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DIFFERENTIATION OF FOOD PRICES BETWEEN EUROPEAN UNION COUNTRIES

Key words: prices, food, dispersion, convergence, European Union

ABSTRACT. Poland's accession to the European Union and the related opening of the Polish economy increased its dependence on global and regional phenomena. Domestic prices of food products began to be influenced by, among others, prices on external markets, mainly on the EU market. Phenomena characteristic of economic integration also occurred in other "new" Member States. The aim of the article is to present the differentiation of food prices between European Union countries, with particular emphasis on the process of convergence of prices, and to evaluate the competitive advantages of Polish producers on the EU food market. A comparative analysis of food prices was carried out for 27 EU Member States, additionally broken down into "old" and "new" EU Member States. The study covered the years 2010-2020. Eurostat data was the source of information. The method of descriptive and comparative statistics was used to evaluate the collected research material. As a result of the conducted analyzes, it was found that there is a large differentiation in food prices between individual countries of the European Union and the prices are clearly higher in "old" than "new" Member States. However, along with the progressing economic integration of individual markets with the EU market, there is a gradual alignment of domestic prices with EU prices. It was also shown that Polish food producers still had significant price advantages over competitors from other Member States. The ongoing process of food price convergence in the EU means, however, that they should actively seek new sources of competitive advantage.

INTRODUCTION

Today's markets are, to a greater or lesser extent, imperfect and geographically very large and often distant from each other. Market segmentation is also fostered by the existence of state borders, the existence of trade barriers, the operation of market regulation instruments and a lack of a single currency. The specificity of individual markets, resulting, for example, from historical or cultural conditions, is not without

significance. For this reason, there are various kinds of price differentiation. It is also not uncommon for individual companies to apply price differentiation strategies, i.e., to obtain additional profits, they set different prices for the same products sold on different markets. In a situation in which the markets represent individual countries or regions, we are dealing with international price differentiation [Szczepaniak 2014].

The phenomenon of price convergence (approximation) appears most often in the context of economic integration. It results from changes taking place on integrating markets, related to the removal of trade barriers, tax system harmonization, increased price transparency and a reduction of the exchange rate risk. Economic integration of markets should contribute to reducing price differences between the same products. A particularly strong convergence of prices in the integrated area occurs in the field of trade goods in sectors which, before integration, were characterized by high trade and non-trade barriers [Szczepaniak 2014]. Price unification is a source of benefits both for countries with high prices, where convergence causes lower prices (the benefits are then for consumers), and for countries with low prices, for which convergence means price increases (the benefits are for producers) [Wolszczak-Derlacz 2007].

The theoretical rationale for price convergence is based on the “law of one price”, which states that on a competitive market devoid of transport costs and no official trade barriers (such as customs duties), identical goods sold in two different countries must be sold at the same price if the prices in the countries are expressed in one currency [Krugman, Obstfeld 2007]. This law creates conditions for the movement of goods from countries where they are cheaper to countries where they are more expensive, but only until the prices of the goods in both countries align. Issues related to the “law of one price” can be found in papers by many economists, e.g., according to Marshall – the more ideal the market is, the stronger the tendency to pay the same price for the same good in different segments of the market, while according to Stigler – a market is an area in which prices of the same goods gradually equalize, after taking into account transport costs and various trade barriers [Wolszczak-Derlacz 2007]. This law applies both when the analyzed markets are part of one country and when they come from different countries or regions. If different currencies are in force in the countries, the law says that prices of the same goods after conversion into the same currency should be identical [Wolszczak-Derlacz 2008]. The basic assumptions underlying the “law of one price” approach on food markets is detailed by Nicholas Minot [2010]. By examining the role of European integration in relation to the prices of food products, he confirmed that this convergence occurs when price dispersion (differentiation) decreases over time.

Functioning within the single market of the European Union, where the free movement of goods, people, services and capital was ensured, also contributed to the convergence of prices, at the same time proving market effectiveness. One can risk stating that price

convergence has become one of the most synthetic measures of economic market integration. Prices of domestic products were increasingly determined by prices on the EU (including neighboring countries) and world markets, and not by changes in the domestic relations of supply and demand. On the other hand, the still existing – despite progressing convergence – price differentiation between individual EU countries confirms the continued segmentation of this market. This also applies to the food market.

The subject matter discussed in the article is part of a broader debate on the factors enabling Polish food producers to compete on foreign markets. Results of food price research on the EU market published in previous years [incl. Juchniewicz 2014, Szczepaniak 2014, Hamulczuk, Kufel-Gajda 2016, Świetlik 2018], considered cost-price factors to be among the most important such factors. The conducted analysis of the differentiation of food consumer prices between individual European Union countries also includes an assessment of the position of Poland among the countries, and, as a result, of the present and changing price competitive advantages of Polish producers on the EU market over the past decade, the last step in the food chain.

MATERIAL AND METHODOLOGY OF STUDIES

Due to the ease of quantification, food prices are a frequent subject of theoretical and applied research, undertaken especially in those countries where the economic system is based on the rules of the market economy [Świetlik 2018]. However, international price comparisons are complicated both in operational and technical terms. The correct selection of products, so that they are comparable, and their valuation face many problems. They result not only from the physical features of the products themselves, but also from different tastes of customers and their different positioning of products on the market [Wolszczak-Derlacz 2008]. The research methodology used in the analysis of price differentiation by Eurostat and the conducted price quotations of consumer goods and services¹ however, seem to be adequate material for assessing the differentiation of food prices in the European Union.

Therefore, this analysis uses data from Eurostat, which, through national statistical offices, cyclically examines and compares the prices of goods and services used in households in 37 countries, including the current 27 EU member states, Great Britain, 3 EFTA countries (Iceland, Norway and Switzerland), 5 EU candidate countries (Albania, Montenegro, North Macedonia, Serbia and Turkey) and Bosnia and Herzegovina [Kurkowiak 2011, 2013, Eurostat 2017, 2021].

¹ In its research, Eurostat identifies prices of food products and prices of final products, while, for example, the FAO uses prices of agricultural raw materials and prices of processed products for the construction of the food price index.

The comparative analysis in all 37 countries covers prices of around 440 comparable products. Covering such a large group of products allowed all countries to include, in the calculations, enough products reflecting the consumption patterns characteristic of these countries. For each country, Eurostat calculates the relative Price Level Index (PLI) for food, non-alcoholic beverages, alcoholic beverages, and tobacco², which make it possible to compare prices in individual countries in relation to the average level of food prices in the EU (in the latest study in relation to the average level of food prices among the EU-27 countries, without the UK). Values of relative price level indices are calculated considering the relation of the Purchasing Power Parity (PPP) and the official exchange rate of each country to Euros (in the case of countries outside the Euro area), which allows for the comparison of prices of the same food products in one common currency [Eurostat 2021]. A price level index higher than 100 means that in each country the prices of a given group of products are higher than the EU average, while an index lower than 100 indicates lower prices in each country than in the EU and, therefore, about a food producer's competitive price advantage from this country³.

To analyze the degree of price volatility of individual groups of food products in the EU, variation coefficients were used, as calculated for individual groups of food products. The coefficient of variation is a relative measure of variation, which is the ratio of the absolute measure of variation (average, standard or quarter deviation) to the mean, expressed as a percentage. It allows to evaluate a differentiation of two or more communities with respect to the same trait or a differentiation of the same community according to two or more different characteristics. The coefficient of price volatility of a given group of food products in this study was determined as the percentage ratio of the standard deviation of relative price indices and the average price index. Source data from Eurostat was used in the calculations.

² In the "food" group, there are also such subgroups of products as: cereals, processed cereals and bread; meat and meat products; fish and fish products; milk, milk products and eggs; oils and other fats; fruit, vegetables, potatoes, and products made of them and so-called other food (including sugar, sweets, ice cream and food concentrates). The group of non-alcoholic beverages includes mineral water, juices and fruit and vegetable drinks, carbonated drinks as well as coffee, tea and cocoa. Alcoholic beverages include both spirits, as well as wine and beer.

³ When comparing relative price levels in individual years, it must be remembered that they are indicators calculated for specific conditions in the years. The compared price levels do not characterize price changes, but only define proportions of prices between countries in each year. Moreover, the average price level in the EU in all years is 100, which does not mean that in absolute terms this value does not change. Some reservations may also be raised using aggregated data for price comparisons, as they may insufficiently overestimate the value of price dispersion because of the so-called aggregation error. In other words, the degree of price convergence depends on the degree of data aggregation, e.g., the price convergence of aggregated products and large price differences at a level of individual product groups (or vice versa) is possible. A detailed description of the methodology used by Eurostat is available at [http://ec.europa.eu/eurostat/cache/metadata/en/prc_ppp_esms.htm].

The higher the coefficient of variation, the greater the dispersion of prices in each group of products. On the other hand, the lower the coefficient of variation, the smaller the dispersion of prices around the average value (when it is 0%, prices are not differentiated at all).

The main aim of the study is to present the differentiation of food prices within the European Union. The objective of the considerations formulated in this way was subordinated to sub-objectives: depicting the process of convergence of food product prices in the EU and quantifying the degree of their volatility as well as assessing the competitive price advantages of Polish producers on the EU food consumer market. A comparative analysis of food prices was carried out for 27 EU Member States, additionally broken down into EU-14 countries ("old" Member States, now without Great Britain) and the EU-13 ("new" Member States). The period covered by the analysis is 2010-2020.

RESULTS OF THE STUDIES

Classifying European Union Member States according to the relative price level index of food and non-alcoholic beverages (the most important category among food products) indicates quite a large diversification of prices of products between individual countries. In 2020, the lowest value of this indicator was recorded in Romania (66%) and the highest in Denmark (129%). This means that a comparable basket of food and non-alcoholic beverages in Denmark was more expensive than the EU average by 29%, and in Romania it was cheaper than the EU average by 34%. Thus, prices of food and non-alcoholic beverages in Denmark were almost twice as high as in Romania (Figure 1).

The entire group of European Union countries, depending on the values of relative indices of price levels of food and non-alcoholic beverages, can be conventionally divided into four groups. Group I include countries where the price level is equal to or higher than the EU average by 20% ($PLI \geq 120\%$ of the EU average). This is a group of countries (Denmark, Luxembourg, Austria and Sweden) where prices of food and non-alcoholic beverages are the highest and, therefore, the least competitive on the EU market. In the second group of countries, the price level of food and non-alcoholic beverages is equal to or higher than the EU average, but less than 20% ($100\% \leq PLI < 120\%$ of the EU average). They are mostly "old" EU Member States (Finland, France, Belgium, Ireland, Italy, the Netherlands, Greece and Germany) as well as Malta and Cyprus. In these countries food prices do not also ensure a competitive advantage, but to a lesser extent than in the countries of group I. Group III countries achieve relative competitive price advantages (prices are at most 20% lower than the EU average), but they are not too high ($80\% \leq PLI < 100\%$ of the EU average). Most of the "new" Member States (Slovenia, Slovakia, Estonia, Latvia, Croatia, the Czech Republic, Lithuania, Bulgaria and Hungary) as well as Portugal and

Spain belong to this group. Group IV consists of countries where prices of food and non-alcoholic beverages are lower than the EU average by more than 20% (PLI < 80% of the EU average) and, therefore, it can be assumed that the prices are the most competitive. This group includes the remaining “new” Member States, i.e., Poland and Romania.

The analysis of relative price indices of food products shows that their prices in “new” EU Member States (EU-13) are much lower than in the “old” (EU-14), but the prices differ in both groups of countries. In 2020, among individual EU-14 countries, food was the most expensive in Denmark, Luxembourg, Austria and Sweden, and the cheapest in Spain and Portugal (Table 1). In Denmark, grain, processed grain and bread as well as fish were particularly expensive. Grain, processed grain and bread, fish and meat were also very expensive in Austria. Meat, milk, cheese, and eggs, as well as grain, processed grain and bread were the most expensive in Luxembourg. In Sweden, oils and fats, fruits, vegetables, and potatoes, as well as grain, processed grain and bread were expensive. Meat and meat preserves, as well as fish and fish preserves were the cheapest in Spain and Portugal. Soft drinks were the most expensive in Finland, Ireland and Denmark, alcoholic drinks – in Finland, Ireland and Sweden, and tobacco – in Ireland, France and Finland. On the other hand, non-alcoholic beverages were relatively cheapest in Italy and Spain, alcoholic beverages – in Spain and Germany, and tobacco – in Greece, Spain, Luxembourg, Austria and Italy.

In the EU-13, the highest food prices were recorded in Malta and Cyprus in 2020 (they were higher than the EU average) and this concerned most product groups, i.e., grain, processed grain and bread, milk, cheese and eggs, and oils and other fats (Table 1). In many countries (including Latvia, Slovakia, Lithuania, Bulgaria and Slovenia) prices of oils and other fats were also high, and in some countries also prices of milk, cheese and eggs. The lowest prices were recorded for food in Romania and Poland, as well as in Hungary and Bulgaria, and then in Lithuania and the Czech Republic. In Poland, the cheapest ones were meat and meat products, fish and fish products, milk, cheese, and eggs, as well as oils and other fats. In Romania the lowest prices were for cereals, processed cereals and bread, as well as fruit, vegetables, potatoes and preserves. Non-alcoholic beverages were the most expensive in Malta and Latvia, and alcoholic beverages – in Malta and Estonia. Soft drinks were the cheapest in Romania, Poland and Hungary, and alcoholic drinks – in Romania and Hungary. Tobacco was the most expensive in Malta and Cyprus, and the cheapest – in Bulgaria, Poland, and Croatia.

The study of relative food price indices in 2010 and 2020 (Figure 1) shows that despite their levels being closer between individual EU countries, changes in the indices were not large. More significant changes were only recorded in a few cases and did not have a major impact on relations between individual countries. This means that the relatively most expensive countries have, for years, belonged to the same group of countries, just as the cheapest countries have still belonged to the same group of countries. The level and

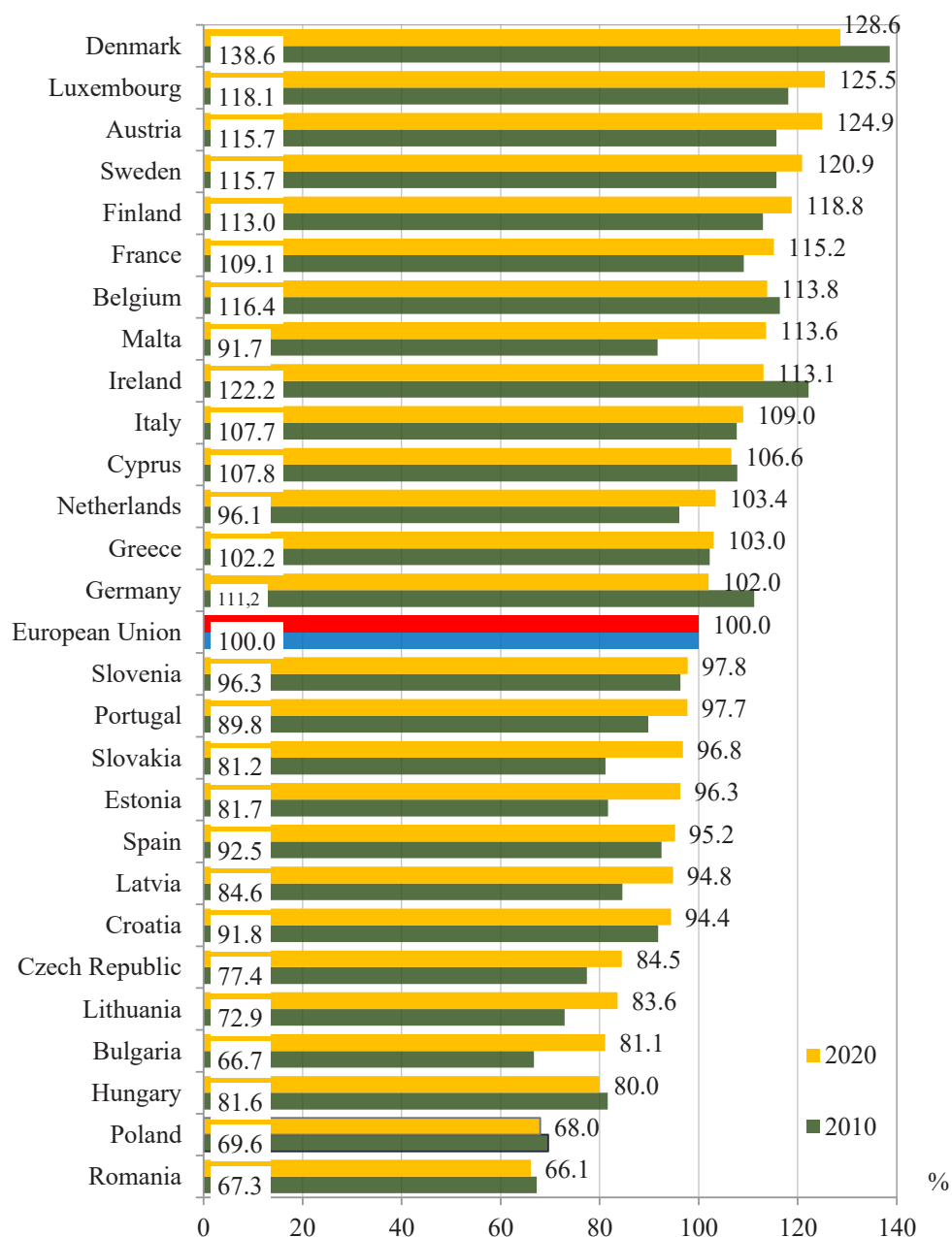


Figure 1. Price level indexes for food and non-alcoholic beverages in EU countries in the years 2010 and 2020 (EU-27 = 100)

Source: own study based on the Eurostat data

Table 1. Price level indexes for food, beverages and tobacco in the EU-27 in 2020 (EU-27 = 100)

Country	Food								Non- alcoholic beverages	Alcoholic bever- ages	Tobacco	Consumer goods and services in total
	total	including:										
		bread and cereals	meat and processing products	fish and processing products	milk, cheese and eggs	oils and fats	fruit, vegetables and potatoes	other food				
EU-14	EU-27 = 100											
Austria	126	135	146	146	109	125	120	115	116	107	90	115
Belgium	114	114	124	111	113	117	107	107	117	112	109	115
Denmark	129	153	120	125	117	114	114	164	129	127	117	141
Finland	118	127	121	106	116	99	123	115	132	193	136	126
France	117	111	130	117	101	116	131	108	103	101	175	114
Germany	102	102	108	126	96	97	103	97	102	91	109	108
Greece	102	117	90	115	134	111	86	131	116	137	80	86
Ireland	112	115	99	103	116	106	116	128	131	181	221	136
Italy	111	115	117	104	114	98	106	113	92	104	92	101
Luxembourg	127	127	141	118	132	125	118	120	118	107	86	136
Netherlands	103	92	129	105	106	100	100	93	104	104	126	117
Portugal	96	97	84	94	105	105	91	126	122	106	88	89
Spain	95	108	89	67	96	78	100	103	93	89	82	96
Sweden	121	126	122	112	115	128	127	124	117	156	114	130

EU-27 = 100

Table 1. Cont.

Country	Food						Non- alcoholic bever- ages	Alcoholic bever- ages	Tobacco	Consumer goods and services in total		
	total	including:										
		bread and cereals	meat and processing products	fish and processing products	milk, cheese and eggs	oils and fats					fruit, vegetables and potatoes	other food
EU-13	EU-27 = 100											
Bulgaria	80	67	70	71	102	116	74	94	96	81	50	56
Croatia	92	102	83	91	93	102	88	109	115	107	65	69
Cyprus	107	122	89	93	135	121	94	122	105	103	82	90
Czech Rep.	84	79	78	87	89	97	85	94	93	88	74	76
Estonia	96	91	80	101	89	110	100	106	105	119	76	84
Hungary	80	73	72	83	85	104	87	89	81	73	68	62
Latvia	93	91	79	88	103	126	91	115	118	115	71	77
Lithuania	82	85	72	76	90	117	76	94	107	100	70	69
Malta	112	116	95	98	123	133	115	131	128	119	93	88
Poland	67	70	61	66	68	82	71	68	81	87	59	58
Romania	65	56	62	69	92	98	57	73	79	74	76	55
Slovakia	96	95	85	105	101	119	97	104	111	95	66	88
Slovenia	98	104	101	89	102	111	91	100	94	96	69	87

Source: own study based on Eurostat data

differentiation of prices can, therefore, very likely be associated with the competitiveness of individual economies. Additionally, it can be argued that prices of consumer goods (including food) largely depend on the wealth of each society, which is expressed by GDP *per capita* in the purchasing power standard. This thesis is confirmed by the fact that prices in rich countries with a higher level of welfare are much higher than in countries with a lower level of welfare [Hamulczuk, Kufel-Gajda 2016, Szczepaniak 2019].

Prices of food products in Poland throughout the analyzed period (2010-2020) were much lower than in the European Union. This is indicated by the analysis of relative price indices of the products. In 2020, prices of food and non-alcoholic beverages in Poland were by 32.0% lower than the EU-27 average, of which food was cheaper by 33.1%, and non-alcoholic beverages by 19.2% (Table 2). Alcoholic beverages and tobacco cost 13.5% and 40.8% less, respectively. In the “food” group, the cheapest in Poland were meat and meat products (by 39.3%), fish and fish products (by 34.1%), milk, cheese, and eggs (by 32.1%) and grain, processed grain and bread (by 30.4%). The least competitive were the prices of oils and other fats (prices in Poland lower by 17.7%) and of fruit, vegetables, potatoes and preserves (by 29.0%). In the analyzed period, the price advantages of Polish suppliers on the EU food market usually decreased by a few percentage points (p.p.).

Table 2. Price level indexes for food, beverages and tobacco in Poland in the period of 2010-2020 (EU-27 = 100)

Specification	2010	2012	2014	2016	2018	2020
	EU-27 = 100					
Food and non-alcoholic beverages, including:	69.6	62.1	64.3	61.4	68.6	68.0
Food	68.5	60.3	62.8	60.0	67.1	66.9
– bread and cereals	64.1	58.4	60.7	58.8	67.7	69.6
– meat and processing products	59.9	55.2	55.7	53.3	62.0	60.7
– fish and processing products	72.6	68.7	65.6	62.3	66.4	65.9
– milk, cheese and eggs	67.2	62.6	66.5	63.8	70.7	67.9
– oils and fats	88.9	75.2	76.9	71.0	87.3	82.3
– fruit, vegetables and potatoes	79.8	56.2	65.3	60.9	67.9	71.0
– other food	75.5	72.2	68.7	67.3	70.2	68.4
Non-alcoholic beverages	81.9	82.5	81.2	77.1	84.1	80.8
Alcoholic beverages	98.2	99.2	93.5	88.7	89.8	86.5
Tobacco	63.1	62.8	68.1	65.8	65.1	59.2

Source: own study based on Eurostat data

Table 3. The variation coefficients of price level indexes for food, beverages and tobacco in the EU-27 in the period of 2010-2020

Specification	2010	2012	2014	2016	2018	2020
	%					
Food and non-alcoholic beverages, including:	19.5	19.4	19.6	20.1	16.9	16.6
Food	19.9	19.8	20.2	20.8	17.6	17.2
– bread and cereals	25.2	25.2	25.4	25.6	22.5	21.6
– meat and processing products	27.6	27.5	27.0	28.3	25.3	24.9
– fish and processing products	20.5	18.2	16.9	18.7	17.5	19.0
– milk, cheese and eggs	18.4	16.9	16.5	18.4	13.9	14.7
– oils and fats	14.6	15.7	13.9	14.3	10.7	12.3
– fruit, vegetables and potatoes	23.5	23.8	24.3	23.9	20.4	18.5
– other food	17.6	17.8	19.4	19.6	18.4	17.9
Non-alcoholic beverages	20.2	20.0	18.0	17.6	14.0	14.3
Alcoholic beverages	21.7	25.8	28.4	26.6	26.3	26.5
Tobacco	37.6	36.2	34.5	35.4	35.3	39.3

Source: own calculations based on Eurostat data

For at least a dozen or so years, a process of gradual equalization of prices of food products in the European Union has been observed. It was particularly clear in the first period after the enlargement of the European Union with “new” Member States [Szczepaniak 2014]. Currently, the process of price convergence in this group of products is much slower, and it has slowed down in some cases. However, an analysis of food prices in the EU in 2010-2020 shows that, in this period, there was a noticeable, albeit diversified, decline in the volatility coefficients of indexes of the relative price level of most products (Table 3), which confirms the further levelling of prices.

The price differentiation of all consumer goods and services in the European Union, measured by the coefficient of variability of relative price level indices, is greater than that of food, non-alcoholic and alcoholic beverages, but smaller than that of tobacco products (Figure 2). In 2010-2020, price equalization only took place in the group of “food” and non-alcoholic beverages (their prices were approximated by 2.7 and 5.9 p.p., respectively). In the group of alcoholic and tobacco beverages, as well as consumer goods and services, price dispersion on the EU market increased (by 4.8, 1.7 and 1.2 p.p.). Throughout the analyzed period, the price differentiation of food products on the EU market changed more than the price differentiation of all consumer goods and services.

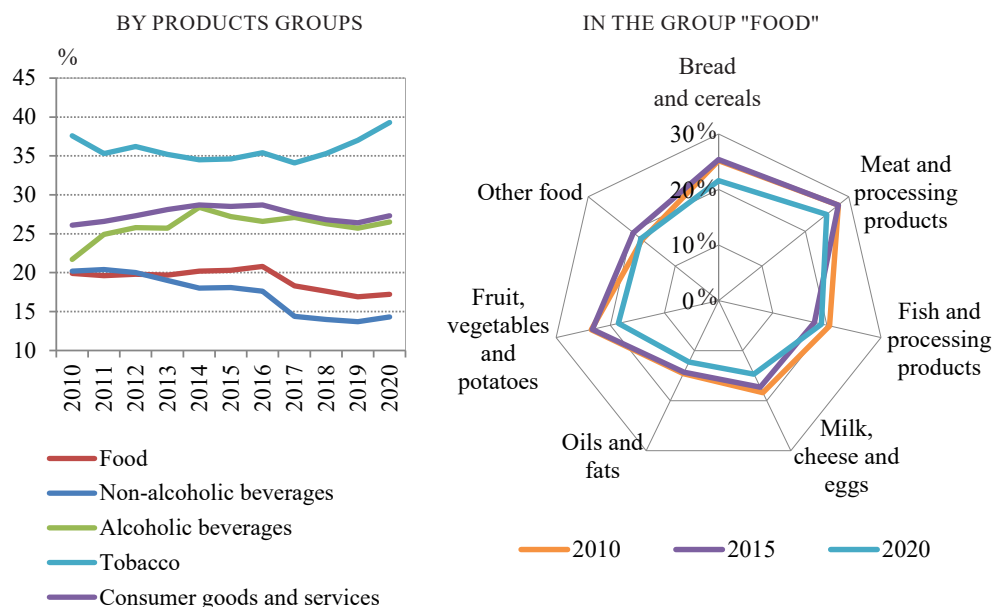


Figure 2. The variation coefficients of price level indexes in the EU-27 in the years 2010-2020
Source: own calculations based on Eurostat data

Among products belonging to the “food” group in 2010-2020, the price differentiation of fruit, vegetables, potatoes and processed goods (by 5.0 p.p.), grain, processed grain and bread (by 3, 6 p.p.), milk, cheese and eggs (by 3.7 p.p.) and meat and meat products (by 2.7 p.p.) has declined. The smallest dispersion of prices was noted in the group of oils and fats as well as milk, cheese and eggs, which were already relatively the least diversified in 2010 (Table 3, Figure 2). The process of food price equalization in the analyzed period was much weaker than immediately after EU enlargement with “new” Member States [Szczepaniak 2014].

CONCLUSIONS

Directions of changes in food prices on the global and EU markets are of great interest, as they determine the profitability of trade transactions and, as a result, international competitiveness at a micro, meso and macroeconomic level. The conducted empirical analyzes confirmed a large diversification of food prices between individual European Union countries, but, at the same time, showed that, in the last decade, this differentiation has decreased. The results of theoretical considerations lead to the conclusion that deeper

economic integration, the elimination of the exchange rate risk (due to a common currency in most countries) and the common monetary policy created by the European Central Bank were the reasons for a higher level of price convergence in the EU single market. Regulations under the Common Agricultural Policy were also significant.

A greater homogeneity of food prices in the “old” Member States confirms the positive impact of integration on the operation of the “law of one price” and the relatively low volatility of prices indicates limits of equalization. The future level of price convergence in EU countries will depend on the degree of convergence of prices in the “new” Member States to the EU average. However, one cannot expect a complete elimination of food price dispersion between EU countries. Regardless of the increase in the degree of economic integration, it results from large differences in the level of economic development, including the development of food markets, between individual countries.

The conducted empirical analyzes and theoretical considerations provide premises for a change in the perception of the determinants of international competitiveness. The equalization of food prices within the European Union means that cost-price advantages gradually cease to be the primary source of competitive advantages for producers from “new” Member States, including Poland. The ongoing food price convergence within the EU, thus, suggests a departure from price as the basic factor shaping the competitive position of economies and sectors. In terms of the economic integration of the markets of individual Member States with the single EU market, producers were forced to look for new sources of competitive advantage. This also applies to food producers from Poland, although, as the conducted research has shown, they still have clear price advantages over competitors from other Member States. It will not be possible to further strengthen competitive advantages on the EU market without a clear improvement in the efficiency of using the competitive potential of the agri-food sector, increasing innovation, or increasing the concentration of agricultural production and food processing.

BIBLIOGRAPHY

- Eurostat. 2017. *Comparative price levels for food, beverages and tobacco*. Statistics Explained, Data from June 2017. Most recent data: Further Eurostat information, Main tables and Database, <https://ec.europa.eu/eurostat/statisticsexplained/>, access: 05.08.2017.
- Eurostat. 2021. *Comparative price levels for food, beverages and tobacco*. Statistics Explained, Data from 22 June 2021, <https://ec.europa.eu/eurostat/statisticsexplained/>, access: 02.09.2021.

- Hamulczuk Mariusz, Justyna Kufel-Gajda. 2016. Ceny żywności w Polsce na tle cen w Unii Europejskiej. [W] *Ceny żywności w Polsce i ich determinanty* (Food prices in Poland against the background of the European Union. [In] Food prices in Poland and its determinants.), ed. Mariusz Hamulczuk, Seria Program Wieloletni 2015-2019, no 29, 88-114. Warszawa: IERiGŻ-PIB.
- Juchniewicz Małgorzata. 2014. Cenowe aspekty konkurencyjności sektora żywnościowego. [W] *Monitoring i ocena konkurencyjności polskich producentów żywności (5). Synteza* (Price aspects of the competitiveness of the food sector. [In] Monitoring and assessment of the competitiveness of food producers (5). Synthesis.), ed. Iwona Szczepaniak, Seria Program Wieloletni 2011-2014, no 115, 97-114. Warszawa: IERiGŻ-PIB.
- Krugman Paul R., Maurice Obstfeld. 2007. *Ekonomia międzynarodowa. Teoria i polityka* (International economics. Theory and politics). Vol. 2. Warszawa: PWN.
- Kurkowiak Barbara. 2011. Significant differences in consumer price across Europe. Comparative price levels in 37 European countries for 2010. *Statistics in Focus, Economy and Finance* 28: 1-8.
- Kurkowiak Barbara. 2013. Comparative price levels for food, beverages and tobacco. Significant differences in price level for food, beverages and tobacco across Europe in 2012. *Statistics in Focus, Economy and Finance* 15.
- Minot Nicholas. 2010. *Transmission of world food price changes to markets in Sub-Saharan Africa*. Report of a Study Funded by the Policy and Research Division of the Department for International Development (DfID) of the United Kingdom.
- Szczepaniak Iwona. 2014. Price advantages of Polish food producers in the European Union market. [In] *Assessment of the competitiveness of Polish food producers in the European Union*, ed. Iwona Szczepaniak, Series Multi-annual Programme 2011-2014, no 126.1, 102-115. Warszawa: IERiGŻ-PIB.
- Szczepaniak Iwona. 2019. Zróżnicowanie cen żywności między państwami Unii Europejskiej (Differentiation of food prices between the European Union countries). *Przemysł Spożywczy* 2 (73): 6-11. DOI: 10.15199/65.2019.2.2.
- Świątlik Krystyna. 2018. Światowe i krajowe ceny żywności w latach 2016-2017 (Global and domestic food prices during 2016-2017). *Problems of World Agriculture* 18 (2): 291-302. DOI: 10.22630/PRS.2018.18.2.56.
- Wolszczak-Derlacz Joanna. 2007. *Wspólna Europa, różne ceny – analiza procesów konwergencji*. (Common Europe, different prices – analysis of convergence processes.), Warszawa: CeDeWu Sp. z o.o.
- Wolszczak-Derlacz Joanna. 2008. Cenowa konkurencyjność w ujęciu międzynarodowym. [W] *Konkurencyjność. Poziom makro, mezo i mikro* (Price competitiveness in international terms. [In] Competitiveness. Macro, meso and micro levels.), ed. Nelly Daszkiewicz, 75-96. Warszawa: PWN.

ZRÓŻNICOWANIE CEN ŻYWNOŚCI MIĘDZY PAŃSTWAMI UNII EUROPEJSKIEJ

Słowa kluczowe: ceny, żywność, dyspersja, konwergencja, Unia Europejska

ABSTRAKT

Akcesja Polski do Unii Europejskiej i związane z tym otwarcie polskiej gospodarki zwiększyły jej zależność od zjawisk o charakterze globalnym i regionalnym. O krajowych cenach produktów żywnościowych zaczęły decydować między innymi ceny na rynkach zewnętrznych, w tym głównie na rynku unijnym. Zjawiska charakterystyczne dla integracji ekonomicznej występowały także w pozostałych „nowych” państwach członkowskich. Celem artykułu jest przedstawienie zróżnicowania cen żywności między państwami Unii Europejskiej, ze szczególnym uwzględnieniem procesu konwergencji tych cen, a także ocena cenowych przewag konkurencyjnych polskich producentów na unijnym rynku żywności. Analizę porównawczą cen produktów żywnościowych przeprowadzono dla 27 państw członkowskich UE, dodatkowo w podziale na „stare” i „nowe” państwa członkowskie UE. Badaniem objęto lata 2010-2020. Źródłem informacji były dane Eurostat. Do oceny zebranego materiału badawczego zastosowano metodę statystyki opisowej i porównawczej. W wyniku przeprowadzonych analiz stwierdzono, że między poszczególnymi państwami Unii Europejskiej występuje duże zróżnicowanie cen żywności, przy czym ceny te są wyraźnie wyższe w „starych” niż „nowych” państwach członkowskich. Wraz z postępującą integracją ekonomiczną poszczególnych rynków z rynkiem unijnym następuje jednak stopniowe wyrównywanie się cen krajowych z unijnymi cenami. Wykazano również, że polscy producenci żywności cały czas mieli znaczące przewagi cenowe nad konkurentami z pozostałych państw członkowskich. Postępujący proces konwergencji cen żywności w UE oznacza jednak, że powinni oni aktywnie poszukiwać nowych źródeł przewag konkurencyjnych.

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