



PROFITABILITY OF SALES REVENUE IN AGRICULTURE

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ABSTRACT

In economics, profitability is a fundamental indicator, as it characterizes the overall activity and financial condition of the relevant enterprise, business or industry. **The object** of this study is the profitability of sales revenues of enterprises operating in agriculture. **The purpose** is to analyze and evaluate the factors that influence the return on sales. **The information** necessary for the analysis is extracted and summarized from the financial statements of enterprises in this sector. The obtained **results** are calculated as a ratio of operating profit from sales and revenue from product sales of agricultural products. The used analysis **method** allows to determine the strength and direction of impact of direct factors affecting changes in the profitability of sales revenue. In **conclusion**, this analysis provides an idea of the financial condition of the industry, necessary for making effective decisions for the development of the Agro-Industry in Bulgaria.

Keywords: sales revenue, profitability, factor influence, agro-industry

INTRODUCTION

Agro-industry is an important sector in the economy of any country. It encompasses various sectors involved in the production, processing and distribution of agricultural products. Creating a competitive agriculture is crucial both for increasing the quality and demand for agricultural products and for creating employment and income opportunities in underdeveloped areas.

Agriculture is a priority and strategic sector as it is linked to land, which is a key factor of production. Its production serves to feed the population, as well as to provide resources for many other industries and sectors of the national economy related to the pharmaceutical and chemical industries. The industry is linked to the provision of livelihood and redistribution of the rural population.

The peculiarity of agriculture is related to high share of production costs, low wages, different use of finished products, seasonality and perishability of production, etc. Unlike other sectors, the agricultural sector is most dependent on natural and climatic conditions.

Sustainable agriculture is a key strategy for adapting to climate change and ensuring long-term productivity and ecosystem health. In recent years, various practices and technologies have been introduced to support these goals, such as: crop rotation, organic farming, agro-ecology, water management, pest and disease management, crop diversity, and others. These practices and technologies not only help overcome climate challenges, but also increase the competitiveness and sustainability of farmers. To be effective, it is important to consider the local conditions and specificities of the region, as well as to educate and make farmers aware of these innovations. The pursuit of sustainable agriculture not only helps to protect the environment, but plays an important role in increasing productivity and hence improving the economic performance of farmers (4).

Gross Value Added (GVA) is a key economic indicator and an important indicator characterising the economic activity and productivity of different sectors. It can be used to assess the impact of agriculture on the economy. Measured as an absolute value for 2023, it amounts to 4663 million BGN, which is a decrease of about 25%, compared to the previous two years. Unfortunately, this trend persists when calculating the sector's GVA relative to the national total. For 2023, the

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measured values show that agriculture occupies about 2.9% of the country's GVA in contrast to the previous two years when this indicator occupied between 4 and 5% (6).

The observed trend can be defined as a signal for an urgent restructuring of the sector through the implementation of innovations related to the introduction of new technologies, increasing labour productivity and improving efficiency in the allocation of financial resources from individual operational programmes to European structural funds. The calculation of this indicator has key implications for future policies aimed at agricultural development.

Another important indicator to characterize each sector is the trade in goods. Both exports and imports in the agro-industrial sector increased during the observed period, with agricultural exports reaching to 11232.5 million BGN in 2023 and imports amount to 8370.1 million BGN, generating a positive trade balance of 2862.4 million BGN.

The trade balance in the agricultural sector calculated as a relative share for 2023 versus the beginning of the period (2019) marks an increase and amounts to about 64%. Unfortunately, the total trade in goods in Bulgaria has seen a negative trend in terms of imports outpacing exports. A negative trade balance is observed for the entire studied period amounting to a peak of 10169.4 million BGN in 2023 (7).

METHODS

Profitability ratios are one of the most important economic indicators as they provide information about the financial health of the enterprise, business or industry concerned. In economic analysis they are of primary importance as they characterise the overall activity of the firm and show how efficiently resources are being used. Profitability is a forward-looking indicator determining the economic growth or decline in an enterprise's activity.

In the paper, the focus falls on the profitability of sales revenue in agroindustry, which is considered as a key profitability indicator. The results obtained from this indicator enable planning, forecasting, coordinating and investing in future production (2).

In today's economic environment, sales profitability is a metric also known as return on

sales and is key to a company's financial performance. In manufacturing, every entrepreneur strives to maximize the return on sales, which makes this metric most relevant to business (3).

Factors that affect the profitability of sales in the agro-industry are agricultural product prices, production revenues and costs, supply and demand, productivity, government policy, global industry trends, and others.

Profitability of revenues is calculated as a ratio of profit (net, gross) to revenues, which firms have received for the implementation of their activities (1). For greater specificity in the study in the calculation of profitability of sales in practice, one of the varieties of this indicator is used, namely profitability of sales revenue (Psr). In the calculation of this indicator it is more appropriate to use the ratio of the calculated operating profit (OP), and the revenue from agricultural product sales (RPS) inherent in the operation. It is obtained according to the formula: (10)

$$(1) \quad \text{Psr} = \frac{\text{OP}}{\text{RPS}} \cdot 100,$$

where: Psr - Profitability of Sales Revenue;

OP - Operating Profit;

RPS - Revenue from Product Sales.

The absolute change in Return on Sales Revenue (ΔPsr) is calculated using the formula:

$$(2) \Delta\text{Psr} = \text{Psr}_{(1)} - \text{Psr}_{(0)},$$

where (0) and (1) are respectively the values of the basic and current year.

To establish the strength and direction of the impact of profitability on sales revenue, it is imperative to determine a conditional level of profitability (Psr^{con}), which is calculated as the ratio of operating profit in the base period ($\text{OP}_{(0)}$) over the revenue from product sales in the current period ($\text{RPS}_{(1)}$).

$$(3) \text{Psr}^{\text{con}} = \frac{\text{OP}_{(0)}}{\text{RPS}_{(1)}}$$

The methodology for calculating the profitability of sales revenue is related to taking into account the influence of 2 factors, namely: (9)

➤ Impact of changes in the net sales (inf RPS) on the return on sales, which is calculated using the formula:

$$(4) \text{inf RPS} = \text{Psr}^{\text{con}} - \text{Psr}_{(0)}$$

➤ Effect of changes in the amount of profit from ordinary activities (inf OP) on the return on product sales, calculated as:

$$(5) \text{inf OP} = \text{Psr}_{(1)} - \text{Psr}^{\text{con}}$$

The cumulative influence of the two factors (inf CUM) is due to the sum of the individual influences of their values, namely:

$$(6) \text{Inf CUM} = \text{inf RPS} + \text{inf OP}$$

RESULTS

According to the Classification of Economic Activities, agriculture belongs to sector A "Agriculture, forestry and fishery" with its two

main areas "Crop production" and "Livestock farming" (5).

The data required for the analysis of the profitability of sales revenue is based on selected and summarized statistical data covering a 5-year period from respectively 2017 to 2021. This sample represents 7% of stratified information of the firms engaged in the agricultural sector in Bulgaria. In order to make a comparative analysis, it was necessary to differentiate the data for the agricultural sector into its two main areas, namely crop production and livestock farming.

Table 1. Profitability of sales revenues in the crop production sector for the period 2017 - 2021

CROP GROWING	Value (thousands BGN)					Change 21 / 17
	2017	2018	2019	2020	2021	
Operating Profit (OP)	150473	140676	127675	139629	327166	
Revenue from Product Sales (RPS)	610880	614134	674060	689952	863256	
Profitability of Sales Revenue (Psr)	24,63	22,91	18,94	20,24	37,90	
Change Profitability of Sales Revenue compared to the previous year (ΔPsr)		-1,73	-3,97	1,30	17,66	13,27
Conditional sales profitability ratio (Psr^{con})		24,50	20,87	18,50	16,17	17,43
Influence of changes in the sales revenue (inf RPS)		-0,13	-2,04	-0,44	-4,06	-8,46
Influence of changes in the operating profit (inf OP)		-1,60	-1,93	1,73	21,72	21,73
Cumulative influence of the factors (inf CUM)		-1,73	-3,97	1,30	17,66	13,27

From the data in **Table 1**, it is evident that the profitability of revenue from sales of crop production has variable values from 24.63 in 2017 to 37.90 in 2021. The data of absolute change of the studied indicator at the beginning of the period are negative, but at the end of the period they increase, reaching the highest values in 2021: 17.66 points. Overall, there is an increase in this indicator by 13.27 percentile points at the end of the period, compared to the initial year taken on at the baseline level, which would mean that for every 100 BGN of revenue from sales of crop production, the profit has increased by 13.27 BGN.

This increase is due to the influence of 2 factors:

- ✓ as a result of the impact of changes in the amount of net revenue from sales, the return on sales decreased by 8.46 points;
- ✓ as a result of the impact of changes in profit from ordinary activities, the return on sales increased by 21.73 points.

From what has been said so far, it can be deduced that the positive result in the crop production sector is the result of the fact that the operating profit is growing at a rate outpacing the revenue from the product sales.

The data on the profitability of product sales revenue in the livestock sector are presented in **Table 2**. The highest value was measured in 2017 at 22.13 points, with a steady downward trend of the studied indicator reaching its lowest value of 14.83 points at the end of the period. This explains the negative values of the absolute change for the observed period.

For the livestock sector as a whole, the change calculated on the basis of the end of the period, compared to the initial one shows a negative result of (-7.30) points. The negative value of the return on sales of the livestock sector is a consequence of the negative impact of the changes in net sales and the neutral impact of the second factor "operating profit".

Table 2. Profitability of sales revenues in the livestock farming sector for the period 2017 - 2021

LIVESTOCK	Value (thousands BGN)					Change 21 / 17
	2017	2018	2019	2020	2021	
Operating Profit (OP)	48620	37023	40870	38513	38522	
Revenue from Product Sales (RPS)	219684	234991	246570	251784	259719	
Profitability of Sales Revenue (Psr)	22,13	15,76	16,58	15,30	14,83	
Change Profitability of Sales Revenue compared to the previous year (Δ Psr)		-6,38	0,82	-1,28	-0,46	-7,30
Conditional sales profitability ratio (Psr^{con})		20,69	15,02	16,23	14,83	18,72
Influence of changes in the sales revenue (inf RPS)		-1,44	-0,74	-0,34	-0,47	-7,30
Influence of changes in the operating profit (inf OP)		-4,94	1,56	-0,94	0,00	0,00
Cumulative influence of the factors (inf CUM)		-6,38	0,82	-1,28	-0,46	-7,30

In order to establish the dynamics and development trends of the agro-industry, a comparative analysis of the products and

services produced by agricultural activities was carried out (**Figure 1**).

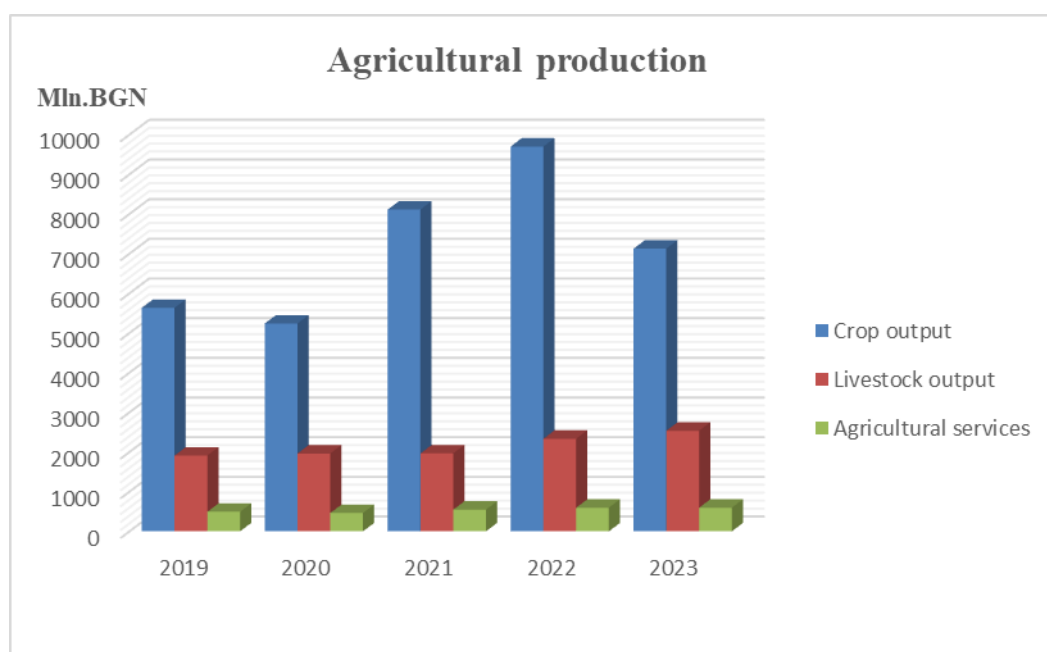
**Figure 1.** Output of agricultural goods and services at basic prices over the period 2019 - 2023 (8).

Figure 1 illustrated is based on data from agricultural output produced and valued at basic prices, divided into crop production, livestock farming and services respectively.

It is noteworthy that during the studied period the final output of agricultural goods and services in terms of value grows and reaches its maximum of 12628.7 million BGN in 2022, which is an increase of 57.2%, compared to 2018, which is taken as a baseline year.

It can be seen that the highest value belongs to crop production, which during the study period occupied between 68% and 76% as a relative

share of the total agricultural production. Livestock farming is the second largest, accounting for between 18% and 24% of the total agricultural production, or 3 to 4 times less than crop production. It is logical and normal that the last place in terms of value is occupied by the provision of agricultural services, which in different years amounts to 4-6% of the total production.

CONCLUSION

Profitability of sales is of paramount importance in economic analysis, as it provides insight into the efficiency of the business in

converting sales revenue into profit. This indicator provides information on the extent to which firms control their sales-related costs.

Profitability of sales revenue in the crop production sector shows a positive trend, amounting to an increase of 13.27% at the end of the period, compared to the baseline. This increase was due to the positive impact of operating profit of 21.73%, which was partially offset by the negative impact of net sales revenue of 8.46%.

In the livestock sector, the profitability of sales revenue shows a negative trend, which amounts to - 7.30%, resulting from the negative impact of changes in net sales revenue by 7.30% and the neutral impact of operating profit.

Agricultural output and services valued at basic prices in the agro-industry have marked an increase. The largest relative share is occupied by crop production, which is 3-4 times more than livestock farming. Agricultural services come last, accounting for only 4-6% of the total agricultural output.

Sales profitability is an important barometer of a company's financial health and operational efficiency. The need to apply this metric is multifaceted, and is related to product pricing, cost management and future investments.

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