that the formation and sustainable development of enterprise economic potential in the industrial sector of the Surkhandarya region depend directly on maintaining a balanced relationship among technological, financial, labour, managerial, and innovation capabilities.

Throughout the study period, all enterprises experienced gradual improvements in their overall economic potential, although the pace of development differed across firms. Among the sampled enterprises, Surxon Inert Stroy LLC demonstrated the strongest improvement, largely because of the relatively balanced development of all five capability dimensions. This finding suggests that sustainable enterprise growth is achieved not through improvements in a single capability but through the coordinated enhancement of multiple organizational resources.

The SMART analysis further demonstrates that strategic objectives for improving enterprise economic potential should not be defined solely in terms of quantitative targets. Instead, they should also incorporate considerations of implementation feasibility, relevance to enterprise development, and clearly defined time horizons. Such an approach enables managers to formulate practical and measurable development strategies while facilitating continuous monitoring of enterprise performance.

4. Conclusion

Based on the findings of this research, the following scientifically grounded recommendations are proposed to enhance the efficient utilization of economic potential in industrial enterprises:

1. Strengthen technological modernization by gradually replacing obsolete production equipment and introducing advanced digital manufacturing technologies.
2. Promote innovation activities through increased investment in research and development, technological innovation projects, and collaboration between enterprises and research institutions.
3. Improve investment policy by strengthening mechanisms for attracting both domestic and foreign investment to finance modernization and enterprise development.
4. Enhance human capital by upgrading employees' digital, technical, and managerial competencies through continuous education and professional training programs.
5. Modernize enterprise management systems by implementing strategic management practices, optimizing resource allocation, and introducing digital management and decision-support systems.

6. Expand export potential by aligning production processes with international quality standards, diversifying export markets, and improving the international competitiveness of building materials enterprises.

Overall, the findings demonstrate that the economic potential of building materials enterprises has evolved differently over time and has been shaped by the combined influence of production, labour, financial, managerial, and innovation-related factors. Although positive improvements have been observed in several dimensions during recent years, the available technological and innovation capacities have not yet been fully utilized. Furthermore, changes in labour productivity and workforce capability continue to exert a significant influence on the overall level of enterprise economic potential. Achieving sustainable growth in enterprise economic potential therefore requires continuous production modernization, expanded research and development activities, greater investment intensity, and the broader adoption of digital technologies. These strategic priorities will strengthen enterprise competitiveness while supporting the long-term sustainable development of Uzbekistan's building materials industry.

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