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Article

Methodological Approach to Assessing Economic Efficiency in the Service Sector

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Abstract: This article examines the theoretical and methodological foundations for assessing economic efficiency in the service sector within the context of the contemporary economic transformation. Particular attention is paid to the specific operational characteristics of the service sector and its role in fostering sustainable economic growth, increasing employment levels, and improving the population's quality of life. The study explores approaches to defining criteria and indicators for the efficiency of service enterprises and substantiates the need for a comprehensive system of indicators that accounts for both economic and social outcomes.

Keywords: Service sector, economic efficiency, efficiency criteria, efficiency indicators, labor productivity, labor intensity of services, gross income, profit, human resources, quality of services, consumer satisfaction, economic diversification, digital economy.

1. Introduction

Today, the rapid development of the service sector serves as a key driver for deepening structural economic transformation and diversification, fostering employment, and enhancing both the income and quality of life of the population. By addressing various social and everyday needs, the service sector improves people's lives and saves them time. Urbanization, an accelerating pace of life, a growing number of elderly individuals and children, and the rise of dual-income households all fuel the expansion of the service sector, as such a society increasingly relies on these services. Looking at the experience of various nations, the service sector accounts for 80% of GDP in France, 76% in Belgium, 76% in Denmark, 76.7% in the United States, 75.9% in Japan, 73% in Italy, 78.5% in Greece, and 78% in Canada. These figures hold strategic importance—not only within the context of today's market conditions but also as a foundation for long-term international economic policy aimed at further developing the service sector in Uzbekistan and providing comprehensive support for increasing its share in the gross domestic and regional product.

One of the founders of the concept of efficiency in economics is D. Ricardo, who defined "economic efficiency" as the ratio of the result to a specific type of input—or, in other words, as "the excess of the result over the inputs" [1].

Later, the concept of "economic efficiency" was employed by the German scholar K. Marx, who defined it as a fundamental condition for the transformation of one socio-political formation into another [2].

Z. A. Demchenko and E. I. Bikovsky characterize economic efficiency as a reflection of the final results obtained from the use of all production resources over a specific period of time [3].

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Modern research also views economic efficiency as a multifaceted category that encompasses a system of indicators for evaluating enterprise performance [4].

2. Research methodology

In addressing the stated objectives—consistent with the methodological approach to assessing economic efficiency within the service sector—methods of logical reasoning, analysis and synthesis, as well as comparative analysis, are widely employed.

3. Results

One tool for identifying ways to effectively utilize resources within the service sector—particularly in the context of economic transformation—is the determination of factors, criteria, and indicators that drive improvements in economic efficiency [5].

The current stage of development in an innovation-driven, socially-oriented economy further elevates the importance of consumer market sectors. This encompasses their role in fully satisfying the needs of the population, the operational efficiency of the organizations and enterprises within this sphere, and the quality standards required for the services they provide. Traditional approaches to evaluating the efficiency of organization and management—originally designed for industrial production systems—are often inapplicable to many consumer-market organizations, given the unique nature of their operational structures, technologies, and the social significance of their products and services [6].

Evaluation of economic activity relies on one or more criteria, which also serve to gauge the scale and level of various events and trends. The term "criterion" implies a "scale" or "measure." It encapsulates the essence, content, and primary objectives for enhancing economic, organizational, and managerial efficiency in the delivery of services. When defining these elements, it is essential to focus on the ultimate outcomes of the service-delivery process. These final outcomes are reflected through various indicators. Consequently, when establishing criteria and indicators for the development of the service sector, it is necessary to account for its specific characteristics and unique aspects [7].

There is still no unified approach to defining a general criterion for the efficiency of enterprises in the service sector. Some economists argue that the criterion for economic efficiency is the provision of high-quality services through the rational use of all resources to fully satisfy the needs of the population [8].

Many economists contend that the level of consumer satisfaction—in terms of the ability to meet demand for consumer goods and services—serves as a general criterion for efficiency in the service sector. Others, however, believe that the efficiency of the service-delivery process should be determined by a system of interconnected key indicators that comprehensively reflect both the gross revenue generated from providing services and the total volume of services delivered to the population. Ultimately, the complete and high-quality satisfaction of demand for specific types of services stands as the primary criterion for enhancing economic efficiency [9].

The growth of economic efficiency is an objective law governing the development of any form of production; as society evolves, there is an inherent need to increase the volume and quality of goods and services produced, reduce production and transaction costs, and expand the scope of extended reproduction [10].

It is important to examine the performance metrics of service-sector enterprises using a system of specific indicators. The aggregate indicator for an enterprise is the volume of services provided. This metric is determined by the volume of services per employee; that is:

Volume of services per employee (Ix) at a service-sector enterprise:

$$I_x = \frac{X_x}{I_s},$$

here: X_x – the actual volume of services for the reporting period (amount);

I_s – the number of employees for the reporting year.

In addition, the following are among the indicators that reflect the efficient use of labor resources in the service sector:

Volume of services per one sum of wages at an enterprise in the service sector (X_{ix}):

$$X_{ix} = \frac{X_x}{IH_j},$$

here: IH_j – the actual total wage fund at a service-sector enterprise in the reporting year.

The amount of profit corresponding to one sum of wages at an enterprise in the service sector (F_{ih}):

$$F_{ih} = \frac{F_h}{IH_j},$$

here: F_h – the amount of an enterprise's profit for the reporting period.

The quality of human resource management in the service sector depends on the level of labor mechanization (Md) at the enterprise:

$$M_d = \frac{I_m}{I_{o'ys}},$$

here: I_m – number of workers in mechanized roles who perform manual labor, in the reporting year;

$I_{o'ys}$- Average employee salary at a service-sector enterprise ($I_{o'rtih}$).

Like any other process, the provision of services takes place over a specific period of time; consequently, the duration of such a process is measured in terms of time. An employee delivers a certain volume of services within a given unit of time [11], [12].

In addition to a metric for working time, an indicator describing labor input in terms of its qualitative composition is also required. For this purpose, the concept of "labor intensity" (or "labor input per unit") is used. Labor intensity is understood as the human labor cost required to produce a single unit of output [13].

Calculating labor intensity in the service sector is particularly significant when evaluating work outcomes. In this sector, labor intensity is determined by the labor input required per unit of service volume [14].

Analyzing the composition and scale of labor inputs by determining labor intensity in the service sector enables, among other things, the selection of the most rational paths for scientific and technical development, as well as the assessment of the effectiveness of various methods, organizational structures, and technologies used in labor and service delivery [15].

Studying the labor intensity of technological processes—and identifying ways to reduce it based on the structure of labor costs—helps uncover potential improvements and key drivers for enhancing labor efficiency. This, in turn, is vital for fostering the creative initiative of scientists, designers, and service providers as they address challenges related to the mechanization and automation of technological processes within the service sector. As the quality and efficiency of labor are improved, particular attention should be paid to supporting the practical implementation of theoretical design concepts—developments that contribute to the creation of more advanced service equipment, machinery, and various technologies.

4. Discussion

The findings of this study highlight the multidimensional nature of economic efficiency in the service sector and demonstrate the methodological importance of evaluating enterprise performance through an integrated system of economic, organizational, and social indicators. Unlike manufacturing enterprises, where efficiency is traditionally assessed through output volumes, production costs, and profitability, service-sector enterprises require a broader assessment framework that incorporates labor productivity, service quality, resource utilization, and consumer satisfaction.

The analysis indicates that conventional approaches to measuring economic efficiency cannot fully reflect the specific characteristics of service activities. In particular, the intangible nature of many services, the simultaneous processes of production and consumption, and the direct interaction between service providers and consumers create additional methodological challenges. Consequently, the evaluation of service-sector efficiency should not be limited to financial performance indicators but should also consider qualitative outcomes associated with the effectiveness of service delivery.

An important aspect of the proposed methodological approach is the relationship between labor productivity and the rational utilization of human resources. The indicators examined in the Results section, including the volume of services per employee, service output per unit of wage expenditure, and profit relative to wage costs, provide complementary perspectives on the economic contribution of labor resources. Their combined application makes it possible to distinguish between improvements resulting from higher employee productivity and those associated with changes in labor expenditure.

Furthermore, the analysis emphasizes the importance of labor intensity as a methodological indicator for identifying opportunities to improve operational efficiency. Reducing labor intensity through technological modernization, automation, and improved organizational processes may contribute to lower operating costs and higher productivity. However, such improvements should be evaluated alongside service quality because excessive reductions in labor inputs may adversely affect consumer satisfaction and the overall effectiveness of service provision.

Another significant issue concerns the selection of appropriate efficiency criteria. The theoretical approaches examined in this study suggest that profitability, resource productivity, and consumer satisfaction represent interconnected rather than mutually exclusive dimensions of enterprise performance. From this perspective, an economically efficient service enterprise should not only achieve favorable financial results but also ensure the effective utilization of available resources while maintaining an appropriate level of service quality.

The findings also suggest that technological development and digital transformation may create additional opportunities for improving efficiency in service-sector enterprises. The introduction of digital management systems, automated operational processes, and data-based performance monitoring can potentially improve labor allocation, reduce administrative costs, and support more informed managerial decisions. Nevertheless, the effectiveness of these technological solutions depends on their alignment with enterprise characteristics, employee competencies, and consumer requirements.

From a managerial perspective, the integrated application of efficiency indicators can support the identification of internal performance constraints, the comparison of alternative organizational solutions, and the development of targeted measures for improving service delivery. At the sectoral level, such an approach may provide a methodological basis for evaluating the contribution of service enterprises to employment generation, economic diversification, and improvements in population welfare.

At the same time, several limitations should be acknowledged. The present study is primarily conceptual and methodological, relying on logical analysis, synthesis, and comparisons of existing approaches rather than enterprise-level empirical testing. Therefore, the proposed relationships between efficiency indicators and organizational outcomes should be interpreted as theoretically substantiated propositions rather than statistically verified causal effects. Future research should examine the applicability of the proposed indicator system using empirical data from different service industries, including tourism, hospitality, transportation, education, and information services.

Overall, the discussion demonstrates that assessing economic efficiency in the service sector requires a comprehensive methodological framework capable of combining financial performance, labor-resource utilization, operational effectiveness, and service quality. Such an approach offers a more balanced foundation for evaluating enterprise performance and identifying opportunities for sustainable improvements in service-sector efficiency.

5. Conclusion

Given the specific nature of the service sector's development, the integration of social standards into the framework of public services will facilitate the sector's rapid growth, enhance the system of social indicators, and ensure that consumer needs are fully met.

Accordingly, the efficiency of an enterprise within the service sector is evaluated based on indicators that reflect the effective use of human resources, the assurance of work quality, and improvements to both working conditions and the nature of the work itself.

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