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ECONOMIC VALUATION OF THE SHARE CAPITAL OF THE JOINT STOCK COMPANY "UZBEKISTAN RAILWAYS"

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Аннотация: Ushbu maqolada asosiy kapitalni iqtisodiy baholash muammolari, xususan, takror ishlab chiqarish jarayonining eng muhim vazifalari, poezdlar harakatining barqaror xavfsizligini ta'minlash vositalarining yanada ilg'or modellarini yaratish va ishlab chiqarishga tatbiq etish muammolari ko'rib chiqiladi. Shuningdek, temir yo'l kompaniyasining sifat va son ko'rsatkichlari tahlil qilingan hamda temir yo'l transportining asosiy vositalarni baholash to'g'risida xulosalar ishlab chiqilgan.

Kalit so'zlar: asosiy kapital, takror ishlab chiqarish, temir yo'l transporti, sifat va son ko'rsatkichlari, iqtisodiy usullar, temir yo'l kompaniyasi.

Аннотация: В статье рассматриваются проблемы экономической оценки основного капитала, в частности, рассматриваются наиболее важные задачи процесса обновления, проблемы создания и ввода в эксплуатацию более совершенных орудий труда для обеспечения стабильной безопасности движения поездов, анализируются качественные и количественные показатели использования основных фондов, сделан вывод об оценке основных средств на железнодорожном транспорте.

Ключевые слова: основной капитал, воспроизводство, железнодорожный транспорт, качественные и количественные показатели, экономические методы, железнодорожная компания.

Annotation: The article discusses the problems of economic valuation of fixed capital, in particular, considers the most important tasks of the renovation process, the

problems of creating and putting into operation more advanced models of tools for ensuring stable safety of train traffic, analyzed the qualitative and quantitative indicators of the use of fixed capital, made a conclusion about estimates of fixed assets in railway transport.

Keywords: fixed capital, reproduction, railway transport, quantitative and qualitative indicators, economic methods, railway company.

Introduction

Economic valuation of fixed assets Indicators of reproduction of fixed capital reflect the pace of scientific and technological progress, characterize the technical condition and movements of fixed assets, and also have a relationship with indicators of their use.

The main capital of railway transport has its own characteristics. First of all, these are longer useful lives than the fixed capital of other sectors of the economy. Secondly, the majority of the share capital cannot be sold. Third, the majority of fixed capital is unique in its application, i.e. cannot be used as intended in other sectors of the economy of the Republic of Uzbekistan.

Material and research methods

At the end of 2018, the share of railway transport accounts for slightly less than 10 percent of all sectors of the country's economy. The sales volume and expenses of UTY JSC for 9 months of 2018 amounted to more than 4 trillion. sum and 3.1 trillion. sum accordingly. The average degree of reproduction of fixed capital over the past 10 years amounted to 7-12 percent, but depreciation for some groups, such as buildings and structures, vehicles increased by 3.2 and 1.9 percent, respectively, which indicates the ineffectiveness of economic valuation of fixed capital .

In this regard, the most important strategic task and an important problem for the railway company is the need to develop new economic methods for managing fixed assets and an economic assessment of their reproduction, taking into account the specifics of market relations. This causes the undoubted relevance and the need to improve existing methods.

Results and discussion

In the literature [1,2,3], the most important methodological principle for determining the indicators of economic efficiency is characterized by taking into account the completeness of results and costs. At the same time, the concepts of general economic efficiency and comparative efficiency are divided. In determining the overall economic efficiency, it was proposed to take into account all costs and in full the result due to these costs, and with comparative economic advantages of one option over the other.

Questions of the methodology for the economic analysis of fixed capital were investigated by V.A. Podsorin and O.O. Korobeynikov [4, 5]. In particular, V.A. Podsorin believes that the economic assessment of the fixed capital of railway transport should ensure the integration of all the resources of the enterprise, since they are technologically involved and contribute to the intensification of investment and innovation processes. O.O. Korobeynikov, in turn, offers diagnostics of fixed capital through the so-called "Regulatory Approach".

The study of economic literature [6], [7], [8], [9], [10], [11], [12] also made it possible to single out the following tasks of economic evaluation and efficiency of using fixed capital: establishing the security of an enterprise and its structural divisions fixed capital; compliance of size, composition and technical level of fixed capital and the need for them; planning their growth, renewal, and you-being; the study of the technical condition of fixed assets and especially the most active part of them - vehicles, machinery and equipment; determining the degree of their use and the factors affecting it; establishing the completeness of the vehicle fleet; determination of the effectiveness of the use of the active part of fixed capital in time and power; determination of the impact of the use of fixed capital on the volume of production and other economic indicators of the enterprise; identification of reserves of growth of capital productivity, increase in production and profits by improving the use of fixed capital.

The theoretical and methodological foundations of the study are based on the findings and suggestions of a scientist in the field of reproduction of fixed capital. The

methodological basis for solving these problems is the concept of updating the fixed production assets of a railway company. During the study, various methods were used: system analysis, economic and statistical analysis, factor analysis, mathematical statistics, as described in the works of domestic and foreign scientists.

In modern conditions of management, an informed determination of the efficiency of using fixed assets is important. The fact is that the depreciation of fixed assets is quite high, and that anxiously tends to increase (mainly in such an important group as vehicles). The main reason is to ensure the reproduction process finances.

In tab. 1 shows the dynamics of the volume of work of railway transport.

Table 1

The dynamics of the volume of work of the railway company in 2000-2017 [16]

Indicator	2000	2005	2010	2015	2016	2017
Cargo turnover, billion t-km	15,802	18,09	22,281	22,482	20824,34	21031,8
% By the year 2000	-	114,5	141,0	142,3	131,8	134,9
Passenger turnover, million passenger-km	2261,3	2099	2904,8	3025,2	3042,8	3049,1
% By the year 2000	-	92.8%	128.5%	133.8%	134.6%	134.9%
Reduced production, billion tkm.	20,324	22,320	28,091	26,803	26910	27130
% By the year 2000	-	109.8	138.2	131.9	132.4	133.5

As can be seen from the table. 1, in the period from 2000 to 2017 there was a significant increase in the volume of work on the railway transport (by 1.33 times), which was due to the macroeconomic processes taking place in the country. Relative stagnation was observed in the period 2002-2005, and in recent years of the analysis a positive trend

of increasing the volume of work of the railway company can be noted.

It is known that the sources of renewal of fixed assets are: depreciation and profits (investments in real objects).

The depreciation fund, as the sum of depreciation deductions, carries out the renewal of fixed assets in the framework of simple reproduction. In the conditions of expanded reproduction of depreciation funds for the renewal of fixed assets at the modern technical level is far from sufficient, additional financial resources are needed here. However, the majority of business entities do not "go" to this, apparently, they are not sure of the effectiveness of such investments.

The effectiveness of the use of fixed assets is expressed in natural and cost indicators. However, physical indicators do not take into account the power and cost of the means of labor, as well as structural changes. Natural indicators then give an objective assessment, when the products created are homogeneous, of the same type. Therefore, the assessment of fixed assets in-kind indicators in terms of the railway company must necessarily be supplemented with generalizing indicators in terms of value.

Generalized indicators characterizing the degree of use of fixed assets of the railway are capital productivity indicators, expressed as the number of tonne kilometers, revenues or profits per 1 sum of production assets.

However, both generalized indicators by types of transportation and operations of the transportation process are not without flaws, therefore their role in assessing the efficiency of using fixed assets cannot be exaggerated. This is due to the fact that fixed assets themselves do not create new value, but only transfer their accumulated value to the products created and are a condition for increasing the efficiency of social labor.

Labor productivity is the most important indicator characterizing the quality and degree of use of fixed assets, bearing in mind the productivity of social labor. In rail transport, labor productivity characterizes the intensity and efficiency of human labor for a number of reasons. The productivity of all social labor in railway transport can be represented as the sum of tonne-kilometers given per unit of living and materialized labor

expended on the execution of a unit of transportation.

Thus, in the aggregate, the indicators of productivity of living labor, capital productivity and material intensity characterize the productivity of all social labor spent on transportation. They determine the degree of efficiency of the workers of the railway, the completeness and intensity of the use of fixed assets, the economical and economical use of material resources. The main production assets, without creating a new value themselves, have a great influence on the productivity of living labor, capital productivity and material consumption of products. Therefore, the effectiveness of their use can only be assessed, comprehensively, by measuring all these indicators.

In our opinion, when assessing the effectiveness of fixed assets, the indicator of the capital-labor ratio of an employee engaged in transportation is also important. Consider how this indicator affects the capital productivity and labor productivity? We introduce the following notation:

ПТ – productivity of living labor;

Фв – capital-labor ratio;

Фо – capital productivity in the above TCM;

ОФ – value of fixed assets;

$\sum pl_{\text{пр}}$ - reduced tkm;

Чэ – number of staff;

А – depreciation, billion soums.

Using these notation, we define:

$$\text{ПТ} = \frac{\sum pl_{\text{пр}}}{\text{Ч}_{\text{э}}}, \qquad\qquad (1.3.1)$$

$$\Phi_{\text{в}} = \frac{\text{ОФ}}{\text{Ч}_{\text{э}}}, \qquad\qquad (1.3.2)$$

$$\Phi_{\text{о}} = \frac{\sum pl_{\text{пр}}}{\text{ОФ}}, \qquad\qquad (1.3.3)$$

From the expression (2) we find the number of staff:

$$\text{ПТ} = \frac{\sum pl_{\text{пр}}}{\text{Ч}_{\text{э}}}, \qquad\qquad (1.3.1)$$

$$\Phi_{\text{в}} = \frac{\text{ОФ}}{\text{Ч}_{\text{э}}}, \qquad\qquad (1.3.2)$$

$$\Phi_{\text{o}} = \frac{\sum pl_{\text{пр}}}{\text{ОФ}}, \qquad\qquad (1.3.3)$$

From the expression (3) - the volume of production:

$$\sum pl_{\text{пр}} = \Phi_{\text{o}} * \text{ОФ}, \qquad\qquad (1.3.5)$$

The obtained values, substituting (1.3.1), we define the productivity of living labor:

$$\Pi T = \Phi_{\text{o}} * \Phi_{\text{в}} \qquad\qquad (1.3.6)$$

Thus, the productivity of living labor is equal to the production of capital productivity by the capital-labor ratio. This relationship is correct only if the capital productivity of the newly introduced fixed assets above its average value for existing funds. If introduced new fixed assets have lower capital productivity than the average for existing funds, then productivity will decline, although the capital-labor ratio will increase.

Similarly, the dependence of the productivity of living labor on material intensity is revealed.

Define the consumption of materials Me as the quotient of dividing the cost of consumable material resources Mo on the value of production:

$$M_{\text{e}} = \frac{M_{\text{o}}}{\sum pl_{\text{пр}}}, \qquad\qquad (1.3.7)$$

From here $\sum pl_{\text{пр}} = M_{\text{o}} * M_{\text{e}},$ \quad (1.3.9)

Substituting the values from formula (1.3.4) and (1.3.9) into formula (1.3.1), we obtain:

$$\Pi T = \frac{M_{\text{o}} * \Phi_{\text{в}}}{M_{\text{e}} * \text{ОФ}}, \qquad\qquad (1.3.8)$$

Thus, the productivity of living labor will increase only under the condition that the input of new fixed assets will not cause the growth of material resources, and consequently, the consumption of materials compared to the values of these indicators for existing fixed assets.

Of paramount importance is the rate of depreciation capacity, which reflects how many monetary units of revenue from services rendered per one monetary unit of

consumption of fixed assets of a railway company, and can be determined by the formula:

$$A_e = \frac{A}{\sum pl_{\text{пр}}}.$$

Calculations of indicators of efficiency of use of fixed assets of the railway company are summarized in table. 2

Thus, based on the table. 2 calculations can be concluded that in the company in recent years, the capital-labor ratio has changed in different directions, the largest increase in the share capital growth was in 2010 and amounted to 208.9%. In general, in 2017. in relation to 2000 this indicator has increased more than 30 times.

Table 2

Indicators of efficiency of use of fixed assets of the company [16]

Indicator	Years					
	2000	2005	2010	2015	2016	2017
The capital-labor ratio, million soums / person	4 365,9	14,808	64,339	123,666	124,296	135,174
% By the year 2000	100,0	339,2	1473,7	2832,5	2846,9	3096,1
In% to the previous year	-	113,6	208,9	103,2	100,5	108,8
Capital productivity in physical terms, etc. tkm / sum.	0,097	0,032	0,007	0,003	0,003	0,002
% By the year 2000	100,0	33,2	7,3	2,8	2,7	2,4
In% to the previous year	-	86,4	41,1	93,0	95,6	88,9
Capital productivity in terms of value, UZS /	0,25	0,15	0,09	0,05	0,07	0,06

UZS.						
% By the year 2000	100,0	61,0	34,6	19,1	27,0	25,2
In% to the previous year	-	105,4	63,1	77,7	141,6	93,4
Amortization capacity, sum / reduced tkm	0,833	1,784	5,247	14,874	20,420	30,915
% By the year 2000	100,0	214,0	629.5	1784.7	2450.1	3709.4
In% to the previous year	-	122,1%	143.5%	113.5%	137.3%	151.4%

The series of capital-labor ratio is due to the fact that fixed assets were updated at a high rate in the company, for the analyzed period the average increase in fixed assets was 66.6%. Of course, this does not mean that the current fixed assets as a whole have been updated, for a number of fixed assets depreciation exceeds all norms. For example, for vehicles, and in particular, for locomotives and freight cars, depreciation is more than 50%. In part, the high rates of capital-labor ratio are due to the high cost of new fixed assets introduced. And since the value of fixed assets was not fully reduced to market value, i.e. a sufficient reassessment of fixed assets was not carried out, the purchase at the current value of the funds predetermined a high growth rate of the capital-labor ratio.

The indicator of capital productivity, calculated in natural and monetary terms, shows a completely inverse dynamics compared with the above indicators. From 2000 to 2017, there was a decrease in the return of surplus fixed assets of the railway company. Return on assets in natural terms in 2017 decreased in relation to 2000. by 97.6% in physical terms and by 74.8% in terms of value. Considering the fact that the consumption of materials for manufactured products is increasing annually, a joint-stock company can be concluded that a joint-stock company annually uses more material resources to produce a unit of production. Differences in the rate of change in capital productivity, calculated

by the volume of traffic and the amount of income from traffic, due to the fact that the composition of the factors determining their value varies.

The amortization capacity of the company increased from 0.83 soums in 2000 to 30.9 soums per reduced tkm in 2017. This means that the consumption of fixed assets of the company increased per unit of output by more than 36 times. This figure confirms the increase in fixed assets per unit of production and a decrease in removal from them.

Along with traditional approaches to the analysis of the efficiency of using fixed capital based on the capital productivity index, the author suggests using a systematic approach to assessing the efficiency of using fixed capital embodied in the means of labor. This approach is based on the position and that fixed assets are designed to save labor and efficiently use production resources.

The effectiveness of the use of fixed assets in terms of factors depending on their use, characterizes resource saving. Thus, the improvement of the efficiency indicators of the use of material resources is characterized by material saving, energy saving, etc., the improvement of the efficiency indicators of the use of fixed assets is characterized by fund saving.

The effect of saving labor is determined on the basis of reducing the labor intensity of work and the average monthly wage, as well as changes in the unit cost of fixed assets per employee associated with the reproduction of labor. A similar approach was used in [11] to assess the effectiveness of the use of fixed assets. However, in our opinion, such an assessment does not reflect the full completeness of relations of fixed assets with other production resources.

The effect of saving material resources (basic material resources; energy resources; fuel resources; other material resources) is determined depending on the amount of their spending per unit of work and the price of the resource.

The effect of saving resources aimed at the overhaul of fixed assets is widely discussed in the economic literature: [12], [13], and others. Saving of resources occurs in two directions: first, the reduction in the number of repairs during the life cycle of an asset

and, secondly, the use of less demanding repairs.

To characterize the turnover of fixed assets by stages and assess the effect of their change, you can use the methodology proposed in [13], [14], [15].

The effect of saving capital investments by increasing the efficiency of using fixed assets is calculated according to generally accepted methods [12], [13], and others. Table. 3 shows the indicators of efficiency of use of production resources in value form, and in table. 4 - expressed in kind.

Table 3

Dynamics of efficiency of use of production resources on the railways for transportation on the basis of cost indicators, UZS / thousand pref. t-km [16]

Indicator	Years					
	2000	2005	2010	2015	2016	2017
abor intensity	508,89	767,41	4799,97	19517,74	20611,48	21838,56
% By the year 2000	-	150,8	943,2	3835,4	4050,3	4291,4
Consumption of materials	1966,27	5646,17	24158,32	24607,02	23669,16	25362,85
% By the year 2000	-	287,2	1228,6	1251,5	1203,8	1289,9
Energy intensity	407,25	605,33	769,48	932,32	964,89	997,46
% By the year 2000	-	148,6	188,9	228,9	236,9	244,9
Capital intensity	10339,67	31128,23	85313,26	280590,98	383463,40	431323,26
% By the year 2000	-	301,1	825,1	2713,7	3708,7	4171,5

Analysis table. 3 and 4 shows that, for the years 2000-2017. the increase in labor expended increased on average 40 times. The consumption of materials per 1 thousand. T-km increased by almost 12 times.

Material intensity is one of the most important indicators of production efficiency

and service provision. This indicator describes how much material resources were involved in the production of a product. The analysis of material consumption indicators showed that in the period of 2000 on 2017 this indicator increased and exceeded almost 13 times to the beginning of the analyzed period. This indicates that annually the company uses and employs more resources, more fixed assets to provide services. The greatest increase in material intensity was in 2006-2007.

Table 4

Dynamics of efficiency of use of production resources on the railways for transportation based on physical indicators [16]

Indicators	Years					
	2000	2005	2010	2015	2016	2017
Labor productivity, thousand pref. t-km / person	422,25	475,71	456,74	357,37	358,80	361,73
% By the year 2000	-	112,7	108,2	84,6	85,0	85,7
electricity consumption, kW-H / 10,000 tkm. br.	17,48	16,48	16,14	15,45	15,31	15,17
% By the year 2000	-	94,3	92,3	88,4	87,6	86,8
Freight car performance, thousand tonnes-km / wag	578,60	864,38	1129,91	1429,86	1491,05	1563,67
% By the year 2000	-	149,4	195,3	247,1	257,7	270,2
Productivity of the locomotive, thousand tons-km / br. on 1 locomotive	1069,0	1093,2	1074,66	1079,41	1080,37	1081,32
% By the year 2000	-	102,3	100,5	101,0	101,1	101,2

Macroeconomic indicators influence the high rates of material consumption of the company. The most significant indicator is inflation. According to the macroeconomic statistics of Uzbekistan, inflation in the country does not exceed 9-14% annually, which

is a negative factor for the increase in prices for fuel and lubricants, electricity and other dependent and independent expenses.

In general, bringing the indicators of efficiency of use of production resources in a comparable form revealed general trends. All indicators for the period under review are growing in money terms, which is a negative factor. So, for example, if the labor intensity increased 40 times, then the material consumption during the same period increased 13 times, the capital intensity increased more than 41 times.

Based on the data table. 4 we can conclude about the improvement of the use of energy resources for train traction. This is especially important in the context of rising prices for energy resources (for fuel 4.4 times in the last 10 years) both in the global market and in the domestic market. During the study period, labor productivity decreased by 14.3% over 17 years, while capital productivity decreased by more than 4 times. The growth rate of workload is higher than the increase in the average number of staff. Qualitative indicators of the active part of the fixed assets of the railway company are also growing, although productivity over the period under review has grown by almost 2.7 times, mainly due to a decrease in the turnover rate of the car.

Conclusion

The method proposed by the author for a multivariate analysis of the economic valuation of fixed capital covers all practical activities. Presented in the article is a new methodological approach to the economic evaluation of the efficiency of using fixed capital, based on indicators of the efficiency of using production resources of the company and assessing the impact of quality indicators on the depreciation of its work.

Implementation of the methodological provisions, proposals and recommendations postulated in building the improvement of the reproduction process management system will allow the joint stock company Uzbekistan Temir Yollari to form an adequate accounting, tariff, innovation, investment and depreciation policy in the interests of their own development, to specialize the system of criteria for the intensification of reproduction of fixed capital, to determine reserves for increasing the efficiency of using

fixed capital and other resources that will not only increase their target indicators, but also have a positive impact on the development of the country's economy as a whole.

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