Estimating Indices Analysis in Strategic Analysis of Business Effectiveness

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Abstract—The fixed assets are the actives, which are used in production, services provision or during the works in a form of management needs of the organization optimization. The fixed assets classification includes 10 amortization groups, which should be followed by all organizations, regardless of the forms of property during amortization and depreciation of fixed assets calculation. This document contains the time-frames, which are mentioned for amortization sequence for the aims of income taxation. Thus, fixed asset is a property, which would bring income in the future, the time of useful use of which is more than 12 months, which shouldn’t be resold, actively used in the enterprise or is given for rent to another object. The cost of asset in 2019 in accounting is more than 40000 rubles, for tax accounting- more than 100000 rubles.

Keywords—estimating indices; strategic analysis; the fixed assets; assets of an enterprise; production assets.

Nowadays most part of enterprises has run-down equipment and mechanisms. The fixed assets condition technical and technological level, quality and diversity of the released products, services, fulfilled works in the organization. Qualitative analysis, held with the help of objective indices, would help to reveal indices defects and create offers concerning the fixed assets movement improvement, which would lead to these objects accounting, amortization charges optimization and finally to the quality of the released product improvement and finance results increase of the economic subject.

Characterizing production facilities we came to the conclusion that they take direct part in the process of production (engineering tools, equipment) or provide necessary conditions creation for production process (productive buildings).

Non-production funds include the needs of housing and communal services, enterprise culture and education (canteens, schools). The rationality and effectiveness of the structure of these funds should be observed. There should be sufficient amount of production capital funds in order to provide the process of production. At the same time it is necessary to have the reserve in case of coming out of the process, but the surplus shouldn’t be great.

The developed sphere of non-productive funds makes the activity of workers easier and provides wealth for the staff and productivity increase.

This forms funds characteristic according to the degree of participation directly in production process:

– active elements, which include the cars, equipment and which influence directly the process of production, quality and quantity of products.

– passive elements, which include buildings and establishments, which create conditions for production process.

If the organization independently made fixed assets, costs are formed in accordance with these assets production.

Free assets (gift contract assets) acknowledge the initial cost the current market cost at the date of acceptance and the following things can be used:

– prices for similar fixed assets;

– information about the level of prices;

– experts' report.

During inventory not considered objects of fixed assets can be revealed, which should be accepted according to current market price.

During re-estimation of the asset, in accordance with modern prices and technique, is called restoring. In time course there is the initial price deflection, for its elimination re-estimation is fulfilled.

Business corporation should re-estimate the groups of objects according to current restoring price no more than once a year.

The initial results for re-estimation are the following:

– initial price or restoring price;
– sum on the date of the calculated amortization for the whole period of the object;
– documents that prove these objects re-estimation.

Preparatory work for re-estimation is in order or regulatory document formation, the list of objects for re-estimation.

The order should reflect the following:
– objects of re-estimation;
– the way of re-estimation;
– methodology of reflection on accounts.

After re-estimation restoring price is accepted as the initial one.

The result of re-estimation can be the additional estimation or price reduction of the object.

Let’s consider joint-stock company “Progress” in the center of Kuban. The history of activity renewal started in 1932, when on isolated farmstead Burakovskiy, in Krasnodar region kolkhoz was formed. Society changed, but the organization preserved its intellectual, technical and staff base. The activity of the organization is in agricultural products production. It grows winter wheat, barley, corn, sunflower and sugar beet. During recent years the enterprise has broadened own production spectrum by means of seed-growing of sunflower and corn hybrids. Each year, regardless of modern economic changes and other disasters, “Progress” gets its income. Every year kolkhoz realizes 10-15000 seeds, 800-1000 tons of sunflower and a lot of other products: sugar, flour, oil and etc.. On the territory of the enterprise there is a township - isolated farmstead Burakovskiy, which is 10 km far from the district center (Korenovsk), 70 km from regional one (Krasnodar). The enterprise became highly industrial. The staff moves forward, ready to realize all orders of every party congress. As a result of 2014 joint-stock company “Progress” is included into the list of the best enterprises of EES association “Frontiere” association (France). In 2006 the enterprise was included into the list of the best enterprises of EES association “Europa” (Germany) and was rewarded by the title “The leader of agro-industrial complex” and “Gold Palm” prize of “Partnership for the benefit of progress” program. In recent years “Progress” takes the leading places among the most effective agricultural enterprises of the region.

For the activity realization of the subject each organization should have resources. During the activity the organization uses the groups of resources: natural, material, finance, intellectual, including labor means. As the main parts of the group of organization industrial resources are the subject of labor, means of labor and workers. The indices of provision level with the main resources of “Progress” are presented in table 1.

Having estimated the results of table 1 we came to the following conclusion. There is stable decrease in land area item, by 2018 it was 4537 ha, which is 3,3% less than in 2016. This change is conditioned by the sale of the part of agricultural lands, the index of which decreased by 3,3% and was 4458 ha. In 2018 average annual number of workers increased by 3,2% in comparison with 2016, but decreased by 1,5% in comparison with 2017 and was 128 people. This change led to outlays decrease on the main production. Average annual cost of the main productive means was constantly increasing. In 2018 it was 220143 thousand of rubles, which is 24,8% higher in comparison with 2016. This change is connected with new cars and equipment provision.

| TABLE I. RESOURCES AND EXPENDITURES OF JOINT-STOCK COMPANY “PROGRESS” |
|-----------------|---------|---------|---------|
| Index            | 2016   | 2017   | 2018   |
| General ground area, ha | 4691   | 4643   | 4537   |
| Area of agricultural lands, ha | 4610   | 4562   | 4458   |
| Effective area, ha | 4552   | 4505   | 4417   |
| Average annual number of workers, people | 124     | 130     | 128    |
| Including those, who take part in rural economy | 115     | 122     | 121    |
| Average annual cost of the main productive means, thous. rubles, - total | 176364  | 195469  | 220143 |
| Outlays on the main production, thous. rubles | 262201  | 312176  | 276293 |
| including: - material costs | 193475  | 234515  | 197988 |
| Power capacities- total | 11258   | 11196   | 11038  |
| Productivity | 2344,8  | 1746    | 1790,1 |
| Efficiency of capital | 1,7     | 1,2     | 1,04   |
| Material return | 1,5     | 1,0     | 1,2    |

Let’s consider the main results of the organization activity, which are presented in table 2.

| TABLE II. ACTIVITY RESULTS OF JOINT-STOCK COMPANY “PROGRESS”, THOUSAND OF RUBLES |
|-----------------|---------|---------|---------|
| Index            | 2016   | 2017   | 2018   |
| Earnings | 290750  | 226979  | 229137  |
| Income from sales | 84276  | 43886   | 33634   |
| Other income | 12628   | 19660   | 6786    |
| Other expenditures | 13747   | 8849    | 16520   |
| Income before taxation | 76865  | 53993   | 21115   |
| Clear profit | 73342   | 53954   | 21030   |
| Sales profitability, % | 29      | 19,3    | 14,7    |
| Sales profitability according to clear profit, % | 25,2    | 23,8    | 9,2     |

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Returns from sales in 2018 in comparison with 2016 decreased by 21.2% and were 229137 thousand of rubles and in comparison with 2017 this index increased by 1.4% and was 2158 thousand of rubles. Prime cost increase led to income decrease. Income in 2018 was 33634 thousand of rubles, which is twice less than in 2016. Other income in 2018 in comparison with 2016 increased twice and in comparison with 2017 decreased by 65.5%, which led to financial result decrease. Other costs within the studied period decreased for 4898 thousand rubles, in 2018 they increased for 7671 thousand of rubles and we 16520 thousand of rubles. Income before taxation within the studied period also decreased for 55750 thousand rubles.

Sales profitability within 2016-2018 decreased by 14,3% and was 14,7%, this change is connected with considerable decrease of earnings and income. Sales profitability according to clear income also had a low level, which shows prime cost increase and realization decrease.

Figure 1 shows financial results of “Progress” activity.

![Graph showing financial results of “Progress” activity within 2016-2018](image)

Thus, PREDICT function helped to reveal the sums of the predicted income of “Progress” in 2018-2019. There is a positive dynamics of the factor increase.

Using Excel we introduced the results of 2013-2018 according to “Fixed assets” index. For the empty cells of earnings calculation in 2018 and 2019 we chose statistical formula PREDICT, which mechanically calculated the results, set during previous years.

Thus, PREDICT function helped to reveal the sums of the predicted income of “Progress” in 2018-2019. There is a positive dynamics of the factor increase.

On the basis of the fulfilled predictions of earnings and fixed assets we defined the predicted values of capital efficiency:

- predicted value CE in 2018
  \[
  \text{CE} = \frac{S_{2018}}{FA_{2018}} = \frac{260854}{226679.6} = 1.151
  \]
- predicted value of CE in 2019
  \[
  \text{CE} = \frac{S_{2019}}{FA_{2019}} = \frac{273284.4}{239517.2} = 1.141
  \]

Thus, taking into account the predicted results of capital efficiency in 2018 was 1.151, in 2019 0,01 less- 1.141.

For the factors influence calculation on the volume of production we used the method of absolute differences. The factors connection corresponds with multiplicative model of earnings:

For multiplicative model of earnings $S = CEa \cdot FA \cdot da$ let’s calculate the influence on the volume of production:

- fixed assets cost
  \[
  \Delta Sfa = \Delta FA \cdot CEa \cdot da = 24674 \cdot 1,242 \cdot 0,942 = 28653;
  \]
- the parts of active fixed assets
  \[
  \Delta Sda = \Delta da \cdot FA \cdot CEa = 0,007 \cdot 220143 \cdot 1,242 = 1913;
  \]
- capital of efficiency of active fixed assets
  \[
  \Delta Scea = \Delta CEa \cdot FA \cdot da = -0,137 \cdot 220143 \cdot 0,942 = -28410.
  \]

Thus, earnings from sales in 2018 increased for 2158 thousand rubles. Considerable part among fixed assets form active fixed assets, in 2018 this index was 94.2%. Nevertheless, capital efficiency of fixed assets decreased by 0.13% and was 1.1 %.

The price of fixed assets 28653 rubles had the greatest influence on productivity volume. The restrictive factor of earnings is a negative value of capital efficiency of active fixed assets-28410 rubles.

Thus, the main problem of joint-stock company “Progress” is a low level of the fixed assets active part capital efficiency. The complex of events, connected with active part of fixed assets development is the offer to change agricultural
technique for new one (producer-Belarus). The research work contains analysis with the help of Microsoft Excel program, which helped to predict earnings in 2018-2019, the cost of the fixed assets in 2018-2019. Taking this into account we predicted capital efficiency, which in 2018 was 1,151, in 2019 - 1,141.

In terms of the existing vehicle reserve depot the enterprise wouldn’t be able to provide considerable increase of technical readiness.

Thus, joint-stock company “Progress” has a wide spectrum of abilities and offers concerning the direction for the effectiveness of fixed assets use.

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