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ANALYSIS OF INDICATORS OF HUMAN CAPITAL UTILIZATION AND LABOR RELATIONS EFFICIENCY IN THE SMALL BUSINESS SECTOR

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Abstract. The article provides a statistical and economic analysis of the system of indicators characterizing the utilization of human capital and the efficiency of labor relations in the small business sector of Uzbekistan. A methodological distinction is made between the existing stock of human capital and the degree of its actual utilization in the labor process, and the relationship between employment, gross value added of small businesses per employed person, the volume of services and exports, labor stability, and the quality of labor relations is substantiated.

Keywords: small business, human capital, labor relations, labor productivity, employment, competence, labor returns, incentives, labor stability, efficiency.

INTRODUCTION

In small businesses, a substantial share of economic performance is determined by the extent to which employees' knowledge, skills, experience, initiative, and adaptability are mobilized in actual work processes. Therefore, from a scientific perspective, it is not entirely appropriate to treat the availability of human capital and the efficiency of its utilization as identical concepts. An employee may possess a high level of qualification; however, a mismatch between assigned tasks and professional potential, limited authority, weak incentive mechanisms, or a lack of trust in labor relations may constrain the transformation of existing human capital into economic returns.

Labor relations shape the institutional and organizational environment for the utilization of human capital. Fair incentives, clearly defined job responsibilities, effective feedback, employee participation in decision-making, and employment guarantees facilitate the transformation of knowledge and competencies into practical outcomes. Conversely, high employee turnover and uncertain labor relations may lead to the loss of firm-specific knowledge and reduce the returns on expenditures allocated to employee training and development.

The purpose of this article is to systematize the indicators reflecting the efficiency of human capital utilization and labor relations in the small business sector of Uzbekistan, assess their dynamics on the basis of official statistical data, and develop scientifically grounded conclusions aimed at increasing the economic returns on human capital.

LITERATURE REVIEW

T. Schultz conceptualized investment in human capital as expenditure capable of generating future economic returns [1], while G. Becker distinguished between general and firm-specific human capital and demonstrated the impact of on-the-job training on labor productivity [2]. Based on these approaches, the efficiency of human capital utilization in small businesses should be determined not only by employees' educational attainment but also by the extent to which their knowledge and competencies are effectively applied in business activities.

J. Mincer's approach to the relationship between education, experience, and earnings identifies work experience as an important determinant of returns on human capital. In the context of small businesses, workplace learning, multifunctional job responsibilities, and direct interaction with customers serve as mechanisms through which formal education is transformed into practically applicable human capital [3].

Within the resource-based view, J. Barney considers unique knowledge and competencies to be sources of sustainable competitive advantage. However, the economic value of such resources depends on the extent to which they can actually be utilized. From this perspective, authority, motivation, and the organizational environment act as mediating factors that transform the existing stock of human capital into tangible economic outcomes [4].

D. North's institutional approach substantiates the influence of formal rules and informal norms on economic behavior. Employment contracts, incentive rules, and clearly defined rights and obligations constitute formal institutions, whereas trust, cooperation, and mutual responsibility represent informal institutions [5]. In small businesses, it is precisely the interaction and coherence between these two institutional dimensions that determine the efficiency of labor relations.

Contemporary human resource management approaches associate efficiency with the coordination and consistency of employee recruitment, development, performance evaluation, motivation, and retention processes. The literature review indicates that human capital in small businesses is often examined primarily as an available resource, whereas the intensity of its utilization and the mediating role of labor relations in this process require separate statistical and economic analysis.

RESEARCH METHODOLOGY

The study employed time-series analysis, base and chain comparisons, structural analysis, relative indicators, the coefficient method, calculated labor return indicators, grouping, and logical generalization. The statistical database was formed using official data on small entrepreneurship published by the National Statistics Committee of the Republic of Uzbekistan.

Since the complete annual official series of employment indicators has currently been published only through 2024, gross value added per employed person was calculated for the period 2021–2024. For 2025, the published final indicators on production, services, and exports were analyzed separately. This approach ensures the comparability of statistical series and prevents the artificial substitution of actual 2025 employment data with forecast estimates.

ANALYSIS AND RESULTS

Assessing the efficiency of human capital utilization and labor relations in the small business sector requires, first of all, determining the extent to which labor resources are involved in economic activity and evaluating the effectiveness of their utilization. In this context, quantitative employment indicators reflect the degree of human capital involvement in economic processes, while the value added generated, labor returns, and performance indicators characterize the efficiency with which this capital is utilized. Therefore, the analysis prioritizes not merely the availability of human capital but rather the extent to which it is transformed into economic outcomes through the activities of small business entities.

During the period under study, the role of small entrepreneurship in providing employment, the economic output per employed person, and the structural indicators of small business activity were assessed in an interconnected manner. On the one hand, this approach makes it possible to determine the role of small businesses in the labor market; on the other hand, it enables the effectiveness of utilizing the knowledge, skills, and experience of the employed population to be evaluated through economic indicators. Accordingly, it is appropriate to begin by examining the dynamics of employment in small entrepreneurship and its share in total employment (table 1).

Table 1
Employment in Small Entrepreneurship and Its Share in Total Employment, 2021–2024

Indicator	2021	2022	2023	2024	2024/2021
Employed persons, thousand people	10080,6	10131,1	10373,3	10628,7	105,4 %
Share in total employment, %	74,5	73,9	74,0	74,5	0,0 f.p.

According to the data presented in Table 1, the number of people employed in small entrepreneurship increased from 10,080.6 thousand in 2021 to 10,628.7 thousand in 2024, representing an increase of 548.1 thousand people, or 5.4%. At the same time, the share of small entrepreneurship in total employment remained relatively stable at approximately 74.5%.

This indicates the substantial capacity of small businesses to generate and maintain employment in the labor market. However, the stability of their share in total employment does not automatically imply an improvement in the efficiency of human capital utilization. To assess efficiency more accurately, employment indicators should be examined in conjunction with the economic value generated by the employed workforce (table 2).

Table 2
Calculated Labor Return in Small Entrepreneurship, 2021–2024

Indicator	2021	2022	2023	2024	2024/2021
Gross Value Added (GVA) of Small Entrepreneurship, trillion UZS	455,7	533,1	646,8	789,5	173,3 %
Employed persons, million people	10,081	10,131	10,373	10,629	105,4 %
GVA per employed person, million UZS	45,2	52,6	62,4	74,3	164,3 %

In Table 2, the gross value added of small entrepreneurship per employed person was calculated as a proxy indicator of the effectiveness of human capital utilization. This indicator increased from UZS 45.2 million in 2021 to UZS 74.3 million in 2024, representing a nominal increase of 64.3%. Given that employment increased by only 5.4% over the same period, the more rapid growth in economic value indicates an improvement in the returns on labor resource utilization.

However, since this is a nominal indicator, it would not be appropriate to interpret it as a measure of real labor productivity. To isolate the effects of inflation and sector-specific price changes, gross value added measured at constant prices would be required (figure1).

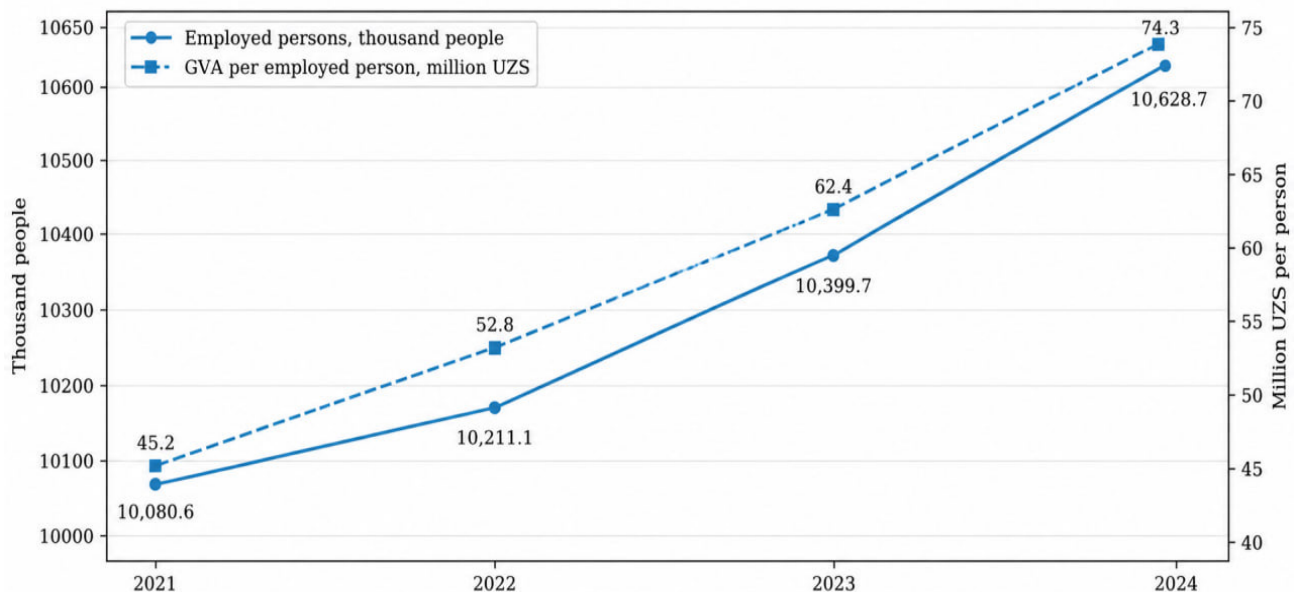


Figure 1. Employment and Calculated Labor Return Dynamics in Small Entrepreneurship

The analysis of Figure 1 clearly demonstrates the different growth rates of employment and economic returns. While the number of employed persons increased along a relatively steady trajectory, nominal value added per employed person grew at a faster rate. This indicates that economic growth in the small business sector is being driven not only by the attraction of additional labor resources but also by an increase in the economic returns generated by the existing workforce. From a human capital perspective, this trend highlights the growing importance of the quality of competencies, the effective use of technologies, and improvements in the organization of labor (table 3).

Table 3
Key Performance Indicators of Small Entrepreneurship in 2025

Indicator	2025	Share in the Economy	Compared to 2024
Small Entrepreneurship GVA in GDP	UZS 923.5 trillion	52,2 %	-
Industrial Output	UZS 383.9 trillion	34,9 %	114,8 %
Construction Works	UZS 230.9 trillion	73,6 %	112,2 %
Services	UZS 595.1 trillion	56,7 %	114,3 %
Retail Trade	UZS 400.5 trillion	83,0 %	109,6 %
Exports	USD 12.4 billion	36,6 %	—

Table 3 shows that in 2025, the basis for creating demand for labor and human capital in small business expanded further. In particular, the increase in services to UZS 595.1 trillion and exports to USD 12.4 billion enhances the economic importance of competencies in service provision, digital literacy, marketing, logistics, foreign languages, and working with international standards within the structure of human capital (table 4).

Table 4
System of Indicators for Assessing the Efficiency of Human Capital Utilization

Block	Main indicator	Calculation / interpretation	Efficiency sign
Employment capacity	Share of employment in small business	Small business employment / total employment × 100	Stable employment consistent with economic results
Labor return	Value added per employed person	Small business GVA / small business employment	Growth in real terms
Utilization of competencies	Job–competency match	Share of employees working in matching competencies	High level of match
Development	Training coverage	Trained employees / total employees × 100	Continuous growth
Innovative utilization	Participation in proposals and innovations	Active participants / total employees × 100	High share of initiatives
Sustainability	Staff turnover	Leavers / average number of employees × 100	Low and manageable level

The methodological significance of Table 4 is that the efficiency of human capital utilization cannot be measured by a single indicator. Employment capacity reflects the extent to which the resource is engaged in the economy, labor return shows the result obtained from it, and professional match indicates the use of existing competencies in actual tasks. Training and innovative participation ensure the dynamic renewal of human capital, while staff turnover indicates the extent to which accumulated knowledge is retained within the enterprise (table 5).

Table 5
Indicators for Assessing the Efficiency of Labor Relations

Direction	Indicator	Content	Desirable trend
Fairness	Satisfaction with incentives	Alignment between performance and reward	Increase
Trust	Manager–employee trust index	Open communication and acceptance of decisions	Increase
Participation	Share of participation in decisions	Integration of employee initiatives into management	Increase
Guarantee	Formalized labor relations	Clarity of rights and obligations	Increase
Stability	Staff turnover	Sustainability of labor relations	Decrease
Conflicts	Frequency of labor disputes	Signal of institutional inconsistency	Decrease

According to the analysis of Table 5, it is not sufficient to assess the efficiency of labor relations solely on the basis of wages. Fairness and trust influence employees' voluntary and active use of their existing competencies, participation strengthens initiative, and formal guarantees ensure long-term employment stability. Staff turnover and conflicts can be regarded as inverse indicators of human capital retention (figure 2).

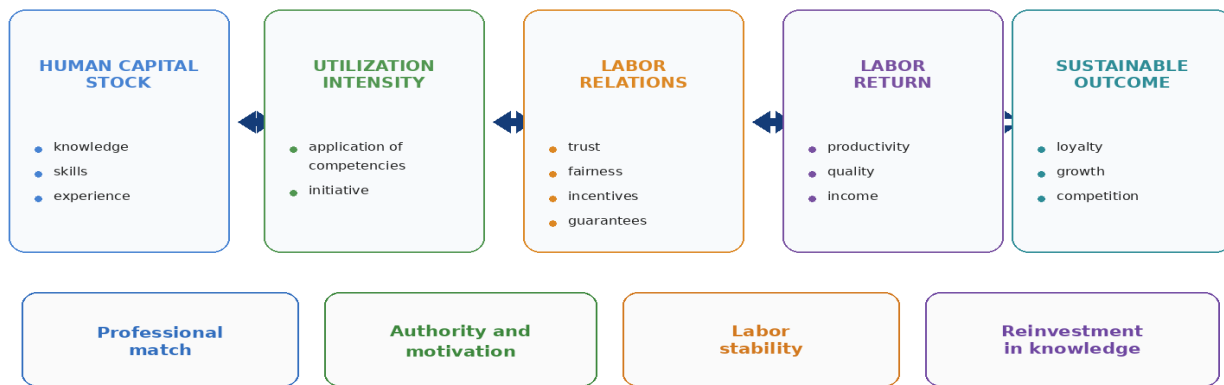


Figure 2. Mechanism of Interaction between Human Capital Utilization and the Efficiency of Labor Relations

Figure 2 shows that the transformation of human capital into economic outcomes depends on intermediate stages. The mere presence of a stock of knowledge, skills, and experience in an enterprise is not sufficient; employees must apply this potential in their tasks, demonstrate initiative, and possess the appropriate authority to do so. Labor relations play a mediating role precisely at this point: fair incentives, trust, and guarantees strengthen the transformation of competencies into labor returns. Allocating part of the resulting gains to employee retraining, in turn, reproduces the efficiency cycle (table 6).

Table 6
Diagnostic Matrix of Human Capital Utilization Efficiency

Case	Human capital stock	Level of utilization	Labor relations	Management conclusion
A	High	High	Effective	Ensure sustainable growth and expand innovation
B	High	Low	Weak	Review authority, motivation, and professional match
C	Low	High	Effective	Increase investment in training and skills development
D	Low	Low	Weak	Comprehensively reorganize personnel and labor relations

The matrix in Table 6 makes it possible to assess the stock of human capital separately from the results of its utilization. The most important case is option B, in which an enterprise has qualified employees, but their potential is not fully utilized because of the low quality of labor relations. This situation indicates the need to review authority, motivation, job design, and management style before allocating additional funds to training (table 7).

Table 7
Key Scientific Findings Derived from the Analysis for 2021–2025

Result	Empirical basis	Scientific interpretation
High employment capacity	74.5% of total employment in 2024	Small business is one of the main channels for engaging labor resources in the economy
Nominal labor return increased	GVA per employed person: UZS 45.2 → 74.3 million (2021–2024)	Economic value grew faster than employment
Expansion of services intensified	Services reached UZS 595.1 trillion in 2025	The role of knowledge- and customer-oriented competencies is increasing
Demand for export competencies increased	Exports reached USD 12.4 billion in 2025	Knowledge of international standards, marketing, and logistics is gaining economic value
Institutional condition of efficiency identified	System of labor-relations indicators	Human capital returns depend on authority, trust, fairness, and stability

The results presented in Table 7 demonstrate the dual nature of human capital utilization in small businesses. On the one hand, the high share of employment ensures broad involvement of human capital in economic activity. On the other hand, the expansion of services and exports requires a transition from ordinary employment to high-competency employment. Therefore, at the next stage, the key task is not only to increase the number of jobs but also to raise the real economic return per employed person and the degree of utilization of professional potential (table 8).

Table 8
Priority Measures to Improve Human Capital and Labor Relations Efficiency in Small Business

Problem area	Proposed measure	Monitoring indicator	Expected effect
Competency–task mismatch	Align professional profiles and tasks	Professional match coefficient	Utilization of potential increases
Low initiative	Authority and performance-based incentives	Share of proposals / participation	Innovative activity increases
Knowledge obsolescence	Continuous workplace training	Training coverage	Competencies are updated
Staff turnover	Retention and development package	Turnover coefficient	Firm-specific knowledge is retained
Subjectivity in management	Transparent evaluation and feedback	Satisfaction / trust index	Quality of labor relations improves
Low real productivity	Technology + competency integration	Real GVA / employed person	Labor return increases

The management conclusion derived from Table 8 is that investment in human capital and the improvement of labor relations should be implemented not as separate programs but as a unified efficiency mechanism. If an employee is trained but is not simultaneously granted the authority to apply new knowledge, the return on investment declines; if incentives are strong but the necessary competencies are absent, the result will not be sustainable. Thus, efficiency is achieved through the alignment of competence, opportunity, and motivation.

CONCLUSION AND RECOMMENDATIONS

The analysis showed that the degree of human capital involvement in the economy is high in Uzbekistan's small business sector. In 2024, more than 10.6 million people were employed by small entrepreneurship

entities, accounting for 74.5% of total employment. This indicator characterizes small business as one of the principal economic platforms for human capital utilization.

During 2021–2024, the gross value added of small entrepreneurship per employed person increased in nominal terms from UZS 45.2 million to UZS 74.3 million. This indicator reflects positive dynamics in labor returns; however, to assess it as real productivity, constant-price series that exclude the price factor should be used.

In 2025, small business services reached UZS 595.1 trillion, and exports reached USD 12.4 billion, indicating that the qualitative requirements for human capital are becoming more complex. The expansion of services and exports is increasing the economic value of digital, communication, management, marketing, and international market competencies.

The study proposes distinguishing between the existing stock of human capital and the degree of its actual utilization. In assessing the efficiency of human capital utilization, it is appropriate to jointly apply indicators of employment capacity, real labor return, professional match, training coverage, innovative participation, and staff stability.

The efficiency of labor relations should be assessed as a mediating factor determining the economic return on human capital. Therefore, small business entities are advised to regularly monitor the fairness of incentives, manager–employee trust, participation in decision-making, employment guarantees, staff turnover, and the frequency of labor disputes.

In practical terms, introducing an internal monitoring system in enterprises based on the “competence – task – authority – incentive – result” chain, linking training expenditures to employees’ subsequent performance, and assessing labor productivity, where possible, on the basis of real value added will contribute to improving the efficiency of human capital utilization.

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