ANALYSIS AND ASSESSMENT OF THE FINANCIAL EFFECTS OF THE INNOVATIVE IMPACT ON THE TANGIBLE AND INTANGIBLE ASSETS ENTERED INTO SERVICE

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Abstract: *Upon commissioning - tangible and intangible fixed assets are recorded in the inventory inventories, which includes the cost of transport and bringing the assets to normal operation in an operating environment (including installation, test, calibration, etc.). This process is strictly regulated, both normative and factual. After the asset is released, its amortization or accrual of depreciation charges begins. During the depreciation period, wastage is recorded, but no account is taken of innovation aging. This reporting has the side effects of rapid technical developments in communications and information technology. This article attempts to provide a methodological explanation for this manifestation and to find an approach for determining the magnitude of scattering or value-estimation of the dynamic asset environment.*

Keywords: INNOVATIVE AGING, SIDE EFFECTS IN THE EXPLOITATION OF MATERIAL ASSETS, INNOVATION DEVELOPMENT

1.Innovative basis for the development of tangible and intangible assets

Tangible fixed assets are developing both in technology and innovation. A problem arises when defining their fair value by traditional and convectional approaches. New approaches, methods and techniques are needed to derive fair values of machinery and equipment. The evaluation methods shout satisfy and reflect the demand for flexible organizational forms regarding their development [1,4]. With new technologies - machines and devices follow an upward trend of constantly innovative solutions, the problem of their production exploitation is also developing in this direction. Intensive development of the production yields other dimensions that are closely related to more efficient use of the main tools such as machinery, equipment, etc.[2,5,6]. The current problem of development is not only the creation of high-tech equipment and the provision of production needs, but above all the creation of a production system of machines, equipment, etc., which will also solve the question of their best use [3]. This system also defines the so-called the effectiveness of the tangible and intangible assets in their operation or the ability of the industrial plant concerned to best uses these assets. This means a constant study of the impact factors on their devaluation as a result of their rapidly aging innovation. Consequently, their depreciation will not be accounted for only when an asset valuation is carried out, but will require a dynamic environment to permanently regulate the production assets [7,8]. This interference will include the regulation of the side financial effects resulting from the constant innovation aging of tangible and intangible assets. The distinctive features of this modern development are that we are looking for ways to flexibly use the forms of innovation development induced by the impacts of innovation aging with to increase the possibilities for optimal use of production assets [5]. All this is achieved by combining traditional approaches with the latest achievements in communications, electronics and so on. Therefore, the problem of the development and exploitation of tangible and intangible assets is also a problem for the development of the industry as a whole. In the context of accelerating globalization and increased market competition, the market and consumption pose permanent issues to industrial firms, related to their competitive advantages, incl. strategies focused on quality, development, innovation, etc.[9]. These are responsible issues relating to the clear formulation of the objectives of profitability, innovative development, the introduction of quality standards, the preservation of the environment and energy efficiency. And this means taking into account all influences on assets and their relative weight in the final economic results.

On the other hand, improving management and marketing strategies, improving social services and paying greater attention to human resources is also one of the priorities of their future development. This will also entail reorienting the activities of industrial firms from globally-priced low-value manufacturing industries to small niches based on specific competitive advantages and innovative products with higher added value. Long-term production flexibility is needed, in line with rapidly changing market conditions and a successful search for new market niches and partners in industrial activities and taking into account the innovation aging of technology and technology. This means that many factors will influence the promotion of this process of mastering innovation aging at the level of an industrial firm, including the fact that an increasing number of people will be part from this organizational and financial process. In this situation, the development of production capacities of these enterprises requires equipment with a higher degree of automation, high flexibility and greater production capabilities. These specific features are hardly taken into account in ongoing planning and financial reporting and also in the possibilities for its long-term development. Strategic management of industrial firms should be directed problems, product quality, and optimal use of machines and equipment.

Another part of the goals are the object and scope of the activity, the range of the production process, the structure of the placement, the expansion of the market with flexibility, the continuous marketing research, The choice of the approach to the development of production equipment and the constant consideration of innovation aging is of the utmost importance for the efficient operation of the whole production system of industrial firms. In the conventional approach of structuring the system of machines defining the production possibilities, it is usually used the method of proportionate distribution of the number of different types of machines.

The principle is to observe their technological purpose with the needs of capacity to implement production orders. Exploration of these impacts is critical to the normal course of the production process and better results from the business operations of industrial firms. Therefore, this report proposes a new approach to identifying the development of manufacturing capacities of industrial companies on an innovative basis, taking into account all side impacts that form the overall asset efficiency [10].

The definition and development of production machines in the context of rapid technical development means seeking a balanced balance between the available technological equipment and the additional needs. The latter means the supply of new machines, the modernization of some of them, the replacement of some with new ones due to their physical wear or complete innovation aging, introduction of new organizational methods, etc.

This also means that the innovation impact imposes new requirements and restrictive conditions on the whole structure of the production system, and production machines. The latter should be considered not as a static parameter but as a constantly changing dynamically functioning system. Properly considering the impact of these innovation factors already creates conditions for the flexible operation of the whole system of machines. which also undergoes changes during the different stages of work. The other change is related to the impact of innovation development directly on the production equipment itself. Contemporary production is also characterized by the very early technological innovation of technology and technology. In order to address these issues, industrial firms should clearly formulate their goals of profit, corporate growth, social contributions, skills and working conditions, as well as environmental protection.

Their strategic management should address the issues, product quality, the scope and scope of the business, the range of the production process, the layout structure, expanding the market with flexibility, continuous marketing research and optimal use of production machinery and equipment.

Investigation of the state, development and innovative aging of the assets in the process of their exploitation

Innovative aging and its financial effects can be explored in the following two areas:

1.Investigation of the development of the active equipment with a relative change of the parameters compared to the new machines. Broad possibilities are being developed to analyze the change of the technical and economic indicators by using analytical and imitation models based on statistical surveys and statistical information. There are conditions to predict the technical condition of the active equipment by forecasting the change of its parameters under the influence of their innovative aging.

2.Formation of equipment development models for virtual system operation. In this case, the construction of the analytical and imitation models is carried out according to the prognostic indicators of already established such systems.

In this case, the construction of the analytical and imitation models is performs on predicted indicators of already built such systems. To what extent these data are sufficient, if it proves to be insufficient, additional data from operating systems or their elements, which are as close as possible to the modeled technical system, are sought. To solve such tasks it is necessary to model the overall change in the technical condition of the equipment under the influence of innovation aging.

If we have to solve a problem that deals with the impacts of both directions, we, with regard to the first direction, model the existing equipment and in the second we model the technical state of an analogue equipment or a separate actual operating equipment.

3.In order to determine the technical condition of the equipment, we can apply the principles of the law for the distribution of the aggregate error by processing the details of these machines using a known mathematical apparatus.

This in essence also means determining the relative lagging of the parameters of the equipment in operation in relation to the new machines.

However, the results can significantly differ from their normal change over time.

In connection with this, the task of forecasting arises by using the total error distribution coefficient for the batch of details (group of machines).

Then the long-term trend of amending the law on the distribution of the summary error can be considered to characterize the change in the technical condition of the equipment.

In this case, faults in the equipment (worn parts, inaccuracies, etc.) are not recorded. Long-term forecasting with application of the law for the aggregation of the processing error of the details can be used in case of a specific set-up time for the development of the equipment because the short-term change of the law for the distribution of the summary error characterizes the way of setting the equipment , wear of tools, temperature deformations and other temporary causes. Short-term forecasting is rather necessary for operational quality management of equipment in the course of its operation, exploitation.

4. Determination of the error distribution density as a basis for relative change of the parameters characterizing the asset condition under the conditions of the innovation impact

The production process involves different types of machines, type and physical state.

Each of these process units defines different performance and different state of the parameters.

In each of these machines, innovative aging occurs at different times and in different stages of the manufacturing and technological process. The innovative innovation aging will be considered for each machine as a random process.

We look at two types of non-stationary, random or quasi-random processes X (t). For the purposes of our study of random and quasi-random processes, we will only accept the term "random processes." The first type is by itself non-random random processes in the exact sense of the word, the distribution density p (x, t), which slowly changes over time. Slow change in distribution density is understood as an opportunity to divide the length of a process that takes the property quasi-stationarity (in the exact sense of the word).

We consider a one-dimensional, random random X (t) represented by a separate realization x (t) in N-type with step h, i. x (xn), n = 0,1,2, ..., N-1.

Conversion is assumed to be centered, ie.

$$\frac{1}{N}\sum_{n=0}^{N-1} x(nh) = 0 \quad (1)$$

The estimation of the distribution density for X (t) can be found by the formula:

$$p(x) = \frac{N_x}{NW} \quad (2)$$

where:

1. - the number that is centered on x (t), represented by N with the meaning of the interval $x \pm \frac{W}{2}$

2. An estimate of the distribution density for the middle of each i-th interval is expressed by

$$pi = \frac{Nik}{N(b-a)}, i = 1, 2, ..., k \quad (3)$$

3. where: k - an integer at equal intervals over which the entire variation range is broken $x(t);[a,b]$ - the examined variation range x (t). The estimation of the distribution density p (x) is displaced. Shuffled estimates

$$b[p(x)] = E[p(x) -]p(x) \quad (4)$$

4. are approximately:

$$b[p(x)] \approx \frac{W^2}{24} p(x) \quad (5)$$

5. where:

6. $p(x)$ - a second derivative for $p(x)$ * x.

7. Evaluation dispersion

$$D[p(x)] \approx \frac{c^2 p(x)}{2BTW} \quad (6)$$

8. where:

c - a constant quantity equal to a unit of limitation on the analogue - the frequency of noise. It is supposed to be randomprocess X (t) has the highest frequency B (in hertz) and the realization x (t) is set in the final time interval T (c).

A solution to the task of diagnosing or forecasting equipment status is the assessment of the distribution density in the type

$$pi = \frac{Nik}{N(b-a)}, i = 1, 2, ..., k \quad (7)$$

but it is inconvenient due to the large size k in the representation of p (x). it is therefore advisable to proceed to a description of the model pi, i = 1,2, ..., k in the form of some analytical expression.

By predicting the time of the outfall random process or the parameters of the distribution density model, using the method of selecting the structure of predictive models, the future technical state of the equipment can be determined. This means determining how much productivity has decreased in relative terms of the old machines inthe result of their innovative aging versus that of the new machines.

The conclusion is that it is not necessary to predict the incipient aging for each machine individually and in general for the entanglements involved in this process X (t).

This cumulative result is more convenient for accounting for the total innovative aging in terms of dynamically changing conditions and the magnitude of the impact factors.

The second type of random processes under consideration refers to non-stationary random processes in the broad sense of the word, moments that slowly change over time.

It is believed that the process has less time-mathematical expectation and dispersion, but also a correlation function that depends on the starting point of the calculation.

Slow changes in statistical characteristics are understood as an option to divide into the process of sufficiently long stretches having the properties of quasi-statistry or the stage is divided by the area of processes with predominant properties of quasi-stationarity.

5. Assessing Influential Innovation Factors and Determining Dominant Parameters

These parameters of the equipment, which have the largest relative share in the formation of the productive result, are dominant. In this case, we will only look at their change in operating conditions.

I accept that they are theoretically true.

The parameters of the equipment are physical quantities characterizing the performance of its components, the importance of which is their technical condition (performance, efficiency, etc.) and the requirements for repair or maintenance.

Typically, this is set by construction parameters of parts, assemblies and machine as a whole. These impacts are related to their physical extinction.

Thus, parameter variations can be considered as a function in a range from zero to extreme (extreme) variation.

The aggregate expression of the Impact Factor grouping function allows to examine the variation of the parameters at a given time as a sum of random variables. One of the most influential factors in operating conditions is the wear of the parts.

This leads to the modification of the performance parameters of the elements, - they characterize the average operating load.

The deviation of the parameters is actually the difference from the actual state or the theoretically given (constructively) to those of the new machines that generate the innovative aging Wearing details has a great deal of impact on machine performance. It leads to a decrease in their productivity, deterioration in quality and frequent stays

Consequently, the parameters that will change the productivity of the machine or the parameters that will lead to a decrease of productivity, increase of the marriage (quality) and increase of the stay of the machine will be considered as dominant parameters, thus decreasing and the effective time-to-work fund.

All these changes in the present case take them as a basis of comparison and do not take them into consideration, but take into account only the difference between the parametric capabilities of the new machines stopped by the old ones. In the end, this will also reduce the financial performance of their work.

Or this is the negative impact of the innovative aging that has occurred in them.

Conclusion

In the economic practice in the development of production, no account is taken of the changes that are made, and when planning and determining the volume of production that can be produced, only the initial data (indices) of the assets to ensure this production are taken.

Changes that may occur due to the impact of innovation factors that form innovative innovation are not taken into account. The latter may lead to relative changes in machine parameters and hence to a reduction in expected financial results. This decrease will depend on the level (difference) between the parameters of new and old machines.

With the proposed approach to taking into account and innovation aging, many of these side effects will be taken into account and controlled.

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