

Risk management specifics in mineral water and beverage production under natural resources conservation

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Abstract. This paper studies two production enterprises of the same segment, which operate in different subjects of the Russian Federation. It shows how such sectoral enterprises develop, especially after the fight against the pandemic to the present day. The study of two enterprises from the Republic of Dagestan and Stavropol Krai revealed the necessity of increasing expenditure to reduce the risks associated with maintaining production positions in the sectoral market. It was found that net profit and revenue are not the most important indicators for assessing the economic security of production enterprises. The main criterion for assessing the company's ability to manage its own risks is the gross profit indicator. The research also revealed the priorities for management decisions for the industry as a whole, especially if the industry enterprise has to reduce several types of risk at the same time. The results and conclusions of the study are of great importance for industry enterprises at the present time because of the presence of some more significant risks of a different order for modern industry manufacturing organisations. Focusing on the gross profit indicator is the best way to ensure solvency and maintain economic sustainability for sectoral enterprises, including those operating in conditions of economic uncertainty.

1 Introduction

In the national economy there are segments that are not a priority, but at the same time account for a significant part of tax revenues to the state budget. Such segments include the production of mineral water and non-alcoholic beverages, which is characteristic of the southern territories of the Russian Federation due to the natural features and healing properties of local reservoirs [1, 91].

The purpose of mineral waters is quite wide, including for health prevention, treatment and daily support of the human body. Soft drinks are produced throughout the Russian Federation, but the climatic and natural specificity of the south of the Russian Federation

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predisposes to the production of potentially useful drinks from the fruits of the local harvest, which are characterized by an increased content of nutrients and vitamins [2, 26].

The territory of the Republic of Dagestan is characterized by favorable climatic and natural conditions that predispose to the development of agriculture and local production of food industry. At the same time, one of the neighboring regions, namely Stavropol Krai, is also characterized by natural climatic advantages that allow the development of identical directions of regional economy [3, 105].

Various events of recent years, both at the state and global level, especially after the fight against the pandemic, contributed to the change in the management trajectory of local business development. The most tangible consequences of economic cataclysms are traced in the sphere of production. However, the economic situation in two different subjects for differential reasons is not identical, which is also reflected in the specifics of the development of enterprises in one direction of the national economy.

Economic security in this case acts as the overriding criterion for assessing the development of local producers, in particular, mineral water and soft drinks. This paper studies the economic situation and specifics of development of JSC "Deneb" (Republic of Dagestan) and CJSC "Water Company "Stary Source" (Stavropol Krai). On the example of two designated enterprises specializing in the production of mineral water and soft drinks, the possibility of analyzing the risks that are associated not only with the presented enterprises, but also with the industry in the context of two differential subjects of the state will be formed.

2 Materials and Methods

JSC "Deneb" is a large producer of soft drinks and mineral waters and is territorially located in the Republic of Dagestan. The enterprise started functioning in 1997 initially as a state production organization. In the 90s of the XX century AO "Deneb" made a breakthrough in the market of soft drinks. The beverages under consideration are made according to a unique technology with flavors of fruits and berries traditional for the subject [4].

The production capacity of AO "Deneb" is about 30 thousand bottles per hour [5, 553]. The company has its own scientific center, and its staff includes more than 400 qualified specialists. Currently, the range of products manufactured by the enterprise under study consists of more than 120 items. The product line of AO "Deneb" provides for different target audience and pricing policy. AO "Deneb" belongs to the backbone enterprises of the region.

In turn, CJSC "Stary Istochnik Water Company" has a long history, starting from 1925, and operates in Stavropol Krai. Initially, the company specialized in the production of mineral water only. Subsequently, the activity expanded, and, in addition to mineral water, the company began to produce lemonade. Currently, the main products of CJSC "Water Company "Stary Istochnik" consist of mineral and carbonated water [6].

The enterprise has a unique right to bottle mineral water "Essentuki", and also produces lemonade in accordance with the old recipes of the Soviet period. On a regular basis, the company is a partner of major Russian sporting events. CJSC "Stary Istochnik Water Company" is one of the major exporters of the Russian Federation in the sphere of mineral and carbonated drinks.

Thus, the two enterprises under consideration are actively developing production and sales components of their activities, which characterizes them as major producers and employers in the south of Russia. Against the background of narrowly focused priorities in the identical segment, these enterprises are not direct competitors, as they have different target audiences and sales channels.

In spite of the fact that the duration of activity of the studied producers is differential, the approaches to business management, especially in the sphere of production and development of new flavors for beverages are almost identical. This aspect allows us to evaluate the economic activity of the identified producers in the context of modern conditions on an equal basis.

3 Results

Table 1 summarizes the key financial indicators for Deneb AO and Stary Istochnik Water Company from 2020 to 2022.

Table 1. Key indicators of AO "Deneb" and CJSC "Stary Istochnik Water Company" for the period 2020-2022, billion rubles [7], [8]

no.	Indicator	Company name					
		AO «Deneb»			CJSC Stary Istochnik Water Company		
		2020	2021	2022	2020	2021	2022
1	Revenue	1.09	1.4	1.8	1.3	1.6	1.9
2	Cost of sales	0.9	1.3	1.5	0.8	0.9	1.2
3	Net profit	0.09	0.3	0.8	0.1	0.2	0.07
4	Gross profit	0.1	0.8	0.3	0.5	0.6	0.8

Based on Table 1, it should be noted that the effects of the pandemic on the two organizations under study had almost no impact on revenue. The results of the revenue indicator indicate a stable demand or an extended network of product sales channels. The cost of sales indicator indicates identical costs to produce the main products. It is highly likely that the product component includes identical raw materials for which there is a common pricing policy.

At the same time, in 2021 Deneb AO began to increase the costs of production of products significantly, which may indicate the expansion of the product range. Against the background of the cost of sales indicator of CJSC "Stary Istochnik Water Company" it should be noted that the increase in the cost of sales for the two surveyed enterprises is caused by identical reasons not related to the expansion of the product range. The indicator of net profit indicates the reasonableness of the decision to invest in the expansion of the product range by JSC "Deneb", which does not correlate with the costs of CJSC "Water Company "Stary Istochnik". The presented difference in financial indicators indicates different economic situation and types of risk faced by the investigated enterprises.

With high probability it is possible to assume that the risks of JSC "Deneb" were caused by the decline in the production cycle of the product range, which was produced earlier. For CJSC "Stary Istochnik Water Company" the risks with high probability are related to the preservation of market share, which was partially provided by the expansion of the product range. In addition, significant expenditures for the company of Stavropol Krai were required to maintain the right to bottle mineral water [9-10].

The gross profit indicator complements the conclusion that the priorities of the investigated enterprises to maintain economic stability are different. AO "Deneb" as an enterprise with a stable economic policy in order to move to the next productivity growth increased expenditures on research and development to expand the product range, which was reflected in the gross profit indicator in 2022. The enterprise CJSC "Stary Istochnik Water Company" due to the expansion of the target audience was able to provide positive dynamics in terms of gross profit, which refers to reasonable decisions in order to minimize risks for economic development [11].

The available financial indicators for the designated period for the two businesses under study were subsequently transformed in a visualized form in Figure 1 and Figure 2 respectively.

Fig.1 shows the key indicators of Deneb AO for the period 2020-2022 in bln. rub.

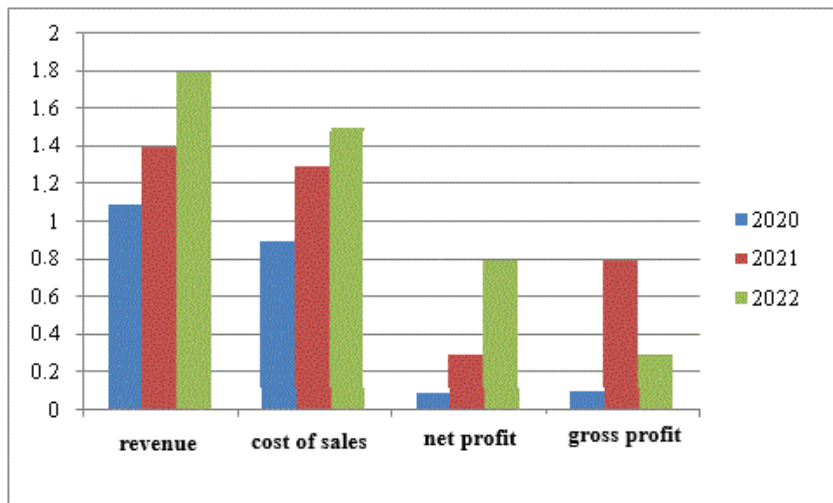


Fig. 1. Economic situation of AO "Deneb" in 2020-2022, bln. rub.

From the point of view of economic security, the situation of JSC "Deneb" in the period under consideration in Fig. 1 has the necessary resources to ensure the growth of key financial indicators. The available resources can both relate to the assets of the organization, and to the specifics of management decision-making. At the same time, the current situation does not allow the enterprise to reduce costs and increase income, which may indicate a serious dependence of the considered production on economic relations formed on the basis of communications with suppliers and partners. The indicators of gross and net profit indicate positive dynamics of the enterprise development due to the ratio of the presented indicators in favor of net profit in 2022 compared to 2021. The ratio of cost of sales and net profit characterizes that in the end the expediency of expenses is justified by the multiplicity of increase in net profit in 2022 compared to 2021. At the same time, the expenditure part is rationalized mainly due to the redistribution of the degree of priority as a result of management decisions. Accordingly, the company reduces the risks, which in 2021 could move to the stage of challenges, but in 2022 were reduced by ensuring the solvency of AO "Deneb".

Fig.2 shows identical indicators for CJSC "Stary Istochnik Water Company" for the period 2020-2022 in bln. rub.

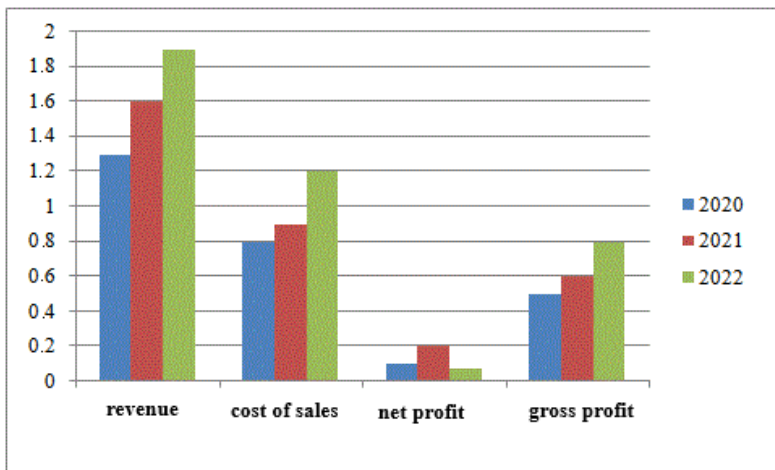


Fig. 2. Economic situation of CJSC "Stary Istochnik Water Company" in 2020 - 2022, bln. rub

The economic situation of CJSC "Water Company " Stary Istochnik" shows that the expenses are justified to an insignificant extent by the revenue indicator. The ratio between revenue and cost of sales is approximately equal, which may indicate an increase in the volume of products, the differences in the product range of which the target audience does not determine. At the same time, the economic security of this company is characterized by great worrying signs, as the ratio of gross and net profit in 2022 is more reflected in favor of gross profit. This means that for whatever reason the enterprise is not solvent. No significant progressive management decisions have been taken in 2022 that would affect the net to gross profit ratio. The considered indicators may indicate the probable presence of the economic situation of the enterprise at the stage of challenges, which requires the management of CJSC "Water Company " Stary Istochnik" to make prompt management decisions [12]. In addition, the ratio of cost of sales and net profit shows the possible adoption by the enterprise of a number of erroneous managerial decisions, which in the foreseeable future may worsen the economic situation of this enterprise.

4 Discussion

The research of two enterprises located in the Republic of Dagestan and Stavropol Krai shows that to consolidate the economic position and ensure economic security it is not enough to spend on expanding the product range and increasing sales channels [13-15]. The performance of AO "Deneb" on the background of the enterprise CJSC "Water Company "Stary Istochnik" characterizes that the ability of management to redistribute the proceeds in order to further ensure the solvency of the organization is extremely important for economic security.

It is established that the orientation on net profit is not a reasoned decision if the enterprise pursues the goal of economic sustainability. The most important indicator for assessing the degree of risks of the economic situation of enterprises is the gross profit indicator [16-18]. However, in an independent form, this indicator does not determine the degree of economic sustainability, as it is mandatory to compare the value of gross profit with other key indicators in order to further make timely management decisions.

Directly for the industry the example of the two studied enterprises can be useful because one of the ways to overcome various external threats, for example, the consequences of a pandemic, is to ensure the enterprise's own solvency, which guarantees the continuity of further business development. Accordingly, any impact on the expenditure

side in the context of management decisions should be justified not by an increase in revenue, but by the company's ability to carry out production activities in difficult conditions [19].

5 Conclusions

The research findings make it clear that ensuring solvency is the key to making correct management decisions in an industry enterprise facing multiple types of risk. AO "Deneb" had to not only cope with the consequences of the pandemic but also overcome the consequences of the end of the production cycle, which coincided with the period of fighting the pandemic.

The example of AO "Deneb" is of particular importance for the industry. Many industry enterprises are currently facing a different kind of risk, which may lead to the need to develop business in a highly volatile environment.

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