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Evaluation of the economic result's development for commercial companies operating in agricultural sector in Nitra

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ABSTRACT

The goal of any manufacturing company is to ensure that the production process is rational and production is as efficient as possible. Enterprises should strive to minimize inputs (costs) and maximize outputs (revenues). The ability of a business to prosper is reflected in its output. The efficiency of agricultural enterprises is influenced by many factors - natural conditions, climatic conditions, soil and its structure and characteristics, economic, social, technical, and technological conditions, etc. The paper's main objective is to evaluate the development of the economic result and the factors that affect it in agricultural enterprises - in commercial companies operating in the Nitra region. We have analysed 102 commercial companies for the period 2017 - 2021. Comparing these years, we can state that the main components (costs and revenues) forming the economic result increased during the period under review in both joint stock companies and limited liability companies. Both legal forms showed a profit before tax each year, which was reflected in positive values for the profitability of costs and the profitability of revenues.

KEYWORDS: agriculture, commercial companies, costs, EBT, revenues

JEL CLASSIFICATION: M20, M21, O13

INTRODUCTION

The introduction of agricultural firms into the new market environment after 1990 marked the beginning of difficult structural, economic, and social transformations that resulted in measurable advances in just a few dimensions of technical performance and competitiveness. New types of business developed, the number of participants rose, and their average focus fell

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(Adamišin & Kotulič, 2013). The Slovak agrarian sector has been part of the EU for several years, so it has to compare its results with the agrarian sector of other Member States and assess its plans using benchmarking. A prerequisite for the competitiveness of Slovak agricultural enterprises is the growth of their performance both in the indicators of the use of production factors and in the key indicator - the economic result. Cost savings can only be achieved through careful cost management and rational intensification of production per hectare of land farmed (Grznár, Szabo & Jankelová, 2009). Slovak farms face major challenges in relation to natural resource management, especially in terms of intensification of agricultural production and climate change impacts. Changes in weather patterns make the agricultural sector vulnerable to greater yield fluctuations and disruption of the crop growing cycle (EC, 2021).

Instability in farm income poses a significant challenge for farm management and public policy design. Identifying farming practices that increase stability can help farms cope with shocks like extreme weather events and economic challenges. Greater agricultural diversity and reduced input intensity are important factors in increasing income stability for all farm types. The Common Agricultural Policy (CAP) budget primarily consists of subsidies for supporting and stabilizing European Union farmers' income. These subsidies mitigate instability in farm income by being lower than market revenue income.

Slovakia, with a predominantly rural population, has 25 658 farms of legal and natural persons, managing 1 889 819 ha of utilized agricultural land. Legal persons farm 88% of agricultural land, while natural persons farm 20%. Agricultural cooperatives are considered effective instruments for bridging the gap between smallholders and modern agriculture, enabling large-scale production and ensuring the quality of agricultural products (Zhong, Jiang & Li, 2023). In 2021, the agricultural sector of the Slovak Republic achieved a positive pre-tax result - a profit of € 208.9 million. Its development was influenced by an increase in sales of its own products of plant origin. Subsidies played a decisive role in the economy of agricultural holdings. The economic results of the enterprises were influenced by a number of income-cost and production factors: the rate of growth of income exceeded the growth of costs, the increase in the production performance of the sector, the increase in revenues from the sale of own products, the dominance of crop production, the increase in the prices of agricultural products, the increase in the prices of cost factors, the reduction in the total volume of support, the decline in production, the decline in livestock, the decline in the number of workers, the impact of the weather, etc. (Green Report, 2022).

Profit is the most well-known indicator of a company's performance. Profit is defined as the excess remaining after total costs are subtracted from total income, and it serves as the basis for taxation and dividend payments. Revenue is the entire amount of money received by a corporation over a certain time, including discounts and deductions for any returned sold items. The whole cost represents the real costs paid in producing a specific level of output. In other words, the overall expenses are used on resources, both explicit and implicit, to achieve a specific level of production (Kumur, 2018). Profitability is one of the most essential measures for assessing a company's success (Vukovic et al., 2023). Profitability is a quantitative indicator of an entity's economic efficiency, comparing profit to its means, indicating return, reinumerativeness, and business efficiency. Profitability has been studied by Mauki, C., Jeckoniah, J., and Massawe, G.D. (2023), Mansikkamäki (2023), and Yin and Yang (2022).

MATERIAL AND METHODS

The material for the preparation of this paper was drawn from the financial statements of agricultural enterprises - trading companies operating in the agricultural sector in the Nitra region. The assessment covered 102 companies, of which 13 were joint stock companies and 89 were limited liability companies. In the paper, we will focus on the evaluation of the development of costs, revenues and their items as the main indicators influencing the formation and development of the pre-tax result. The data on these indicators are presented in the financial statement - profit and loss account. The period under review is the years 2017-2021. The economic result is an important indicator that speaks about the prosperity of the enterprise.

During the study, we employed EBT (Earnings Before Taxes) alongside standard deviation. EBT offers benefits as it allows us to adapt our budget according to gross revenue, enabling smarter purchasing choices. Being aware of this figure can significantly aid in making informed decisions. Your EBT serves as a useful indicator of your business's financial performance, and through analysis, it becomes possible to gauge the effectiveness of operational efficiency (Portal.ct.gov, 2023). The standard deviation is, in statistics, a measure of the amount of variation or dispersion in a set of values. A low standard deviation means that the values tend to be close to the set mean. A high standard deviation means values are spread over a wider range. From the indicators in which the economic result is reflected, we quantified the profitability of costs and revenues (Bland and Altman, 1996).

$$\text{Return on Costs} = \text{EBT} / \text{Costs} \quad (1)$$

$$\text{Return on Revenues} = \text{EBT} / \text{Revenues} \quad (2)$$

We then calculated the mean value of profitability, the minimum and maximum value of profitability, the variance and standard deviation. We evaluated the development over the entire period by calculating the change (2021-2017) and the index (2021/2017).

RESULTS AND DISCUSSION

In the agricultural sector of the Slovak Republic, in terms of the representation of entities, agricultural cooperatives, trading companies and independent farmers are active, they usually manage a smaller area, but this group is represented by the largest number of entities. On the other hand, commercial companies and agricultural cooperatives manage the greater part of the agricultural land. Commercial companies have more favourable management results than agricultural cooperatives. The table below shows the development of costs, revenues and earnings before taxes (EBT) in joint stock companies. The development of the value of revenues and costs is influenced by both economic and financial activity. The economic area predominates. Overall, the value of revenues and expenses showed a fluctuating trend. The highest values for both indicators were reported in 2019. Compared to 2021 and 2017, revenues and costs increased by 8% and 3% respectively.

Table 1 Development of EBT, revenues and costs in joint stock companies in the Nitra region

Indicator/year	2017	2018	2019	2020	2021	21-17	21/17
Revenues	3,088,003	3,197,958	3,374,407	3,043,451	3,334,076	246,073	1,080
Costs	2,898,261	2,944,394	3,216,918	2,881,811	2,986,430	88,169	1,030
EBT	189,741	253,564	157,489	161,639	347,646	157,905	1,832

Source: own calculation, Profit and loss statements of joint stock companies

The profit before tax showed a similar fluctuating trend, however, the highest value was reached in the last year analysed, when the joint stock companies in the Nitra region achieved a profit before tax of € 347,646.

On the basis of the indicators presented in Table 1, we quantified the profitability of revenues (Return on revenues) and costs (Return on costs). Return on revenues and its development in joint stock companies is presented in Table 2. The highest value of return on revenues was in 2021, when there was 10.43 € EBT per 100 € of revenues. This value was favourably influenced by both revenue growth and EBT growth until 2021 compared to 2020. Overall, revenue profitability showed positive values in every year, increasing by €0.0428 over the whole period. The highest average return on revenue was achieved in 2021, with an average of €10.93 EBT per €100 of revenue. The lowest value of return on revenue was reported in 2019 (-0.1452 €) and the highest value of return on revenue was reported in 2020 at 0.2848 €. The predominance of companies that achieved positive returns on revenues. In terms of negative return on revenue, the number of businesses ranged from zero in 2021 to two in 2019.

Table 2 Development of Return on Revenues in joint stock companies in the Nitra Region

Indicator/year	2017	2018	2019	2020	2021	21-17	21/17
Return on Revenues	0.0614	0.0793	0.0467	0.0531	0.1043	0.0428	1.697
Average	0.0532	0.0590	0.0306	0.0543	0.1093	0.0561	2.053
Min	-0.1049	-0.0731	-0.1452	-0.0335	0.0097	0.1146	-0.093
Max	0.2727	0.1947	0.1368	0.2848	0.2631	-0.0097	0.965
Variance	0.0073	0.0060	0.0052	0.0065	0.0083	0.0010	1.140
Standard deviation	0.0888	0.0803	0.0751	0.0837	0.0949	0.0060	1.068
Number of companies with positive return on revenues	12	12	11	12	13	1	1.083
Number of companies with negative return on revenues	1	1	2	1	0	-1	0

Source: own calculation

The development of return on costs in joint stock companies in the Nitra region is presented in Table 3. The return on costs shows positive values in all analysed years. The highest value was calculated in 2021 when 11.64 € EBT per 100 € of costs. Overall, the cost profitability increased by 0.0509 € over the whole period under study. The highest average value of profitability was in 2021, when on average €13.52 EBT per €100 of costs was calculated. The lowest minimum value of cost profitability was in 2019 at -0.1268 € and the highest value was quantified in 2020 at 0.3981 €. The number of businesses with a positive value of cost profitability outweighs the number of businesses with a negative value of profitability.

Table 3 Development of Return on Costs in joint stock companies in the Nitra Region

Indicator/year	2017	2018	2019	2020	2021	21-17	21/17
Return on Costs	0.0655	0.0861	0.0490	0.0561	0.1164	0.0509	1.778
Average	0.0659	0.0701	0.0371	0.0666	0.1352	0.0694	2.053
Min	-0.0949	-0.0681	-0.1268	-0.0324	0.0098	0.1048	-0.104
Max	0.3750	0.2417	0.1585	0.3981	0.3570	-0.0180	0.952
Variance	0.0117	0.0082	0.0056	0.0118	0.0150	0.0033	1.286
Standard deviation	0.1124	0.0944	0.0782	0.1129	0.1275	0.0151	1.134
Number of companies with positive Return on Costs	12	12	11	12	13	1	1.083
Number of companies with negative Return on Costs	1	1	2	1	0	-1	0

Source: own calculation

Table 4 shows the development of EBT, revenues and costs in limited liability companies in the Nitra region. The highest value of revenues and costs was reported in 2021, which was also reflected in the highest reported profit before tax. Overall, the value of revenues increased by 31.8% and the value of costs by 24.9%. These figures were influenced by both the economic and financial performance of the companies. In terms of economic activity, sales of own products dominate the annual sales figures. In addition to these sales, sales of goods and other income from economic activity also influenced revenue. In terms of income from financial activities, it was interest income. In terms of the development of costs, material and energy consumption, cost of goods, services and personnel costs predominated. From financial activities, interest expense predominates. The pre-tax result is positive year on year. It increased by € 164 398 over the period under review.

Table 4 Development of EBT, Revenues and Costs in limited liability companies in the Nitra Region

Indicator/year	2017	2018	2019	2020	2021	21-17	21/17
Revenues	1921743	1926492	2054154	2165517	2532044	610302	1,318
Costs	1790503	1819420	1928125	2047236	2236407	445904	1,249
EBT	131240	107072	126029	118281	295637	164398	2,253

Source: own calculation, Profit and loss statements of limited liability companies

Table 5 shows the development of profitability of returns in limited liability companies in the Nitra region. The profitability of revenues is positive every year, the highest value is reached in 2021 when per 100 € of revenues, 11.68 € of EBT was attributed. The return on revenue increased by 71% over the whole period under review. The average value of return on revenue shows negative values every year, with the highest value recorded in 2020, when on average per 100 € of revenue, there was a loss of -25.91 €. The lowest minimum value of return on revenue was achieved in 2021 at -20.1338 € and the highest value of return on revenue in 2021 at 0.9789 €. The number of enterprises with positive returns on revenue outweighs the number of enterprises with negative returns on revenue.

Table 5 Development of Return on Revenues in limited liability companies in the Nitra Region

Indicator/year	2017	2018	2019	2020	2021	21-17	21/17
Return on Revenues	0.0683	0.0556	0.0614	0.0546	0.1168	0.049	1.71
Average	-0.0956	-0.0988	-0.1964	-0.2502	-0.2253	-0.13	2.356
Min	-11.9074	-9.4664	-13.225	-13.9042	-20.1338	-8.226	1.691
Max	0.7868	0.7397	0.7290	0.2693	0.9789	0.192	1.244
Variance	1.644	1.1512	2.4519	2.9561	5.1761	3.532	3.149
Standard deviation	1.2894	1.0791	1.5748	1.7292	2.2881	0.999	1.775
Number of companies with positive return on revenues	71	74	72	72	78	7	1.099
Number of companies with negative return on revenues	18	15	17	17	11	-7	0.611

Source: own calculation

Table 6 shows the development of cost profitability in limited liability companies in the Nitra region. The cost profitability is positive every year, affected by the reported EBT. The highest value of cost profitability was quantified in 2021 when €13.22 EBT per €100 of costs. Over the entire period, the value of cost profitability increased by €0.059. The average value of cost profitability is highest in 2021, when on average €59.39 EBT per €100 of costs was incurred. The lowest value of cost profitability is at -1 € and the highest value of cost profitability was 46.4238 € in 2021. In Table 6 we can see that the standard deviation is highest in 2021. In 2017 to 2019 the standard deviation was less than 1. The number of businesses with positive cost profitability outweighs the number of businesses with negative cost profitability.

Table 6 Development of Return on Costs in limited liability companies in the Nitra Region

Indicator/year	2017	2018	2019	2020	2021	21-17	21/17
Return on Costs	0.0733	0.0588	0.0654	0.0578	0.1322	0.059	1.80
Average	0.1010	0.0441	0.0486	-0.0211	0.5939	0.493	5.878
Min	-1.0000	-1.0000	-1.000	-1.0000	-1.0000	0	1
Max	3.6911	2.8419	2.6903	0.3685	46.4238	42.733	12.577
Variance	0.3201	0.2103	0.2212	0.0727	23.995	23.675	74.954
Standard deviation	0.5690	0.4612	0.4729	0.2712	4.9262	4.357	8.658
Number of companies with positive Return on Costs	69	70	69	69	75	6	1.087
Number of companies with negative Return on Costs	20	19	20	20	14	-6	0.700

Source: own calculation

Figure 1 shows the development of costs, revenues and EBT in trading companies in the Nitra region as a whole. The value of revenues approximately follows the value of costs. Their values oscillate around € 2 million. The most favourable pre-tax result is achieved in 2021 at the level of € 302 266.

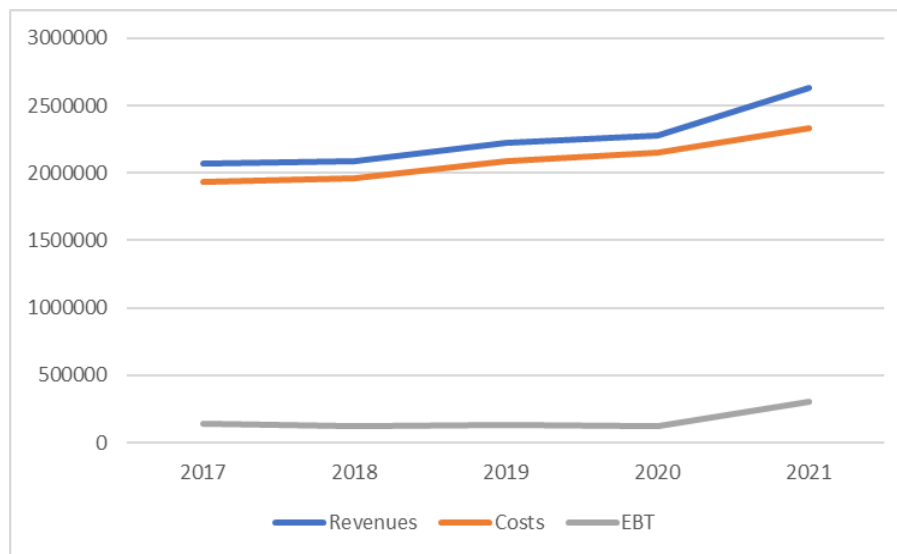


Figure 1 Development of Revenues, Costs and EBT in commercial companies in Nitra Region
Source: own calculation

CONCLUSIONS

In the paper, we dealt with the development of the economic result and two basic indicators that affect its formation and development, namely costs and revenues in companies operating in the agricultural sector in the Nitra region. The Nitra region is located in the southern part of Slovakia and is one of the regions with better natural conditions. In this region, agricultural production has a tradition and an irreplaceable place. In the commercial companies divided into joint-stock companies and limited liability companies, all three basic monitored indicators - revenues, costs, and profit before tax - had an increasing tendency until 2021. Revenues and expenses from economic activity predominate. In terms of revenue, the most dominant item is revenue from the sale of own products, and in terms of costs, consumption of materials and energy. Cost minimisation is one of the strategic objectives of agricultural producers (Grznár, Szabo, Jankelová, 2009). The highest pre-tax result was reported in the last year, which positively contributed to the highest achieved profitability of revenues and profitability of costs indicators in both legal forms. In both legal forms, a larger number of enterprises with positive cost and revenue profitability prevail.

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