IMPROVING THE METHODOLOGY FOR CALCULATING AND ASSESSING FIXED ASSETS IN THE CONTEXT OF ECONOMIC MODERNIZATION

Rihksimbaev Odiljon Kobiljonovich
Tashkent State University of Economics
Assiteant professor Department of Econometrics
odiljonrikhimbaev@gmail.com

Abstract: This article provides a comprehensive study of the improvement of accounting and valuation processes of fixed assets. In particular, the economic essence of fixed assets, their types, and classification according to functional purposes are thoroughly discussed. Various valuation methods - such as historical cost, revaluation, replacement cost, and fair market value - are comparatively analyzed. In addition, the types of valuation depending on the time and condition of assets, as well as their advantages and limitations, are examined from both theoretical and practical perspectives. The article also analyzes modern approaches to accounting for fixed assets in accordance with national and international accounting standards (in particular, IAS 16) and provides recommendations for their practical application. Furthermore, the significance of accurate asset valuation under inflationary conditions, the impact of revaluation on financial reporting indicators, and its influence on the efficiency of business entities are scientifically substantiated. Based on the results of the research, it is demonstrated that improving the processes of accounting and valuation of fixed assets contributes to achieving financial stability, increasing investment attractiveness, and enhancing the quality of managerial decision-making.

Keywords. Fixed assets, valuation, investment attractiveness, enterprise assets, comparative weight, depreciation.

Introduction. Fixed assets, as the foundation of the material and technical base of enterprises, constitute the largest proportion within the structure of enterprise assets. Therefore, their valuation has a significant impact on the enterprise's financial statements and its investment attractiveness. The inconsistency of certain rules in accounting and financial reporting does not allow obtaining accurate information about the value of fixed assets, which in turn reduces both their internal and external usefulness for users. The reasons for this situation are methodological shortcomings in the provision of accounting rules (standards). In this regard, it is essential to conduct an in-depth study of the methodology for valuing fixed assets.

The fixed assets of enterprises are characterized by a long service life exceeding one year. For accurate accounting and effective evaluation of their use, fixed assets must be properly classified. The most widespread and applied approach is the classification of fixed assets according to their functional purposes (see Figure 2.1.1).
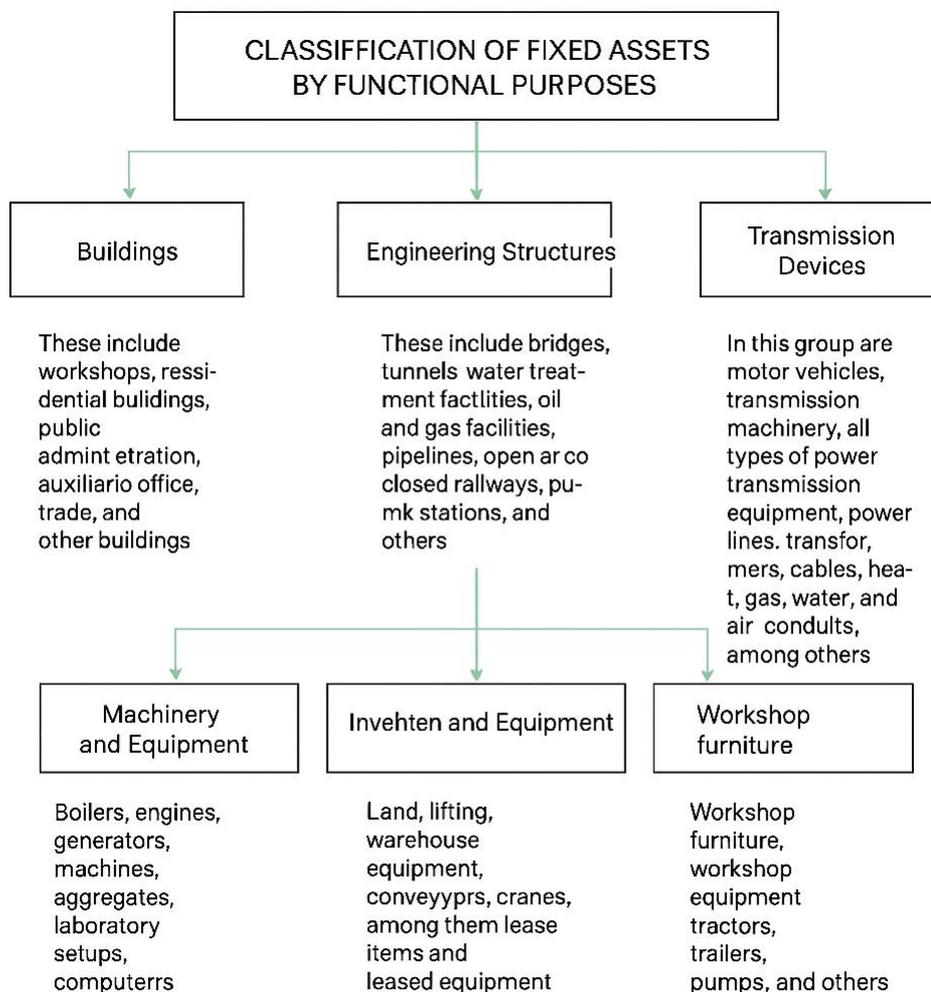
Figure 1. Classification of Fixed Assets by Functional Purposes[1]

In addition to the above classification of fixed assets, their composition by specific types, that is, their structure, is of great importance. The technological structure of fixed assets is determined by the ratio of their active and passive parts.

The active part includes those fixed assets that directly participate in the production process, determine the level of technical equipment of labor, and have a direct impact on the enterprise's production capacity and output volume (such as production machinery, equipment, tools, computing and manufacturing devices).

The passive part includes those fixed assets that indirectly affect production capacity and output volume, but ensure normal conditions for the production process (such as buildings, structures, inventories, and others). A progressive trend in changing the technological structure of fixed assets is the growth of the share of their active part.

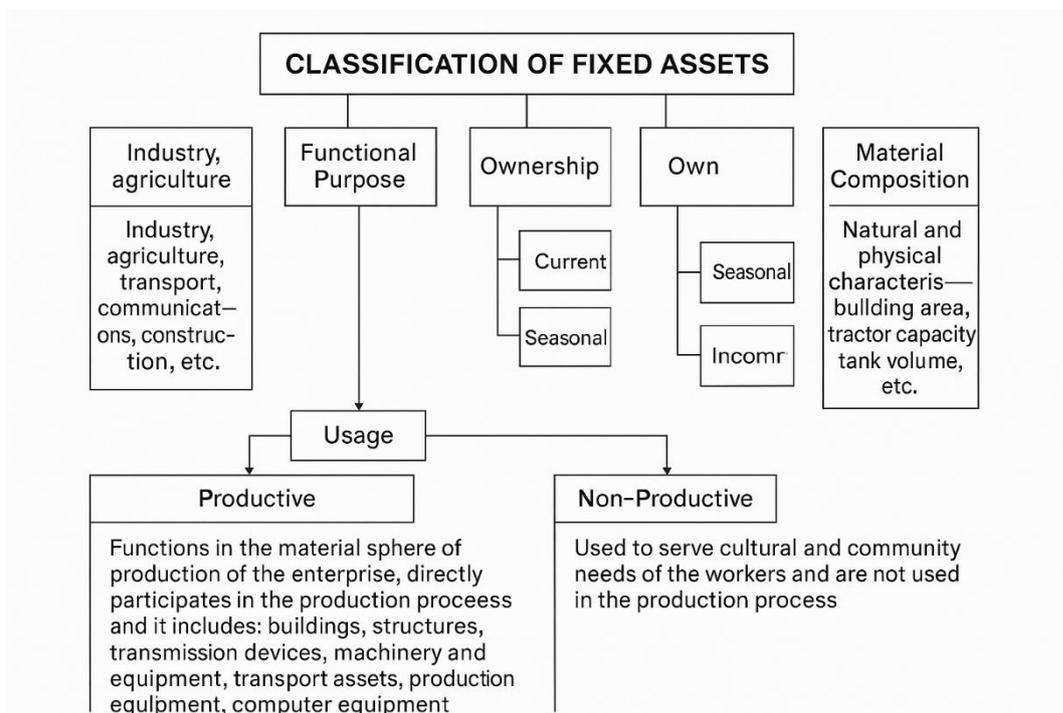[1] Тадқиқот натижаларидан келиб чққан ҳолда муаллиф ишланмаси

Figure 2. Classification of fixed assets

Accounting and valuation of fixed assets is carried out in kind and in value forms. Natural indicators of accounting and valuation are used to calculate the production capacity of the enterprise, assess the technical composition and condition of fixed assets, develop equipment balances, etc.

Literature analysis. Despite the large volume of scientific work on analyzing the economic essence of fixed assets, answering questions about their nature, many studies have been conducted on the issue of the formation and circulation of fixed assets in "lean production". In particular, I.O. Blank, R. Braily, J. Brigham, R. Westfield, L. L. Ermolovich, J. K. Galbraith, G. Z. Susha, A. Marshall, D. North, S. M. Onisko, M. N. Kreinina, Kramarenko G. O. and others. Scientists have long studied the issue of inventory management as part of the working capital system. There are scientific works in the field of studying the effectiveness of the inventory management system in order to ensure the uninterrupted supply of enterprises in all areas of economic activity. Inventory management algorithms are based on classical inventory systems and their modifications. In the developed methods of inventory management in highly specialized industries, you can pay attention to taking into account parameters that are not typical for other areas of application.

Methodology. In the course of this study, the cost of restoring fixed assets was analyzed using revaluation, initial cost, replacement cost, fair value and other empirical methods.

Analysis and results. The natural indicators of accounting for fixed assets are determined by the specifics of their elements and purpose. In particular, you can highlight area (m2), volume (m3), power (kW), equipment productivity (pieces/shift), number of equipment, etc. among them.
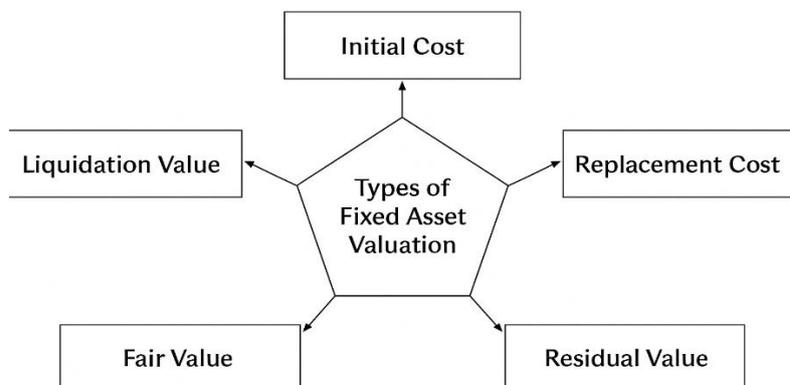
Figure 3. Types of valuation of fixed assets depending on the time and condition of their valuation

If we conduct a more detailed explanation based on the information presented in Figure 2.1.3, the following types of valuation of fixed assets are distinguished, depending on the time and condition of their valuation:

1. Initial cost - the actual costs of the enterprise at the time of purchase of fixed assets and their inclusion in the balance sheet. This cost includes:
- the purchase price of fixed assets and the amount of import duty;
- the amount of indirect taxes in connection with the purchase (creation) of fixed assets (if they are not returned to the enterprise);
- the costs of insurance against the risks of delivery of fixed assets;
- the costs of installation, installation, adjustment of fixed assets;
- other costs directly related to bringing fixed assets into working condition. The initial cost of fixed assets (AFdq) can usually be expressed by the following formula:

$$AFdq = AFn + Cb + C + M \qquad (1)$$

where; AFn - cost of fixed assets;
Cb - fees, duties, indirect taxes;
Xs - cost of risk insurance;
M - cost of installation, assembly and commissioning of fixed assets. If the enterprise is about commissioning new buildings, then the estimated cost is its initial cost. The initial cost of fixed assets is always a constant value, regardless of changes in labor costs.

2. Replacement (revalued) cost - the costs incurred in modern conditions for the reproduction of fixed assets. It includes the same costs as the initial cost, but at today's prices. Such an assessment is carried out in order to bring the cost of fixed assets commissioned in different years into a comparable state. The difference in the cost of fixed assets is associated with inflation, the consequences of scientific and technical progress, etc.

The replacement cost of fixed assets is determined by revaluation, that is, by indexing their initial value. The indexation index of fixed assets is calculated based on the inflation index for the year. If inflation during the year did not exceed 10%, indexation of fixed assets is not carried out. The replacement (revalued) cost of fixed assets (AFqb) can be determined by the following formula:

AFqb = AFaq / Afqq (2.)

where: AFqb is the revaluation index of fixed assets.

AFaq is the fair value of fixed assets, sums;

AFqq is the residual value of fixed assets, sums.

3. Residual value (AFqq) is the difference between the value of fixed assets accepted into the balance sheet of the enterprise (original or revalued) and the depreciation amount. The residual value represents the part of the cost of fixed assets that has not been transferred to the manufactured product and is calculated as follows:

AFqq = AFaq - AFE, or AFqq = AFaq / Afqb (3)

where: AFE is the depreciation amount of fixed assets.

4. Fair value is the initial value of the fixed assets received in the exchange. It is equal to the amount at which the object could be valued if there was an agreement between the interested parties. This value is essentially the market (real) value of the fixed assets, determined by professional appraisers. If such an assessment is not possible, the fixed assets are replaced at the replacement cost. Fair value can be determined by the following formula:

$AF_{aq} = AF_{qq}*AF_{qb}.$ (4)

5. Liquidation value (LQ) is the residual value of fixed assets at the time of their retirement due to wear and tear. At this value, the enterprise can sell fixed assets, write them off, or transfer them to the balance sheet of another enterprise.

$LQ = A_{bq} - M_{bq} - N_a$ (5)

where: LQ – liquidity value;

Abq – book value of fixed assets;

Mbq – book value of liabilities;

Na – intangible assets

If we compare these tangible assets, the formula for liquidity value is:

$LQ = A_{tq} - M_{tq}$ (6)

where; Atq - liquidation value of assets;

Mtq - liquidation value of liabilities

Tugatish paitida majburiyatlarning tugatilish qiimati majburiyatlarning balance qiymatiga teng boladi. In the new hand, the formula above is as follows:

$LQ = A_{tq} - M_{bq} => A_{tq} = \sum_{i=1}^{n} A_{TDi}*A_{bq}$ (7)

where: A_{TDI} is the recovery rate of asset i.

In this formula, we assume that the recovery rate of intangible assets is 0%. It excludes intangible assets from the liquidation value of assets. For other assets, the recovery rate is less than 100%, and therefore the liquidation value of assets is equal to the difference between the book value of assets and intangible assets. Physical obsolescence is the loss of fixed assets of their consumer properties, as a result of which they cease to meet the requirements imposed on them. Physical obsolescence of fixed assets can be recoverable (eliminated by carrying out repairs of varying complexity) and irreversible. You can estimate the physical obsolescence of fixed assets using the physical depreciation coefficient of fixed assets (kAFJE).

$$k_{afje} = AF_{ktx} / AF_{dq} , \text{ ёки } k_{afje} = A / AF_{dq}, \text{ ёки } k_{afje} = H_x / N_x \qquad (8)$$

where: AFktx - capital repair costs of fixed assets since the start of service;
AFdq - initial cost of fixed assets;
A - amount of depreciation (amortization) of fixed assets since the start of service.
The annual depreciation amount is determined as the annual depreciation rate multiplied by the residual value of fixed assets at the beginning of the reporting year or the initial value at the date of commencement of depreciation. The annual depreciation rate is twice the rate used in the straight-line depreciation method. Depreciation calculation methods such as reducing the residual value, accelerating the reduction of the residual value and accumulating are considered accelerated depreciation methods for fixed assets. They are used to stimulate the process of reproducing fixed assets, since they allow restoring 60-70 percent of their value in the first half of their useful life.

Conclusion. In conclusion, Depreciation is calculated monthly. When determining the useful life of fixed assets, it is necessary to take into account the expected physical and moral wear and tear of the object, taking into account its capacity, productivity, and the use of legal and other restrictions on the conditions of use of fixed assets. Also, if the expected economic benefit from the use of fixed assets changes, their service life and the method of calculating depreciation will be revised. Depreciation is suspended for the period of decommissioning of the object due to reconstruction, modernization, re-equipment, conservation, etc. Depreciation of fixed assets ends only if their residual and liquidation values   are equal (conditionally the liquidation value is zero).

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