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Position of the Food Industry in Poland on the EU Food Market

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Abstract:

Purpose: *This article aims to determine the position of Poland's food industry in the EU food market and compare its entity structure with that of the European Union. Poland's integration into the EU accelerated the development of the food industry and increased trade turnover of the sector's products, resulting from access to a market of approximately 450 million consumers.*
Design/Methodology/Approach: *The objective was realized through a statistical-descriptive analysis using a range of statistical data presented in tables and graphs, facilitating understanding and visualization of the raw data describing the evaluated phenomenon. In the next stage, an inferential statistical analysis was employed to identify the position of the food sector in the EU market across various areas. The study was enriched by comparing the population and economic potential with the economic strength of the country's food industry.*
Findings: *The level of concentration of the food industry in Poland is lower than the EU average, but for the proper functioning and development of the sector, it is necessary to diversify the entity structure. The food industry in Poland occupies a strong position in the EU market as both a producer and exporter. The dynamic development of the sector has improved labour productivity and economic efficiency, narrowing the gap between it and the leaders of the EU food sector.*
Practical Implications: *The research results presented in the article can be useful for entrepreneurs and exporters, as well as for public administration at various levels in creating regional policy. They can also serve as a source of information for traders and be helpful to educators in presenting the potential of this industry in Poland.*
Originality/Value: *The originality of the research lies in assessing the position of the Polish food industry against the EU sector using absolute values concerning, among other things, the value of production not only at current prices but also at comparable prices (i.e., after considering the purchasing power parity of individual currencies). This assessment is supplemented by a ranking evaluating the competitive position of the food industry in Poland against large selected food producers in the EU.*

Keywords: *Food industry, entity structure of the food industry, food industry production.*

JEL codes: *O12, O14, Q13.*

Paper type: *Research article.*

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1. Introduction

The food industry is a key link in the food chain. The unique importance of this sector is due to the specificity of the products it produces—they are essential to consumers' existence, as illustrated by A. Maslow's hierarchy of needs (Gambrel and Cianci, 2003) and E. Engel's work on the level and structure of household spending (Kaus, 2013).

The primary function of the food industry is to create added value in processing agricultural raw materials to make them suitable for consumption or trade. In other words, the food industry determines the demand for agricultural raw materials, develops the market for processed products, and influences food consumption. By marketing finished products, it creates food consumption patterns while meeting the growing demands of consumers.

The strategic nature of the food sector is determined not only by the nature of the products produced but also by the sector's contribution to output and gross domestic product (GDP), as well as to labour market development and trade. In Poland, the sector is one of the important parts of the economy, as the value of food and beverage output in the entire national economy in 2022 accounted for 6.3%, with a share of 3.7% in the number of employees.

The food and beverage industry also made a significant contribution to GDP, as measured by its share of gross value added (GVA), accounting for 2.4% of the GVA generated in the national economy (Central Statistical Office, 2023). The value of Polish exports of agri-food products in 2023 accounted for 14.7% of total exports, while imports accounted for 9.7% (CSO, Domain Knowledge Base. Foreign Trade).

At the same time, the food sector is one of the few branches of the national economy with a positive balance in foreign trade. Trade enables players in this sector to effectively utilize their production potential, integrate with international markets, and positively impact the prosperity of many related industries. Trade openness improves food availability to consumers and ensures food security, which is an important element of the country's socioeconomic policy.

2. Study Material and Method

The empirical part utilized statistical data on food industry enterprises published by the European Statistical Office (EUROSTAT) and the Central Statistical Office (CSO). The information concerned the number of enterprises and people working in this industry, as well as the value of sold production in the food sector. The survey was conducted using statistical data aggregated according to the classification of economic activities per NACE 2. Due to the availability of complete data, the evaluation was limited to divisions 10 and 11 (according to the Polish Classification of Activities—PKD 2007), i.e., the production of foodstuffs and beverages, respectively. The manufacture of tobacco products, which is also included in the food industry, was excluded due to incomplete data.

The analysis was based on the latest available data, mostly referring to 2022, both for the entire European Union and Poland. EUROSTAT data on trade in agri-food products (i.e., HS codes 1-24) of individual EU member states were also analyzed. In assessing the position of Poland's food industry in the EU market, in addition to absolute values, the labour productivity index was used, as well as ratios determining the country's share in EU production, employment, and exports.

In evaluating the results, it was considered that recent years have been a special period—not only due to the progressive concentration and consolidation of food enterprises associated with the globalization of the world economy but also due to emergency phenomena such as the COVID-19 pandemic and the war in Ukraine. Given the lack of clarity in defining terms in the literature, the terms food industry, food processing, and food sector are used interchangeably.

3. Research Results and Discussion

The food industry is an integral part of the economies of the vast majority of countries worldwide. The role and position of this industry branch vary and depend, among other things, on the country's level of economic development and the size and direction of agricultural production, largely due to natural and climatic conditions.

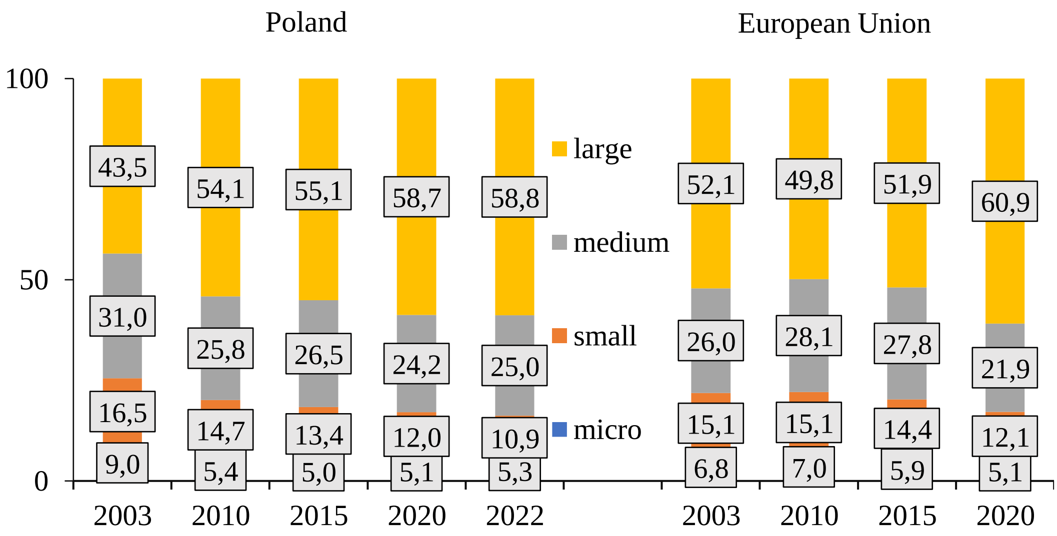
These factors shape not only the industrial structure of the food sector but also the entity structure. Food processing is characterized by a relatively low level of concentration, partly due to the type of raw materials processed, strong connections with local and regional markets, and a large assortment diversity. These features create space for the development of micro, small, and medium-sized food companies, but ongoing processes of integration, liberalization, and globalization of economies affect the concentration of production in this sector.

In Poland, the concentration of production is steadily progressing but is still lower than the EU average (Figure 1). In 2020, the share of large food companies in the sector's sold production in Poland was 2.2 percentage points (p.p.) lower than in the EU, and employment was lower by the same amount.

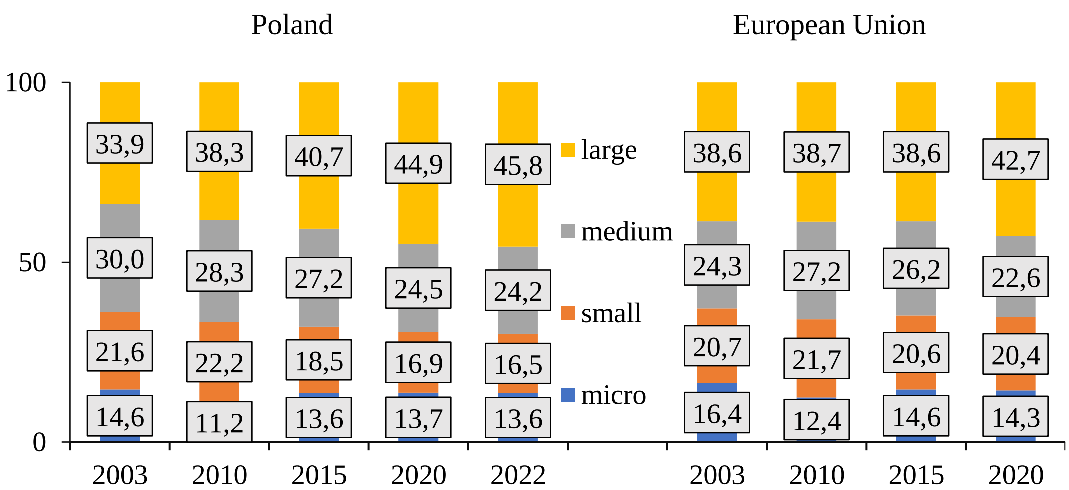
The changes associated with Poland's functioning in the EU structures undoubtedly favoured the concentration of production, and emergency phenomena in recent years (i.e., the COVID-19 pandemic and the war in Ukraine) have accelerated concentration in the sector. Under strong external competition, the food industry needs a diversified entity structure to function and develop effectively.

The European Union is a major global food producer. In 2022, the value of sold production of the food industry (at current prices) in the EU amounted to 1,440 billion euros (Table 1, Figure 2), and at comparable prices (i.e., after currency purchasing power parity conversion), more than 1,470 billion euros.

Figure 1. *Entity Structure of the Food Industry (Excluding the Tobacco Industry) in Poland and the EU (in Percentages, by Company Size)*
Share in Sold Production (in %)



Share of Employment (in %)



Source: *Own compilation based on data from CSO (2023) and Data & Trends (2006, 2013, 2018, 2023).*

Almost 80% of this production came from the "old" EU countries (EU-14), and the remaining over 20% from the "new" EU (EU-13). The value of sold production in Poland at current prices was 96.6 billion euros, and in comparable terms, it was over 156 billion euros, accounting for 10.6% of EU production. Poland ranks fifth among EU producers of food and beverages.

The domestic food industry thus holds a strong position in the multi-million-euro EU market. Germany, France, Italy, and Spain accounted for a larger share of the EU food industry's output. These four largest EU food producers together produce almost 57% of the EU sector's output, and together with Poland, the figure is 67%. The study shows that Poland is the leader among the new EU members, and the production value of Polish food processing accounted for 55% of the food produced in these countries.

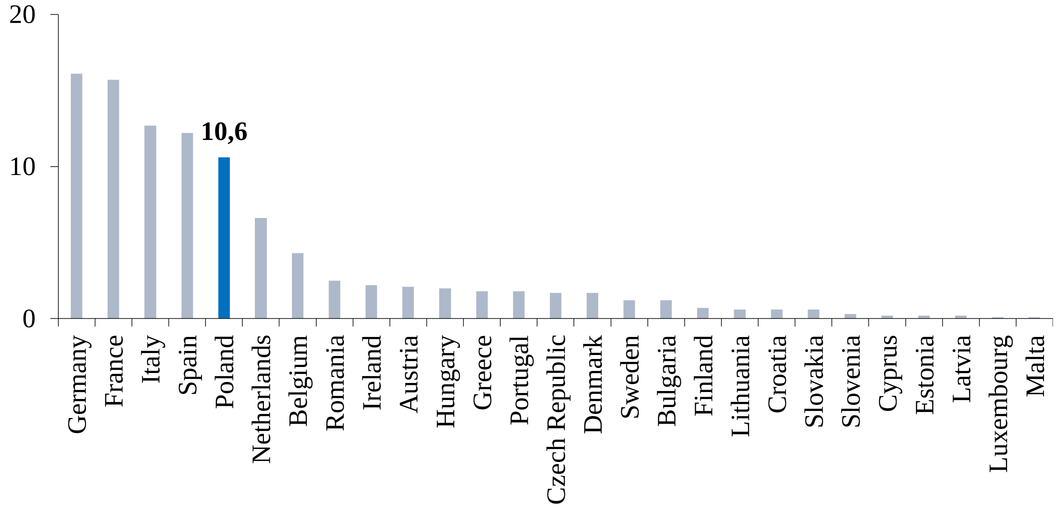
Table 1. *Basic Information on Food and Beverage Producers in the European Union in 2022*

Countries	Number of companies (in thousands)	Employment (in thousands)	Value of production sold in billion EUR at prices		Value of sold production per capita (in thousands of EUR)	Value of turnover of 1 company (in million EUR)	Employment of one company (person)
			current	comparable			
Belgium	7,9	105,1	71,9	64,0	5,5	8,1	13,2
Bulgaria	5,9	83,7	9,9	17,3	2,5	2,9	14,2
Czech Republic	13,0	100,1	20,7	25,2	2,4	1,9	7,7
Denmark	1,7	60,1	34,1	25,6	4,4	14,8	34,7
Germany	27,6	953,3	165,8	236,6	2,8	8,6	34,5
Estonia	1,0	14,5	2,8	3,2	2,4	3,1	14,2
Ireland	2,4	59,1	39,1	32,4	6,4	13,7	24,9
Greece	15,9	125,0	21,7	26,3	2,5	1,7	7,9
Spain	30,1	472,5	168,2	180,0	3,8	6,0	15,7
France	60,1	713,6	254,1	231,2	3,4	3,9	11,9
Croatia	3,5	57,0	6,5	9,5	2,5	2,7	16,4
Italy	52,4	399,9	179,4	186,6	3,2	3,6	7,6
Cyprus	1,0	14,8	2,1	2,3	2,6	2,4	15,4
Latvia	1,4	22,3	2,6	3,2	1,7	2,4	16,2
Lithuania	2,3	40,6	6,5	8,5	3,0	3,7	17,7
Luxembourg	0,1	5,1	1,0	0,8	1,2	5,3	34,1
Hungary	7,1	105,0	18,8	29,2	3,0	4,1	14,8
Malta	0,4	3,8	0,5	0,6	1,1	1,4	9,1
Netherlands	9,1	139,0	114,8	97,6	5,6	10,7	15,2
Austria	4,9	90,6	35,1	30,9	3,4	6,3	18,4

Poland	**19,2**	**447,7**	**96,6**	**156,5**	**4,2**	**8,2**	**23,4**
Portugal	11,4	105,7	22,4	26,6	2,6	2,3	9,2
Romania	14,8	181,3	20,4	36,5	1,9	2,5	12,3
Slovenia	2,9	17,6	3,2	3,8	1,8	1,3	6,1
Slovakia	6,0	41,1	6,5	8,2	1,5	1,4	6,8
Finland	2,6	37,3	13,0	10,5	1,9	4,1	14,5
Sweden	4,3	56,5	22,9	18,1	1,7	4,2	13,0
EU-27	**309,0**	**4 452,2**	**1 440,8**	**1 471,3**	**3,3**	**4,8**	**14,4**
EU-14	**230,6**	**3 322,7**	**1 243,7**	**1 167,3**	**3,4**	**5,1**	**14,4**
EU-13	**78,4**	**1 129,5**	**197,2**	**304,0**	**3,0**	**3,9**	**14,4**

Source: *Own compilation based on Eurostat Database.*

Figure 2. *Member States' Share of the Value of Sold Production of the EU Food Industry (Excluding Tobacco) in 2022 (in %)**



Note: **By purchasing power parity of currencies.*
Source: *Own compilation based on data from Eurostat Database.*

Poland's food processing industry has a strong and enduring position in the European Union, as evidenced by the sector's share in EU output (10.6%), which is several percentage points higher than its population potential (8.4%) or economic potential as measured by its contribution to EU GDP (6.7%)—compared to 6.2% in 2011 (Poczta and Beba, 2014).

This indicates a strengthening of the domestic food industry's position in the EU economy. The value of sold production per capita in Poland was significantly higher than the EU average, including both the EU-14 and the EU-13. In 2022, Poland had 4.2 thousand euros of sold production per capita, while the EU average was 3.3 thousand euros (3.4 thousand euros in the EU-14 and 3.0 thousand euros in the EU-

13). In countries ahead of us in terms of the scale of food sector production (i.e., Germany, France, Italy, and Spain), the value of production per capita was lower than in Poland.

These indicators testify to the strong position of the Polish food sector in the EU market, where we successfully compete with food products, and highlight its great importance for the country's economic development.

In 2022, food production in Poland involved 19.2 thousand entities, accounting for 6.2% of EU food enterprises, giving us the fifth position among EU countries (Table 1). The size of the average food enterprise in Poland, measured by the value of turnover or the number of people employed per company, was larger than the EU average by 70% and 62%, respectively.

Of all EU countries, only enterprises in Denmark, Germany, and Ireland had both larger average company turnover and employment per company. Companies with a larger scale of production than in Poland were also found in the Netherlands, and those employing more people were in Luxembourg. These indicators confirm that food companies in Poland are economically strong and thus highly competitive in the EU market.

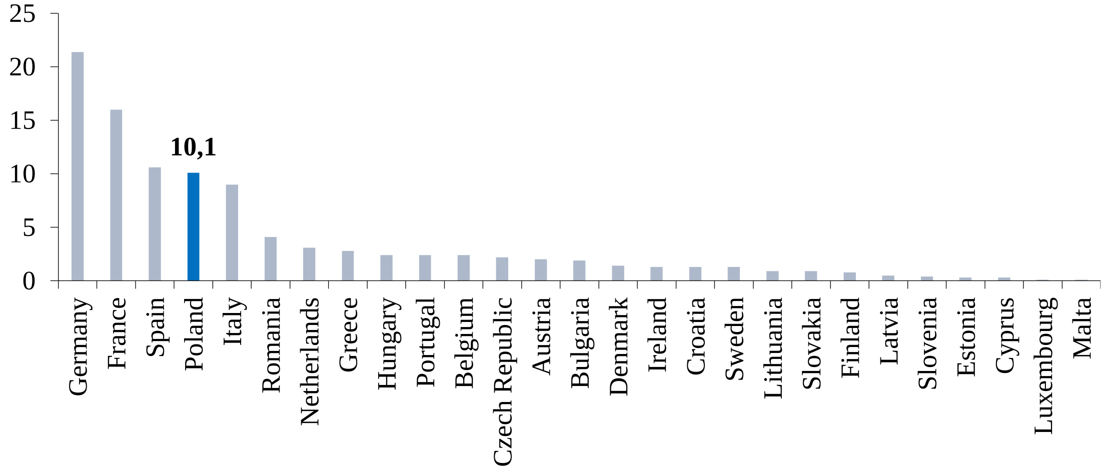
The food industry in Poland, as in most EU countries, is an important source of jobs and a stable employer. In recent years, employment in the food industry in Poland and the EU as a whole has been growing, in Poland at an average rate of about 1% annually. As a result, in 2022, almost 448,000 people worked in food companies in our country, accounting for 10.1% of the total number of people working in the EU sector (Table 1, Figure 3).

However, this was 0.3 percentage points less than in 2010 (according to EUROSTAT data), meaning that employment growth rates were even higher in other countries. In 2022, we ranked fourth in terms of employment share, ahead of Italy, which is a larger food producer than Poland.

The dynamic development of the food industry in Poland more than compensated for the increase in employment, leading to higher average labour productivity, measured by the value of output sold at comparable prices per employee (Figure 4). As a result, labour productivity in the food industry in Poland in 2022 amounted to almost 350,000 euros, i.e., 5.6% above the average level in the EU and close to that of the old EU countries.

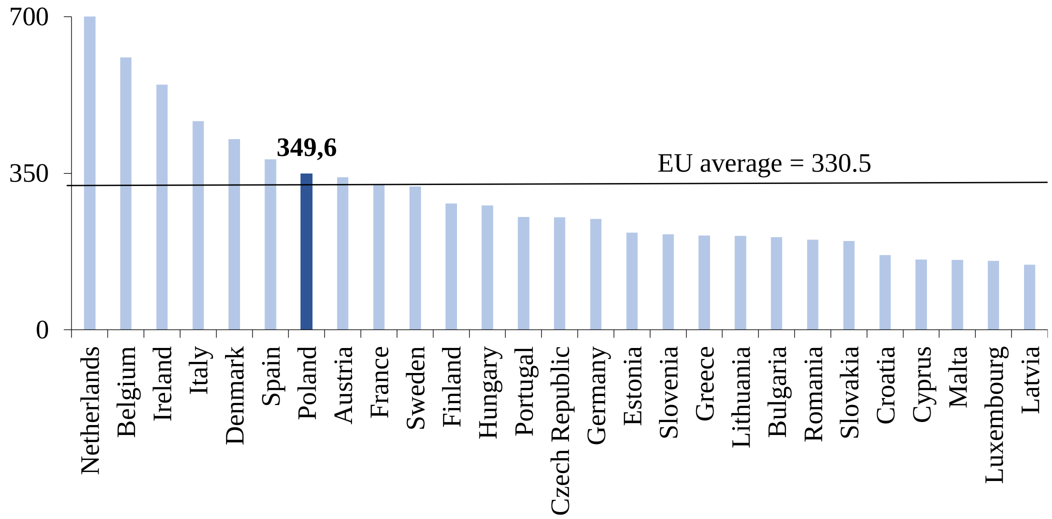
The gap in labour productivity between Poland and major food producers has narrowed. Labour productivity in this industry in Poland was lower than in the food industry of the two large EU food producers, Italy and Spain, but exceeded that of other major producers like Germany and France. More detailed research indicates that this phenomenon is due to the extremely high fragmentation in several food industries (i.e., bakery, wine, and spirits) in these two countries.

***Figure 3**. Share of Individual Member States in Employment in the EU Food Industry (Excluding Tobacco) in 2022 (in %)*



***Source:** Own compilation based on data from Eurostat Database.*

***Figure 4.** Labor Productivity in the Food Industry (Excluding the Tobacco Industry) of Individual EU Countries in 2022 (in Thousands of Euros/Employee)**



***Note:** *Measured by the value of output sold at comparable prices.*
***Source:** Own compilation based on data from Eurostat Database.*

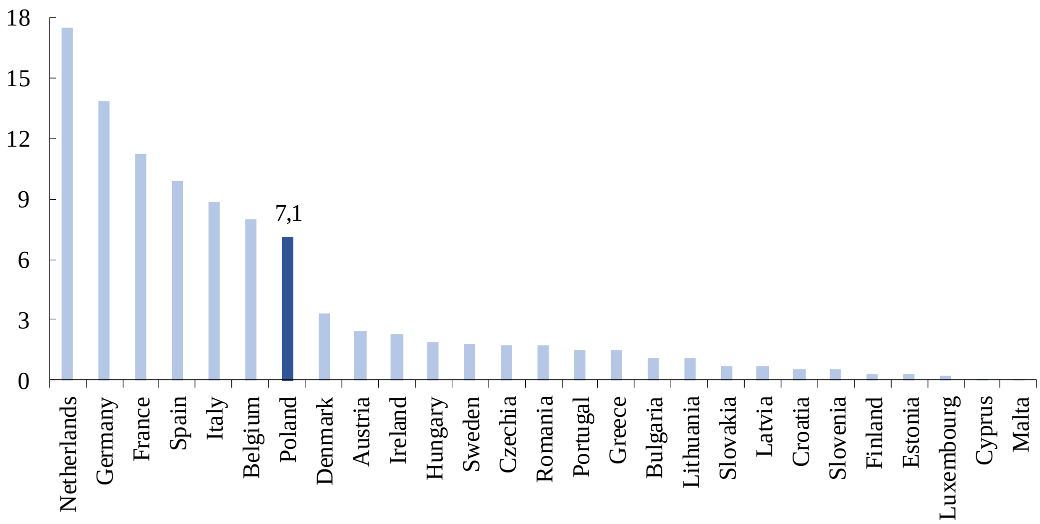
The position of the Polish food industry in the EU market during our EU membership is also evidenced by research results presented in the LEI Wageningen

UR Report—*Competitiveness of the EU Food Industry. Ex-post Assessment of Trade Performance Embedded in International Economic Theory* (Wijnands & Verhoog, 2016), where an ex-post assessment of competitiveness was made for ten selected EU countries, including Poland. This was done over two time periods using a synthetic competitiveness index calculated based on three economic indicators and two trade indicators.

The study found that Poland ranked seventh among the surveyed countries in the second research period (2008–2012). In this ranking, Poland fared less favourably than in classifications based on absolute values like production value, employment, or trade turnover, but its position was significant.

In 2023, Poland, with a share of 7.1%, occupied the seventh position among the largest EU exporters of agri-food products (Figure 5), up three places from 2004 (Szczepaniak and Drożdż, 2024). The Netherlands, Germany, and France remain the largest exporters among traditional member states, but their share declined slightly between 2004 and 2023 in favour of other EU countries (Szczepaniak *et al.*, 2022).

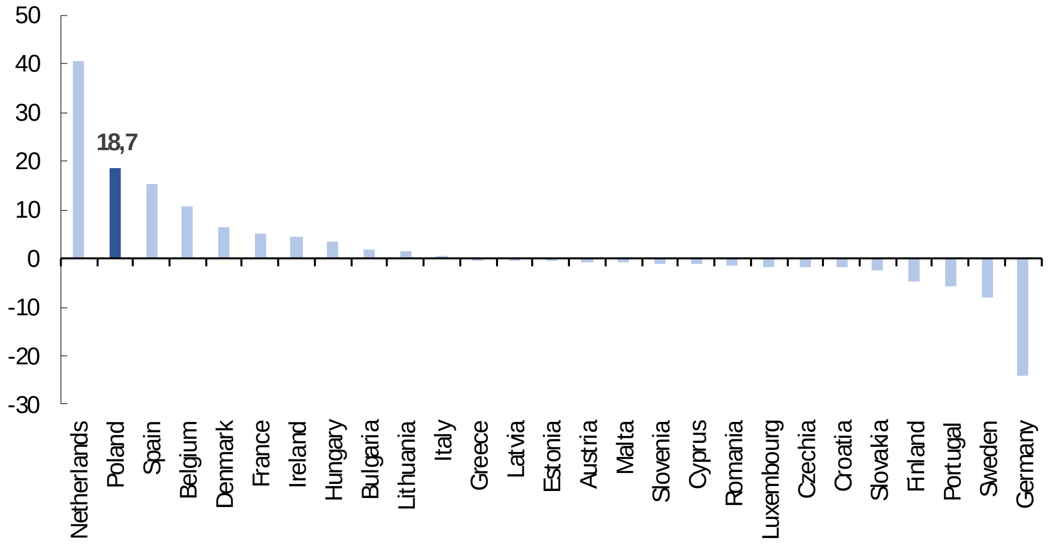
Figure 5. *Poland's Position in EU Agri-Food Trade in 2023*
Share in Exports (in %)



Source: *Own compilation based on data from Eurostat Database.*

Poland is also one of the leading net exporters of agri-food products in the EU. In 2023, Poland's trade balance reached €18.7 billion, giving it the second position among EU countries (Figure 6). Only the Netherlands achieved a higher agri-food trade surplus. In contrast, Germany, Sweden, and Portugal recorded the largest trade deficits.

Figure 6. *Trade balance in billion EUR.*



Source: *Own compilation based on data from Eurostat Database.*

4. Conclusions

The food industry in Poland is an important branch of the national economy, as evidenced by its contribution to GDP and its share in job creation. Integration with the EU has positively impacted the acceleration of production development in the Polish food industry and the growth of foreign trade in food products. Poland has strengthened its position among the EU's leading food producers, becoming a major food producer and an important exporter of food industry products.

The Polish food industry stands out compared to other EU countries. The process of reducing differences in the sector's development level between Poland and the EU-14 countries is progressing, resulting in the strengthening of Polish food producers' position in the Single European Market.

However, this would not be possible without achieving competitive advantages over producers from other EU countries. Food producers have strengthened their competitive position not only in the internal market but also internationally.

The entity structure formed in both the EU food industry and the sector in Poland corresponds to the needs of the developed European market. The results of the country-by-country analysis further indicate that the importance of the food sector in the economies of the new EU members was significantly higher than in the "old" EU countries. Such a high position of the Polish food industry in the EU means that Poland is an important food producer, and the distance separating it from the largest producers in terms of economic efficiency is systematically decreasing.

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