

# NATIONAL ECONOMY'S MARKET MECHANISMS OF ACCOUNTING, ANALYSIS AND AUDIT

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## IMPROVEMENT OF ACCOUNTING OF REPAIRS AND MODERNIZATION OF FIXED MEANS AND METHODS OF THEIR MANAGEMENT

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The article examines the economic essence of the concepts of repairs and improvements of fixed assets and accounting for repair and improvement of fixed assets on separate sub-accounts and the relationship of accounting with management methods such as planning, budgeting, forecasting, analysis and internal control. Ensuring timely renewal and modernization of fixed assets is a necessary element of asset management, without which effective production activities of the enterprise are impossible. The production activity of any enterprise is due to the laws of the reproduction process and the changes that occur. A significant, and in many cases the vast majority of capital investments of the enterprise are made in the form of buildings and structures, machinery and equipment, vehicles, production lines and more. This, in turn, leads to the need for calculation in fixed assets when creating an enterprise, when it is expanded, updated and so on. In a market economy, the main emphasis in the work of enterprises is shifted to identifying reserves and ways to reduce the resource intensity of production. This means, first, saving material resources, which is an important condition of today's resource situation in Ukraine; secondly, it is one of the main ways to increase the income of enterprises. Only a well-built accounting system is able to provide the necessary information base for making rational management decisions. Today, the issue of rational use of fixed assets is given considerable attention at all levels of government. The rational use of fixed assets improves the technical and economic performance of the enterprise and requires constant recovery or improvement of these assets in order to increase future economic benefits. It is proved that today there is no unity of views on the economic essence of these concepts, general economic and accounting terminology, issues of organization of control over repairs and improvements and methods of their management. The basic forms of reproduction of fixed assets are considered, which is a necessary condition of any production, and reproduction, in turn, is the replacement of physical disposal and renewal of fixed assets, their increase in kind and value. All costs are accumulated on sub-account 152 "Acquisition (manufacture) of fixed assets". However, in UAS 7 there is no clear definition of the reflection of repairs in the accounts. We consider it necessary to enter account 29 "Repair of fixed assets" and open sub-accounts 291 "Current repairs of fixed assets" and 292 "Overhaul of fixed assets" to account for the cost of repair of fixed assets.

It is proposed to open to account 152 analytical accounts of the third order by type of repairs and improvements of fixed assets: creation of their own (economic or contractual way); technical re-equipment, modernization (modification, completion, additional equipment), reconstruction, etc.; purchase for money; free receipt of fixed assets; receipt in the form of a contribution to the authorized capital; receiving in exchange. Such information can be used to manage the enterprise and to analyze the types of improvement of fixed assets in the enterprise.

## УДОСКОНАЛЕННЯ ОБЛІКУ РЕМОНТІВ І МОДЕРНІЗАЦІЇ ОСНОВНИХ ЗАСОБІВ ТА МЕТОДИ ЇХ УПРАВЛІННЯ

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### Ключові слова:

облік, основні засоби, ремонт, модернізація, модифікація, реконструкція, управління, планування, прогнозування, бюджет.

У статті досліджено питання економічної суті понять ремонтів і поліпшення основних засобів та обліку витрат на ремонт і поліпшення основних засобів вести на окремих субрахунках і взаємозв'язок обліку з такими методами управління, як планування, бюджетування, прогнозування, аналіз та внутрішньогосподарський контроль. Забезпечення вчасного оновлення та модернізації основних засобів є необхідним елементом управління засобами, без якого неможлива ефективна виробнича діяльність підприємства. Виробнича діяльність будь-якого підприємства обумовлена законодавчими актами відтворювального процесу і змінами, що при цьому відбуваються. Значна, а у багатьох випадках і переважна частина капітальних вкладень підприємства здійснюється у вигляді будівель і споруд, машин та обладнання, транспортних засобів, технологічних ліній тощо – це призводить до необхідності розрахунку в основних засобах при створенні підприємства, при його розширенні, оновленні тощо. В умовах ринкової економіки основний акцент в роботі підприємств переноситься на виявлення резервів і шляхів зниження ресурсомісткості виробництва продукції. Сьогодні питанням раціонального використання основних засобів приділяється значна увага на всіх рівнях управління, що покращує техніко-економічні показники діяльності підприємства та вимагає постійного відновлення працездатності або поліпшення цих активів з метою збільшення майбутніх економічних вигод. Доведено, що на сьогодні немає єдності поглядів щодо економічної суті даних понять, загальноекономічної та бухгалтерської термінології, питань організації контролю за проведенням ремонтів і поліпшення та методами управління ними. Розглянуто основні форми відтворення основних засобів, що є необхідною умовою будь-якого виробництва. Усі витрати накопичуються на субрахунок 152 «Придбання (виготовлення) основних засобів». Проте, у П(с)БО 7 чіткого визначення відображення ремонту на рахунках бухгалтерського обліку не існує. Вважаємо необхідним для обліку витрат на ремонт основних засобів ввести рахунок 29 «Ремонт основних засобів» і відкрити до нього субрахунок 291 «Поточний ремонт основних засобів» та 292 «Капітальний ремонт основних засобів». Запропоновано відкривати до рахунку 152 аналітичні рахунки третього порядку за видами ремонтів та поліпшення об'єктів основних засобів: створення власними силами (господарським чи підрядним способом); технічне переозброєння, модернізація (модифікація, добудова, дообладнання), реконструкція тощо; придбання за гроші; безоплатне отримання основних засобів; отримання у вигляді внеску до статутного капіталу; отримання в обмін. Така інформація може бути використана для управління підприємством та для аналізу різновидів поліпшення основних засобів на підприємстві.

### Formulation of the problem

In modern crisis conditions of management the questions become especially acute about the organization of the account of fixed assets, planning of directions of updating of means of work that physically, technically or morally obsolete, the choice of a source of their financing at the enterprise of any form of ownership and type of economic activity. The problem of reproduction of fixed assets is always relevant, but over time, the tools to record, control and analyze the state of these resources are changing. The current stage of economic development is characterized by the fact that the ability of enterprises to survive depends directly on the ability to manage effectively available resources, including fixed assets. The interest of the state and enterprises in the effective management of fixed assets is due, firstly, to the fact that fixed assets are the most important part of the national wealth of the country and enterprises. Therefore, the development of social production, its efficiency depends largely on the formation of rational structure, improving the quality characteristics and efficiency of use of fixed assets. Secondly, one of the important reasons for the low growth rate of production is the physical and moral depreciation of fixed assets, which require immediate and timely reproduction. After all, the full and rational use of fixed assets improves their technical and economic indicators, which are manifested through increased productivity, capital efficiency, raised output, lower costs and higher profits. Successful use of information by governance to solve the tasks of fixed asset management requires the interconnection of accounting with individual management methods.

### Analysis of recent research and publications

The modern professional literature highlights the positions of many scholars on the economic essence of the category of reproduction of fixed assets. However, today there is no single conceptual apparatus, comprehensive reflection of repairs and modernization of fixed assets in the accounting and analytical system of Ukraine and there is a lack of established methodological support for the process of reproduction of fixed assets. Problems of modernization and repairs of fixed assets are devoted in the works of domestic scientists, such as M.T. Bilukha, M.I. Bondar, B.I. Valuev, M.M. Kotsupatryi, M.B. Kuzhelnyi, L.B. Napadovska, S.F. Pokropyvnyi, M.S. Pushkar, E.I. Sviderskyi, Ya.V. Sokolov, V.V. Sopko, M.H. Chumachenko and others. Scientific achievements of scientists-practitioners show that in modern market conditions effective enterprise management requires a new approach to accounting and control over repairs, reconstruction and improvement of fixed assets, as the efficiency and intensity of social production depends largely on their quality, which determines the functioning almost the entire production apparatus of the modern economy. All this has affected the level of development of certain theoretical and practical aspects of the accounting process of repairs and improvement of fixed assets and the reflection of their costs in the enterprise.

### Objectives of the article

The purpose of the study is to study the theoretical and practical aspects of the essence and types of repairs and modernization of fixed assets and to develop proposals for improving the interconnection of accounting with individual methods of management.

### Presentation of the main research material

The economic essence and material content of fixed assets are the defining characteristics for outlining their importance in the implementation of reproduction processes, functioning and development of any production.

Fixed assets in the process of their use experience physical depreciation (loss of original technical and operational qualities) and moral depreciation (premature demonetization of assets caused by a decrease in their cost or introduction into production of more advanced equipment) and therefore fixed assets require timely reproduction. Reproduction - is the replacement of physical disposal and renewal of fixed assets, their increase in kind and value form [2].

Repair of fixed assets is divided into current repairs (the elimination of various minor problems, replacement of individual parts) and overhaul (complete disassembly of equipment, replacement and restoration of all worn parts and components).

Modernization of fixed assets is an improvement of assets in order to eliminate depreciation completely or partially and increase technical and operational parameters to the level of modern production requirements [2].

It can be seen that in the economic literature, the concept of "repair" has a predominantly technical content and is disclosed using terms such as maintenance, improvement of quality characteristics, power, productivity and so on. Instead, the concept of "modernization" has an economic content (increase of future economic benefits).

While the term "modernization" is used when you want to emphasize the increased economic benefits of using such an object [2].

Among the important problems posed by the practice of accounting and tax accounting the repair and modernization of fixed assets acquire the particular relevance in the new economic conditions.

According to UAS 7 "Fixed assets" repair is a set of operations to restore the serviceability or good condition of the object or its components, i.e. repair is only the maintenance of the object in working order [8].

The classification of fixed assets by their economic and technological characteristics is important for the construction of accounting for repairs (Fig. 1).

As for modernization, it, as well as modification, completion, retrofitting, reconstruction, etc. are considered as types of improvement of fixed assets.

According to UAS 7 "Fixed assets" the concept of modernization means the improving the technical parameters of the fixed assets in order to increase the useful life or production capacity, resulting in increased future economic benefits that are initially expected from its use [8].

Tax legislation (both current and repealed) does not distinguish between the concept of “repair of fixed assets” and “modernization of fixed assets”, but rather equates the repair to the reconstruction, modernization and other improvements of fixed assets except for repairs which are up to 10% of the cost of fixed assets at the beginning of the tax period (Fig. 2) [7].

Repair of fixed assets is a partial restoration of individual objects to keep them in working order. According to the tax legislation, the improvement includes all types of repairs (capital, medium and current, as well as planned and emergency).

Modernization of equipment is an improvement of the structure, which increases the productivity of the object, helps to expand its technological capabilities to the level of modern technical and technological requirements, to achieve resource savings, improves working conditions. That is, modernization refers to equipment (machinery, equipment), and the repair process concerns each individual object of fixed assets or its component [2].

Thus, according to tax canons, all types of repairs, modernization, reconstruction, and technical re-equipment are related to the improvement of funds.

According to accounting canons, modernization refers to the improvement of fixed assets. Repairs do not belong

to the improvement, which, by the way, is very correct, because the repair is just to keep the facility in working order. After the repair, nothing improves, only the resource of the object is restored.

In UAS 7 “Fixed assets” [8] in general the issue of accounting for the cost of improving fixed assets is covered. All expenses are accumulated on sub-account 152 “Acquisition (manufacture) of fixed assets” and after the improvement of fixed assets they are debited to the required sub-account 10 “Fixed assets”, increasing their initial cost. However, in the above standard there is no clear definition of the reflection of repairs in the accounts. We consider it necessary to enter account 29 “Repair of fixed assets” and open sub-accounts 291 “Current repairs of fixed assets” and 292 “Overhaul of fixed assets” for the cost accounting of repair of fixed assets. On the debit of the account during the reporting month is proposed to reflect all the costs of repair of fixed assets, at the end of the month on the credit – to write off the costs of completed repairs of fixed assets to the costs of the enterprise at the place of use. Thus, the debit balance of account 29 “Repair of fixed assets” will show the cost of unfinished repairs of fixed assets, which is recommended to reflect in the second section of the asset balance. This approach to the articles of the second section makes it possible to detail the production in progress and

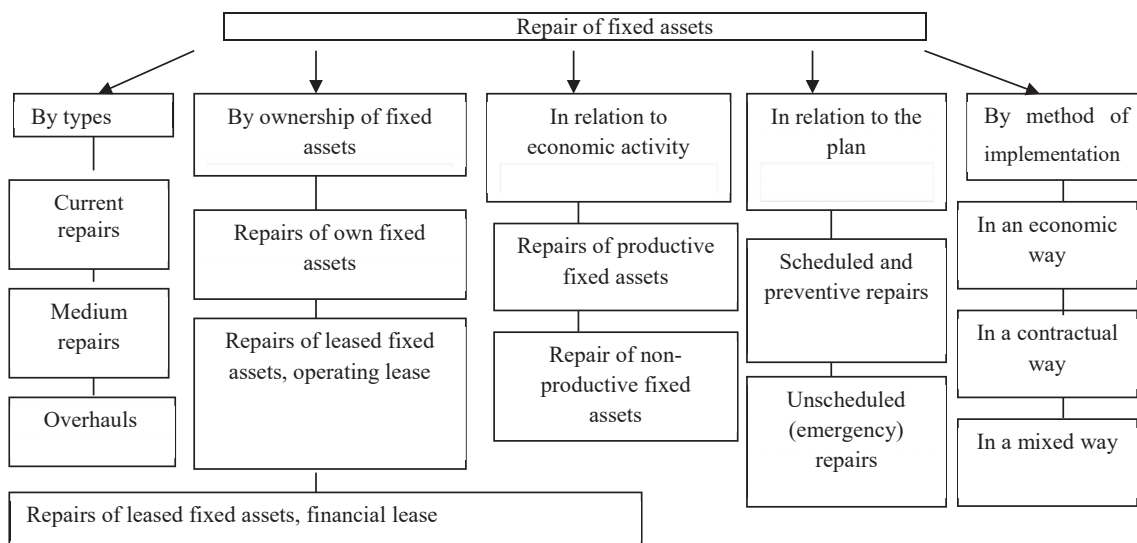


Fig. 1. Classification of repairs of fixed assets

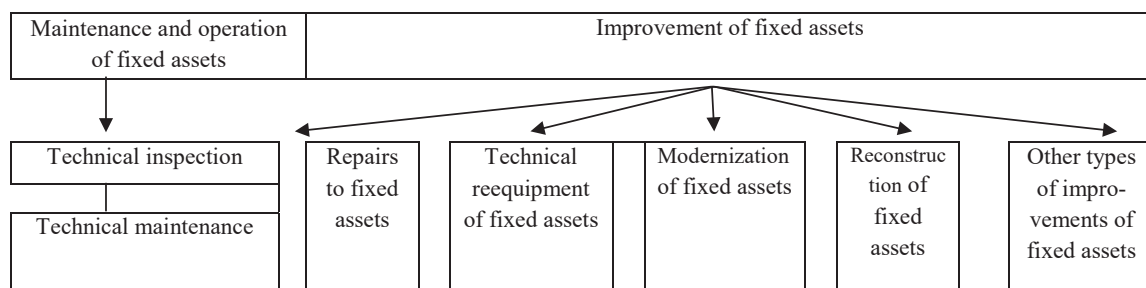


Fig. 2. Classification of costs for maintenance and improvement of fixed assets in tax accounting

inform users about the repair in progress of fixed assets, which is useful for quality and real estimation of the assets of the enterprise.

For greater analytics of accounting, it is proposed to open to account 152 “Acquisition (manufacture) of fixed assets” analytical accounts of the third order by type of repairs and improvements of fixed assets: creation by own forces (in an economic or contractual way); technical re-equipment, modernization (modification, completion, additional equipment), reconstruction, etc.; purchase for money; acquiring free of charge of fixed assets; obtaining in the form of a contribution to the authorized capital; receiving in exchange. Such information can be used to manage the enterprise and to analyze the types of improvement of fixed assets in the enterprise.

The single process of integrated enterprise management in the most general form is provided by the implementation of planning, forecasting, analysis and control. The connection among accounting and planning, analysis and control is very close (Fig. 3).

Planning is one of the economic methods of management, which consists in the development and practical implementation of plans that determine the future state of the enterprise, ways, methods and means of achieving it, which is based on the analysis of past financial and non-financial information [3].

Forecasting is closely related to planning, it is the process of developing a scientifically sound judgment

about the possible state and alternative ways of enterprise development in the future [5].

An integral part of planning is budgeting, i.e. the composition of the budget. The budget is an integral part of control, creates an objective basis for evaluating the results of the enterprise. The main benefit of the budget is the further use of the information collected. It reflects the forecasting of conditions that require premature corrective action; coordination of activities of all structural subdivisions of the enterprise; development of standards for assessing the contribution of each employee in achieving the planned indicators.

The starting point in the preparation and implementation of budgets is the accounting of the enterprise. It is thanks to accounting that the result of budget execution and deviations with their subsequent regulation can be measured. At the same time, fixed assets have the greatest weight in the investment budget, which is associated with repairs and reconstruction of production, commissioning of new fixed assets, opening and expansion of new productions, the use of new technologies.

Internal economic control is the final stage of management, which allows you to compare the achieved results with the planned [5].

In our opinion, the main purpose of fixed assets management is to provide conditions for timely renewal, modernization and increase efficiency of their use. Management of fixed assets is given in Fig. 4.

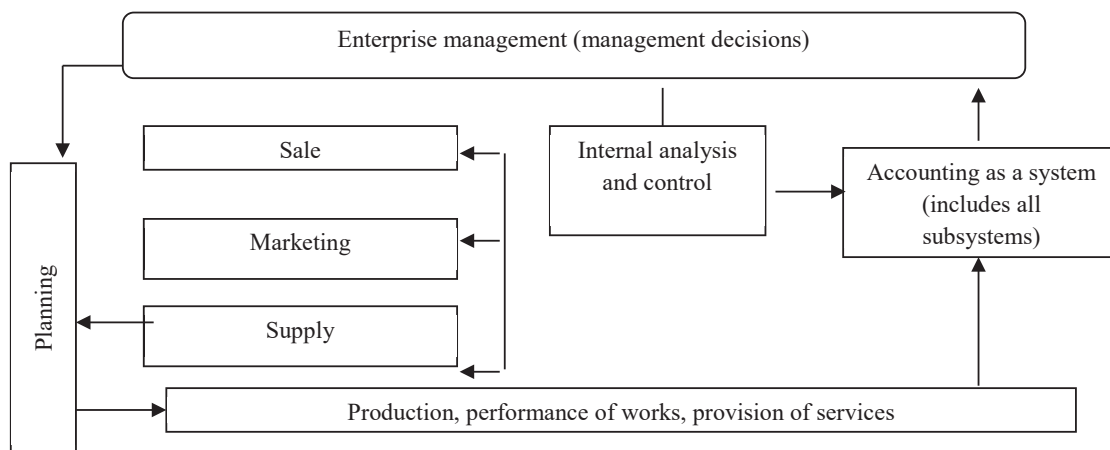


Fig. 3. Accounting in the system of management decisions

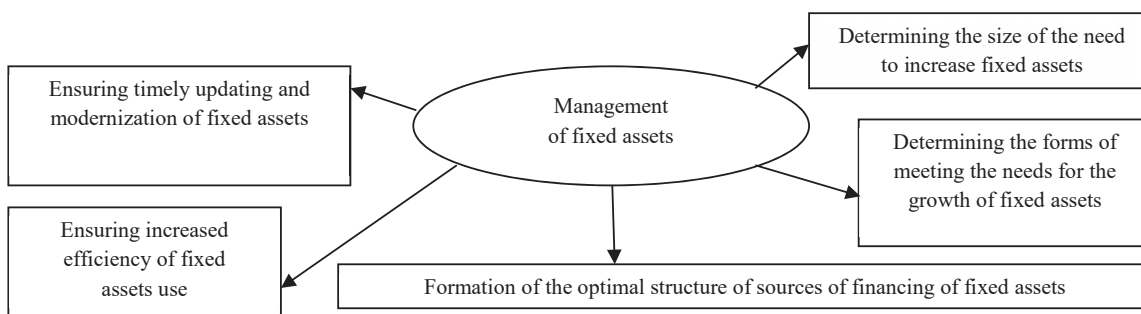


Fig. 4. The main tasks of fixed assets management



Ensuring the increase in the efficiency of the use of fixed assets is carried out by making management decisions based on the calculation and analysis of such indicators as profitability, return on assets, capital intensity, capital adequacy, etc.

### Conclusions

The research allows us to conclude: to account for the cost of repair of fixed assets it is necessary to enter account 29 "Repair of fixed assets" and open sub-accounts 291 "Current repairs of fixed assets" and 292 "Overhaul of fixed assets", the balance of account 29 "Repair of fixed assets" will show the cost of work in progress, which is recommended to be reflected in the second section of the asset balance sheet. This approach to the articles of the second section makes it possible to detail the production in progress and inform users about the work in progress of fixed assets, which is useful

for quality and real estimation of the assets of the enterprise. For greater analytics of accounting, it is proposed to open to account 152 "Acquisition (manufacture) of fixed assets" analytical accounts of the third order by type of repairs and improvements of fixed assets. Improving the accounting system is the relationship of accounting with management methods such as planning, budgeting, forecasting and internal analysis and control. The ensuring the timely renewal and modernization of fixed assets is a necessary element of asset management, without which effective production activities of the enterprise are impossible. Only a well-built accounting system is able to provide the necessary information base for making rational management decisions. The study found that the specifics of repair work and improvement of fixed assets have a direct impact on the internal control of the enterprise, in particular, the main purpose of such control is to prevent overuse of resources, abuse, theft and illegal actions.

### References

1. Butynets, F.F. and Davydiuk, T.V. (2007), *Bukhhalterskyi upravlinskyi oblik [Accounting management]*, Ruta, Zhytomyr, Ukraine.
2. Harasym, P.M., Zhuravel, H.P. and Khomyn, P.I. (2004), *Podatkovyi oblik i zvitnist na pidpriemstvakh [Tax accounting and reporting at enterprises]*. Profesional, Kyiv, Ukraine.
3. Horodnianska, L.V. (2008), "Reproduction of non-current material resources in the domestic accounting and analytical system", *Bukhhalterskyi oblik i audyt*, vol. 9, pp. 4–8.
4. Napadovska, L.V. (2000), *Upravlinskyi oblik [Management accounting]*. Nauka i osvita, Dnipro, Ukraine.
5. Ministry of Finance of Ukraine (2013), "National Accounting Regulation (Standard) 1 "General Requirements for Financial Statements", approved by the order of the Ministry of Finance of Ukraine from 07.02.2013 № 73", available at: <http://www.rada.gov.ua> (Accessed 22.01.2021).
6. Verkhovna Rada of Ukraine (2010), "Tax Code of Ukraine from 02.12.2010 № 2755-IV (as amended)", available at: <http://www.rada.gov.ua> (Accessed 03.01.2021).
7. Verkhovna Rada of Ukraine (1999), "On Accounting and Financial Reporting in Ukraine: Law of Ukraine from July 16, 1999 № 996-XIV (as amended)", available at: <http://www.rada.gov.ua> (Accessed 22.01.2021).
8. Ministry of Finance of Ukraine (2000), "Regulation (standard) of accounting 7 "Fixed assets" approved by the order of the Ministry of Finance of Ukraine from 27.04.2000 № 92 (as amended)", available at: <http://www.rada.gov.ua> (Accessed 03.01.2021).