CONTENT

ECONOMIC SCIENCES

HISTORICAL SCIENCES

JURISPRUDENCE

PEDAGOGICAL SCIENCES

PSYCHOLOGICAL SCIENCES

ECONOMIC SCIENCES

METHODICAL APPROACHES TO ASSESSING THE EFFICIENCY OF ECONOMIC ACTIVITY OF ENTERPRISES

Chikov I.

Postgraduate student *, assistant of the department of computer science and economic cybernetics
Vinnytsia National Agrarian University,
Vinnytsia, Ukraine

Abstract

The article considers the main theoretical and methodological approaches to assessing the economic efficiency of enterprises. The point of view of scientists concerning the choice and characteristics of indicators of estimation of economic efficiency of activity of the enterprises for the purpose of carrying out the complex analysis is investigated. The main aggregate indicators of complex assessment of economic efficiency of enterprises are determined. The essence of the concepts "efficiency of enterprise activity"   .

Keywords: evaluation, economic efficiency, indicators, system of indicators, analysis, effectiveness, sustainable development, economic growth.

Problem statement. The question of the efficiency of economic activity of the enterprise in modern conditions is one of the most relevant and important. There are many proposals and concepts for evaluating the work of companies, both from Ukrainian and foreign experts, but so far there is no consensus on this issue.

In modern conditions, the goal of business entities is to obtain maximum profits with optimal costs, the main task of managers at all levels is not so much the quantitative indicators of the enterprise, as their qualitative characteristics, namely the efficiency of management.

No less important point is the choice of the optimal system of indicators, which would allow the most accurate and comprehensive assessment of the efficiency of enterprises.

Analysis of recent research and publications.

Problematic issues are reflected in the works of such domestic and foreign scientists O. Amosov [1], O.I. Amosha, P. Drucker, O.I. Shamanska [14], V.G. Andriychuk [5], S.P. Lobov [10], O.V. Shlyaga [8] and others.

Despite the large number of scientific studies, the main theoretical provisions and practical aspects of economic efficiency of enterprises remain controversial and require further research. Research also requires methodical approaches to the selection of components and criteria of the system of indicators for assessing the economic efficiency of the entity, identifying reserves and opportunities for their operation, identifying areas for economic efficiency and development, the use of economic and mathematical methods in forecasting their further development.

The purpose of the article is to explore the main aspects of the analysis of modern approaches to assessing the effectiveness of economic activity of enterprises.

Presentation of the main material of the research. Economic efficiency is a key category of a market economy, which is directly related to achieving the ultimate goal of social production as a whole, as well as each enterprise individually.

It is important to define the essence of the concept of "efficiency of economic activity of the enterprise". In the table 1. the basic definitions of this concept are given.

---

* Scientific supervisor - Doctor of Economic Sciences, Professor of the department of computer science and economic cybernetics Koliadenko S.V.

Table 1

The essence of the concept of "economic efficiency of the enterprise"

Author	Definition
O.V. Shnipko	"… a combination of resources that allows you to achieve maximum production of goods at the lowest cost"
T.S. Khachaturov	"…to determine the efficiency of the enterprise must take into account the implementation of established plans for production and cost, and argued that stimulating the development of new capacity without taking into account the efficiency of costs is impossible"
V.G. Andriychuk	"… the relationship between the results of production, ie products and material services, on the one hand, and labor costs and means of production, on the other hand"
Emerson	"… this is the most favorable ratio between total costs and economic results"
O.O. Slyusarenko	"… the most important indicator of the effectiveness of the enterprise, which is a comparison of the results of these activities with the costs of its implementation, as well as determined by the ratio of results to costs"
P. Drucker	"…the efficiency of the enterprise must be assessed by indicators of profit and profitability."
Dolan E.J., D. Lindsay	"…a state of affairs in which it is impossible to make any change that would more fully satisfy the desires of one person without interfering with the desires of another person"
E. Dolan	"…it is the choice of the right goals on which all the energy of the enterprise is focused"
R. Macmillan	"…production of the best or optimal combination of products based on the use of the most efficient combination of resources"
Vilfredo Pareto	"… it is a condition in which it is impossible to increase the degree of satisfaction of the needs of at least one person without worsening the situation of another member of society".
A.G. Zagorodniy, G.L. Voznyuk	"…the effectiveness of economic activity in the implementation of economic programs and taking measures characterized by the ratio of the obtained economic effect (result) to the cost of resources that led to the receipt of this result"
S.V. Mocherny, S.A. Yerokhin, L.O. Kanishchenko	"…achieving the greatest results at the lowest cost of living and tangible labor"
N.V. Savenko	"…the result of production activity, which is expressed as the ratio between the results of economic activity and resource costs"

Source: based on [9, 10, 15].

Thus, the existence of different concepts about the essence of the efficiency of economic activity of the enterprise is due to different theoretical positions on its analysis, the allocation of some one aspect to solve the overall problem.

To date, there are many methods and approaches to determining the economic efficiency of the enterprise. The most widespread is the traditional financial model, which began to be used at the beginning of the last century, improved with the development of accounting methods and is still widely used [6].

The essence of this model is to move away from external influences and assess the economic efficiency of the enterprise on the basis of calculations of internal performance indicators. The main indicators of efficiency growth in this model are the increase in profits achieved by reducing costs. The analysis of the state of the enterprise is carried out on the basis of the data of the reporting of the previous periods, efficiency of the future periods is put in direct dependence on earlier reached results.

These approaches differ in the depth of analysis and informativeness of key indicators and, accordingly, are used for various purposes: from exclusively educational, "academic" to form basic knowledge of students in the study of economic disciplines to solve practical problems to assess the effectiveness of the enterprise. However, they do not contain deep contradictions and have similar advantages and disadvantages, so it seems appropriate to consider them only as approaches, methods of calculating economic efficiency within the traditional financial model.

The advantages of this model include a simple calculation algorithm, ease of implementation and versatility, well-known and available information on algorithms for calculating the required indicators, the development of a methodological basis for analysis, the presence of many examples of adaptation of this model to different sectors of the economy [11].

Of the shortcomings of the traditional financial model, we would like to note its highly specialized orientation (only material factors are taken into account when determining efficiency), limited informativeness (changes in the owner's capital are not taken into account), relative accuracy (accounting data do not give an accurate picture of the company). as well as the shortcomings rightly noted in the article [15]: simplification of the model due to the lack of an indicator that characterizes the risk factor; incomplete accounting for

the cost of raising capital (some costs, such as dividends, are partially reflected in net income); difficulty comparing traditional performance indicators of competing companies due to differences in their accounting policies.

An alternative to the traditional financial model are cost models for determining the efficiency of the enterprise, in which increasing the efficiency of its activities is associated with an increase in its value. James Tobin, in 1966. proposed the "theory of portfolio investment choice" - the first cost model for determining the efficiency of the enterprise.

The author of the model argued that in the presence of alternative investment options, one should strive to achieve a balance of high-risk and low-risk investments in the investment portfolio. James Tobin proposed the concept of "factor Q" (Tobin coefficient), which is defined as the ratio of market value of assets in tangible form to the cost of their replacement and is used to determine the effectiveness of capital investment in the enterprise. The efficiency of the enterprise can be calculated by the formula:

$$q = \frac{P}{A}, \qquad (1)$$

where - q is the Tobin coefficient;

P - capitalization of the company;

A - the value of its net assets.

The emergence of the model is also associated with the emergence of the concept of "cost thinking", which is characterized by the efforts of managers to maximize the value of the enterprise, calculated using cash flow values taking into account various external factors (unlike the traditional model folded on internal processes).

Foreign economists T. Copeland, T. Koller, D. Murrin proposed a more effective approach to the allocation of value factors, based on calculations of the value as the discounted cash flow of the company. The approach of scientists is more adapted to assess the effectiveness of the enterprise than previously developed, because it takes into account all available factors from the internal or external environment of the company that may affect performance. As part of building a system that would allow you to track changes in value, it is proposed to identify cost factors and set them as performance indicators for different units. The application of this model, however, there were difficulties with the allocation of cost factors, because only financial indicators were taken into account, which was quite difficult to extend to all levels of the organization [7].

The development of cost models took place in parallel with the improvement of management and planning systems, the development of information technology, increased competition and increased complexity of tasks. The initial stage of this development is associated with such significant models as factor analysis (DuPont model), return on investment (ROI), return on assets (ROA), earnings per share (EPS), earnings before taxes, interest and depreciation (EBITDA), return on net assets (RONA), return on equity at risk (RAROC), Edwards-Bell-Olson model (EVO).

To date, the most common concept in value thinking is the concept of economic value added (EVA) developed by J. Stern and B. Stewart.

Economic value added is a modification of the indicator of economic profit (residual income), which measures the financial result of the company, taking into account not only accounting costs but also the opportunity cost of invested capital. Economic profit (residual income) is the result of subtracting the above opportunity costs from accounting profit.

EVA is determined by the formula:

$$EVA = NOPAT - WACC \cdot IC, \quad (2)$$

where EVA (Economic Value Added) - economic added value;

NOPAT (Net Operating Profit After Tax) - net operating profit;

WACC (Weighted Average Cost of Capital) - weighted average cost of capital;

IC (Invested Capital) - invested capital.

Many modern economists suggest calculating EVA differently - the principle allows you to link the return on assets of the company and the added economic value:

$$EVA_t = (ROA_t - WACC) * C_{t-1}, \quad (3)$$

де WACC - weighted average cost of capital;

ROA - indicator of return on assets of the company.

It is worth noting that the increase in EVA in the past is possible not only due to increased efficiency of the enterprise, but also due to factors that could lead to negative consequences in the future.

Since the value of EVA is affected by production costs, an example of such factors may be an attempt to save on materials, as a result and product quality, which in the short term will lead to an increase in EVA, and in the long run - to its reduction due to loss customers and reduced sales revenue.

It is not necessary to completely abandon traditional financial methods, because they do not lose their relevance and can be used in conjunction with cost models, which will allow you to get more sound and balanced management decisions.

It is not advisable to use several independent indicators that assess the value of the company at the same time, because the system of cost-oriented management is effective in subordinating management decisions to one goal, which is associated with increasing a single cost indicator.

Among the existing cost models there is no one that fully takes into account all the factors of the external and internal environment of the enterprise, the most promising of them, despite these shortcomings, is the model of economic value added that needs to be improved.

Note that to date, scientists have not identified a single common indicator for determining the economic efficiency of enterprises. The question of determining a universal indicator for determining economic efficiency is relevant and needs further study.

Methods for assessing economic efficiency are associated with the calculation of the ratio of the result (effect) from production to the amount of resources

(costs) that were spent to obtain this result, and is calculated by the general formula:

$$e = \frac{E \to max}{B \to min},\qquad(4)$$

where e - criterion of economic efficiency;

E - economic result (benefit, effect);

B - costs of achieving economic results.

The use of economic and mathematical methods in the study of the level of economic efficiency of enterprises makes it possible to obtain a systematic assessment of economic activity, and all elements of the system must be considered.

When assessing the economic efficiency of the enterprise, it is necessary to take into account the efficiency for the owners (participants) of the enterprise. Today the following types of economic efficiency are evaluated:

- activities of economic entities as a whole;

- efficiency of participation in the capital of the enterprise (efficiency of the own capital of the owner of the enterprise or investments in the authorized capital of the enterprise of its participants).

Such calculations are made in order to confirm for each of the participants the appropriateness of its participation in the capital of the enterprise and belong to the class of calculations of the feasibility of investing. The study of the problem of efficiency in different directions and its evaluation for different purposes and users of information determine the multifaceted approaches to determining the effectiveness of the enterprise.

Evaluating the effectiveness of the enterprise, for example, for the previous year, summarize the activities of the enterprise in the past, evaluate what has already happened. And no matter how effective the operation of the enterprise in the past, it does not mean that this trend will be predicted for the future. Therefore, when evaluating the efficiency of production, it is necessary to clearly understand that it should be forecast for several years, and past estimates can be used in the design of indicators, taking into account both existing trends and forecasts of internal and external factors [5].

During the study of production efficiency, it is also necessary to pay attention to the production functions that characterize the dependence of finished products on the factors influencing the processes of the enterprise. Consider the production function proposed by Charles Cobb and Paul Douglas, which takes into account the influence of two factors - capital and labor:

$$V = A \times K^{\alpha} \times L^{\beta},\qquad(5)$$

where V - production volume;

K - production assets;

L - workforce;

A - coefficient of proportionality or scale;

α, β - coefficients of elasticity of production to capital and labor, which characterize the increase in production, which accounts for 1% increase in the corresponding factor of production.

In this case, if the values increase K i L in n times, then there is a directly proportional dependence, according to which increases L in $n^{\alpha+\beta}$.

This production function was worked out by R. Solow, E. Denis, Y. Stern, who drew attention to the need to take into account the following factors: the qualifications of workers and the technical level of production:

$$V = A \times K\alpha \times L\beta \times e^{Rt},\qquad(6)$$

where e^{Rt} - factor depicting the impact of qualitative changes in production, including technical progress.

In general, there are two main approaches to assessing the economic efficiency of economic entities: targeted and systemic.

The target method involves determining the level of implementation of certain goals, as well as determining the effectiveness of all available tools; the system method involves finding the necessary tools and determining the effectiveness of all available tools.

For the target method, such criteria for assessing the level of economic efficiency as efficiency, rationality of management, efficiency, usefulness are used [11].

The system approach involves finding the necessary tools, evaluated in absolute or relative terms, and the external productivity of the enterprise.

In our opinion, it is necessary to consider a system of indicators to assess the economic efficiency of the enterprise, which is shown in table 2.

The main indicators of a comprehensive assessment of economic efficiency of enterprises

Types of indicators	Indicators
Process measures	- costs per 1 UAH of produced and sold products; - term of repayment of receivables (days); - term of repayment of accounts payable (days); - receivables repayment ratio; - accounts payable repayment ratio; - liquidity ratios; - inventory turnover ratio; - turnover ratio of fixed assets; - return on assets; - equity maneuvering ratio; - equity turnover ratio;
Output measures	- income from sales of products; - gross income;
Outcome measures	- net income (loss); - product profitability; - profitability of sales;
Impact measures	- the amount of money saved during the entire production cycle; - the level of satisfaction of consumer product needs.

Source: based on [6].

Thus, the efficiency of economic activity of enterprises, in our opinion, should be assessed using a system of indicators (table 2), as they most fully reflect the efficiency of enterprises.

Conclusions. Analyzing the interpretation of the concept of "efficiency of economic activity of the enterprise", in our opinion, we can assume that the efficiency of the enterprise is one of the main factors that reflects the level of efficient use of resource capabilities of the economic unit, ability to achieve strategic goals and ability to compete market environment.

The effective functioning of enterprises requires the optimal combination and use of available resources to obtain the highest results. The system of factors of economic efficiency of production in modern conditions should include the rational combination of internal (information base, production resources, management, production, production results and marketing) and external (state, economic and social policy, market environment, structural changes, institutional changes) factors, which directly affect the end result of the effective functioning of entrepreneurship.

In turn, improving the efficiency of entrepreneurship should ensure the economic and social development of the country, which at the present stage is characterized by negative trends: low wages, high unemployment, insufficient social infrastructure.

Thus, the theoretical and methodological approach to determining the economic efficiency of enterprises should be based on: system analysis, which is one of the methods of assessing the structural relationships of the system based on a combination of statistical and economic-mathematical methods and study the impact of key factors on enterprise efficiency; determining the optimal levels of input resources; assessment of economic efficiency of enterprises on the basis of modeling and development of integrated indicators, the use of which makes it possible to make adequate comparisons, determine industry ratings of enterprises and carry out a comprehensive assessment of the efficiency of enterprises.

Therefore, in order to fully analyze the activities of the enterprise, to make clear conclusions about its condition, it is necessary to consider the system of indicators as a whole. Indicators that characterize the company must be analyzed in the dynamics, the optimal period for comparing indicators is a period of 3-5 years, as it is possible to clearly track this or that dynamics during this period, while identifying certain patterns on which to formulate an action plan to eliminate existing deviations.

References

1. Amosov, O. (2015), "Formation of a model for managing the efficiency of enterprises", *Problemy ekonomiky*, vol. 4, pp. 115-120.

2. Bratnovich, M.V. (2014), "Defining the essence of economic efficiency and classification of their types", *Aktual'ni problemy ekonomiky*, vol. 7, pp. 55-58.

3. Golubeva, T.S. (2011), "Methodological approaches to assessing the effectiveness of the enterprise", *Aktual'ni problemy ekonomiky*, vol. 5 (59), pp. 66-71.

4. Islamova, E. R. (2016), "Methods of determining the value of the company", *Naukovyj visnyk NHU*, vol. 1.

5. Andriychuk, V.G. (2005), *Efektyvnist' diial'nosti ahrarnykh sil's'kohospodars'kykh pidpryiemstv: teoriia, metodyka, analiz* [Efficiency of agricultural agricultural enterprises: theory, methods, analysis], Kyiv, Ukraine.

6. Zalizko, V.D. (2014), "Ways to increase the efficiency of agricultural production resources of Ukraine in the context of strengthening economic security", *Ekonomika APK*, vol. 10, pp. 19-27.

7. Kosyanchuk, T. (2014), "Theoretical bases of an estimation of efficiency of activity of the enterprise under modern conditions", *Ekonomichni nauky*, vol. 3, pp. 113-116.

8. Shlyaga, O.V. (2014), "Ways to increase the efficiency of the enterprise", *Ekonomichnyj visnyk. Zbirnyk Zaporiz'koi Derzhavnoi Inzhenernoi Akademii*, [Online], vol. 12, available at: www.zgia.zp.ua (data zvernennia: 12.08.2020).

9. Kudrenko, N. (2014), "Theoretical and methodological approaches to assessing the economic efficiency of enterprises", *Ekonomika*, vol. 24, pp. 61-67.

10. Lobov, S.P. (2015), "Modern concepts of economic efficiency and efficiency of enterprise management", *Efektyvna ekonomika*, [Online], vol. 4, available at: http://www.economy.nayka.com.u (Accessed 14.08.2020).

11. Otenko, V.I. (2014), "Formation of analytical tools for assessing the effectiveness of the enterprise", *Biznes Inform,* vol. 5.

12. Tyuleneva Y.V. and Linnik I.M. (2016), " Selection and substantiation of the system of indicators for assessing the effectiveness of activities", *Materialy XV Mizhnarodnoi naukovo-praktychnoi konferentsii* [Proceedings of the XV International Scientific and Practical Conference], Rozvytok pidpryiemnytstva iak faktor rostu natsional'noi ekonomiky [Entrepreneurship development as a factor of national economy growth], Kyiv, Ukraine, P. 232.

13. Yaroslavsky, A. O. (2018), "Economic efficiency of the enterprise: a theoretical aspect", *Naukovyj visnyk Uzhhorods'koho natsional'noho universytetu,* vol. 20, pp.174-177.

14. Shamanska, O.I. (2013), "Modern approaches to evaluating the effectiveness of resource management of the enterprise", *Efektyvna ekonomika,* [Online], vol. 3, available at: http://www.economy.nayka.com.u (Accessed 14.08.2020).

15. Poryadin, V.S. (2011), "Analysis of existing methods for assessing the economic efficiency of enterprises' activity", *Vestnik Leningradskogo gosudarstvennogo universiteta im. A.S. Pushkina*, vol. 4, pp. 16-24.

INTEGRATED MANAGEMENT SYSTEM FOR CUSTOMS AND LOGISTICS SERVICE

Dudorova T.
PhD student, of the Department of Entrepreneurship and Business
Kiev National University of Technologies and Design

Abstract
The article considers aspects of customs logistics, as well as recommendations for the introduction of an integrated management system of customs and logistics services, which allows to optimize the work of customs authorities in the current trends of the Ukrainian economy.

Keywords: customs logistics, management, integrated system, customs and logistics services.

In modern conditions, the most important principle of the formation and operation of an integrated system of customs and logistics services is the focus on consumers of customs services. The allocation of the subsystem of services in the customs sphere allows to make full use of the customer-oriented approach, taking into account the conditions of specific export-import transactions, the variety of consumer requests and the peculiarities of interaction between the customs infrastructure. The principles of integrity and systematization presuppose the integration of all participants in customs and logistics services with the development of mechanisms for their effective interaction, allowing the fullest consideration of the interests of customs authorities, professional customs intermediaries and participants in foreign trade. [3].

The following scientists and practitioners have devoted their works to customs aspects in logistics: Bayazitov L.R., Egorov O.B., Platonov O.I., Sheiko A.P., Stakhanov D.V., Stakhanov V.N., Smirnov I.G., Fedorenko R.V., Ponomareva N.V., Stolyar T.V., Mishchenko I.V., Guzhevskaya L.A. and others [1; 2; 4; 5; 6]. However, Bayazitov L.R. drew attention to the organization of the cargo customs complex using the mechanism of "single window", considering a separate customs component in the logistics system, so the other authors listed above highlight customs logistics as a separate science [1]. All publications related to customs logistics can be divided into those where customs logistics is defined as a branch of customs and where customs logistics is considered as a field of logistics, where attention is paid to rational ways of promoting material and related flows from production to consumption.

For a comprehensive consideration of the integrated system of customs and logistics services, we propose to highlight the following aspects:

1. Customs aspects of logistics: including consideration of objects and subjects, management of movement of freights in a chain of delivery of goods, complex management of a chain of deliveries of goods;

2. Movement of goods in the supply chain. Elements of cargo movement control in the supply chain: international freight transport, as basic logistics functions related to the movement of individual parts of the supply chain, including the movement of road, rail, sea and air transport, as well as methods of transporting goods: unimodal, mixed or combined transportation;

3. Parts of the supply chains of goods not related to the carriage of goods: include terminals, temporary storage warehouses, customs licensed warehouses, checkpoints where the modes of transport are replaced;

4. Control of goods at the border: international standards - include consideration of international conventions and agreements that regulate the specifics of