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The Competitiveness of Agriculture in EU Member States According to the Competitiveness Pyramid Model

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Abstract: Agriculture in the European Union is highly differentiated, and one of the objectives of the Common Agricultural Policy is to improve agricultural competitiveness. Therefore, surveys regarding the competitiveness of agriculture and grouping countries of the European Union (EU) according to similar characteristics of agriculture are very valuable. They help make strategic decisions concerning the agricultural sector. This paper aims to evaluate the agricultural competitiveness of EU member states in 2010–2019. Data used is derived from the Eurostat and FADN (Farm Accountancy Data Network). The study employed a competitiveness pyramid model based on two groups of factors–competitiveness sources (bottom of the pyramid) and competitiveness effects. Partial components allocated to the groups mentioned above of factors were used to calculate a synthetic measure to determine the level of agricultural competitiveness in respective countries. The studies revealed that EU agriculture varies both in terms of resources and relationships between production factors, as well as the efficiency of their utilization. A clear difference in the level of competitiveness occurred between old and new member states, although some new countries ranked relatively high in terms of competitiveness sources (Czechia and Poland). Belgium scored highest for the synthetic measure of agricultural competitiveness in 2010–2019, and Cyprus had the lowest. It was demonstrated that human resources were of utmost importance in the structure of competitiveness sources. In turn, the average holding area determined the management conditions to the highest extent.

Keywords: agriculture; competitiveness; European Union; factor analysis

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1. Introduction

Agriculture is considered a strategic sector, although its impact on the macroeconomic indicators declines with the socio-economic development of countries. However, it still has many social, economic and environmental functions [1,2]. Agriculture contributes to generating national income, absorbs considerable workforce resources, gives shape to foreign trade, supplies food to the society and raw materials to industry, and fulfils essential environmental functions [3,4]. Therefore, in all countries, the competitiveness of this sector is significant both in relation to other sectors and other countries. In addition, globalization and the related liberalization of economic relations strengthen the meaning of competition [5].

The competitiveness of agriculture should be understood in the context of a sector defined by Porter [6] as an industry, branch of industry, specific area of economic activity, or group of firms manufacturing products that are close substitutes. Competitiveness was a term used regarding agriculture in scientific publications in the 1980s. Then, it mostly referred to the size of farms as well as benefits related to the scale of their operation. With time, agricultural competitiveness was associated with production systems, particularly with relationships between these systems and farm size, effectiveness and productivity.

The number of determinants of competitiveness in agriculture was regularly increased; these include economic, organizational, psychological and sociological factors [7].

A universal definition of competitiveness has not been developed yet, as it can be seen from more than one perspective [8–10]. According to OECD [11], competitiveness is the ability of companies, industries, regions, nations, or supranational entities to keep up with international competition and generate a relatively high return on the production factors and a relatively high level of employment on a sustainable basis. Another problem is finding the proper measures of competitiveness [12]. This area is still a challenge to researchers. Latruffe [8] classifies measures of agricultural competitiveness into those related to strategic management (e.g., production costs, profitability, productivity) and competitiveness ratios related to trade. Trade-related measures of competitiveness in this sector were used, among other researchers, by Ball et al. [13], who prepared a ranking of agriculture in 11 member states of the EU compared to the USA in 1973–2002. According to Wziątek-Kubiak [14], competitiveness is expressed by relative changes in productivity and by the market position. The European Commission [15] presented a similar stance underlining that productivity was the most reliable indicator of competitiveness in the long-term perspective. Measures that are frequently used in studies are Total Factor Productivity (TFP) indices taking into account total outputs and inputs in the process of production. The most popular are the Malmquist productivity index [16–18], Hicks-Moorsten productivity index [19] and Tornqvist index [20]. In turn, Józwiak [21] notes that studies concerning competitiveness need a transition from isolated indices that often poorly reflect the spectrum of conditions determining competitiveness to comprehensive approaches. Also, Łukiewska [22] underlines the deficiency of monographs evaluating competitiveness in synthetic terms, at the same time identifying the indicators and outcomes of competitiveness. One of the models used for describing competitiveness is the pyramid of competitiveness. This concept presents factors determining the level of competitiveness and proposes a systematic approach to their classification. This model was used in regional competitiveness studies by Gardiner et al. [23], Lengyel [24] and by Kołodziejczak and Kossowski [25]. This concept considers the relationship between sources of competitiveness (factors shaping competitiveness in the long run), growth factors (revealed competitiveness), and results including an increase in welfare. This study attempts to fill the research gap by using the competitiveness pyramid model adapted to the specific features of the agricultural sector, taking the aspect of international competitiveness into account.

The paper aims to evaluate the competitiveness of agriculture in the member states of the European Union using a synthetic measure based on the pyramid of competitiveness. The need for such studies is particularly significant as the level of agricultural development varies enormously between member states [26–29]. This is manifested in differences in agrarian structure, the level and structure of production, the relationship between production factors and their productivity. In addition, the differentiation of agriculture in the European Union increased at subsequent stages of EU expansion. For this reason, as Martinho [30] emphasizes, all surveys aiming to identify and describe agriculture, as well as group the countries according to similar characteristics of agriculture are very valuable.

2. Materials and Methods

Competitiveness is a complex research problem that has not been clearly defined and evaluated. Thus, many scientific papers relied on different types of measures that most frequently focused on a selected aspect of competitiveness. Designing a complex measure of agricultural competitiveness is a difficult task [31]. Zawalińska [32] underlines that an ideal measure of competitiveness does not exist. According to Kołodziejczak and Kossowski [25], the most comprehensive approach to this phenomenon is designing a complex competitiveness index.

This paper employed the competitiveness pyramid model, for which two groups of factors describing agricultural competitiveness were identified. The first group describes sources of competitiveness (SC), including human resources (HR), farming conditions (FC),

production methods, and capital outlays (CO). By contrast, the second group of factors refers to direct competitiveness effects. Kołodziejczak and Kossowski [25] identified similar factors concerning regional sources of competitiveness, direct competitiveness effects and target competitiveness effects. It was assumed that sources of competitiveness determine a certain potential (bottom of the pyramid). It is shaped by various factors regarding the resources and relationships between production factors. Thus, the variables taken into account by the study include labor, land and capital as production factors. Since it is not only the number of production factors but also their quality that matters to the economic results, variables related to farmers' age and education level were employed in the analysis. Only the potential determined as mentioned above allows achieving competitiveness effects that constituted the second group of factors adopted in the study. The results were evaluated by looking at the productivity indicators of production factors (land, labor and capital), the profitability of farms, share in gross value added of EU agriculture and share in EU food exports. A comprehensive assessment of the agricultural competitiveness of respective member states is possible when the variables evaluating both the potential (competitiveness sources) and competitiveness effects are considered.

This way, the advantage of the adopted method results, on the one hand, from a wide range of variables assessing agriculture; on the other hand, from a separate express of the potential and effects of competitiveness. Moreover, the method enables identifying countries that achieve low resulting competitiveness while having high potential competitiveness. The merit of the method is also the possibility of significantly reducing a large number of scrutinized indicators to a smaller number of mutually independent factors. New variables (factors) contain a relatively large amount of the information contained in the original variables, and at the same time, all of these new variables are carriers for different substantive content. Loadings of factors that describe the contribution of input variables to respective factors allow pointing variables that are particularly important for achieving competitive advantages.

Variables were allocated to respective groups of factors based on a literature review and data availability. The procedure for calculating the synthetic competitiveness index typically consists of several stages [33]. These are usually:

(1) developing a theoretical model for the analyzed problem,
(2) selecting normalized and standardized variables,
(3) grouping and assigning weights to indicators,
(4) calculating the values of the competitiveness index

The first stage refers to one of the competitiveness models. This paper uses the competitiveness pyramid model considering a wide range of variables, on the one hand, shaping the possibilities for competing (competitiveness sources), and on the other hand– the effects of competitiveness. The second step of the research procedure was the selection of indicators describing respective groups of factors. A list of these indicators is given in Table 1, with symbols from X1 to X18 assigned to them.

The indicators listed in Table 1 were averaged (in years) and then standardized using the formula:

$$Z_i(X) = \frac{X_i - \overline{X}}{S(X)} \quad (1)$$

where $S(X)$ denotes a standard deviation of X, and $\overline{X}$ is its arithmetic mean.

Since some indicators ($X1$, $X2$) were destimulants, they were changed into stimulants prior to standardization. This was done according to the formula:

$$X' = \frac{\max\limits_i X_i - X_i}{\max\limits_i X_i} \quad (2)$$

where $\max\limits_i X_i$ is the maximum value of X.

Table 1. Indicators used for evaluating the competitiveness of agriculture in EU countries.

Group of Factors		Variable
Sources of competitiveness (SC)	Human resources (HR)	X1–the percentage of agricultural workers [%]
		X2–workers per 100 ha of agricultural land [AWU/100 ha]
		X3–the percentage of farms where the manager has full agricultural training [%]
		X4–share of farm managers aged under 44 (%)
	Farming conditions (FC)	X5–share of UAA in the total area of the country (%)
		X6–share of ecological UAA in total UAA (total fully converted and under conversion to organic farming) (%)
		X7–average farm area [ha]
		X8–the average economic size of a farm (FADN)
	Capital outlays (CO)	X9–intermediate consumption per 1 ha UAA [EUR/ha]
		X10-gross investment per 1 ha UAA [EUR/ha] (FADN)
		X11–fixed assets per 1 ha UAA [EUR/ha] (FADN)
		X12–the percentage of UAA after land improvement [%]
Competitiveness effects (CE)		X13–land productivity (total production value per 1 ha UAA) [EUR/ha]
		X14–labor productivity (gross value added per 1 AWU) [EUR/AWU]
		X15–share in GVA of EU's agriculture (%)
		X16–capital productivity (production/total costs) [EUR]
		X17–share in EU food exports (Food, drinks and tobacco) [%]
		X18–farm income per 1 AWU [EUR/AWU] (FADN)

Note: AWU-Annual Work Unit; UAA-Utilised agricultural area; EUR-euro GVA-gross value added; FADN-Farm Accountancy Data Network; total intermediate consumption-total specific costs (including inputs produced by the holding) and production overheads in the accounting year. Source: Own elaboration.

At the following stage, weights were assigned to indicators employed for the study. For the purposes of this paper, it was assumed that respective variables were equally important. The introduction of weights that are usually subjective could make the outcomes of the study directly dependent on subjective decisions [34].

Linear relationships between the converted *Xi* indicators–that is *Zi*–and factors affecting the regional competitiveness of agriculture, were determined as follows:

$$HR = a_1Z_1 + a_2Z_2 + a_3Z_3 + a_4Z_4$$
$$FC = a_5Z_5 + a_6Z_6 + a_7Z_7 + a_8Z_8$$
$$CO = a_9Z_9 + a_{10}Z_{10} + a_{11}Z_{11} + a_{12}Z_{12}$$
$$SC = a_{13}HR + a_{14}FC + a_{15}CO$$
$$CE = a_{16}Z_{13} + a_{17}Z_{14} + a_{18}Z_{15} + a_{19}Z_{16} + a_{20}Z_{17} + a_{21}Z_{18}.$$

The values and weights a_j $(j = 1, \ldots, 21)$ of HR, FC, CO, SC and CE indicators were determined by factor analysis [35], which, through the aggregation of variables, guarantees a minimum loss of information on original X variables. Factor loadings were identified using the principal component analysis with Varimax rotation. Extraction was based on the correlation matrix for the first factor only. Variables with a low correlation coefficient (<0.3) and objects (countries) being outliers were eliminated from further studies. Bartlett's test of sphericity corroborated the reasonableness of applying multidimensional factor analysis to the analyzed data set [36].

The competitiveness index (CI) of agriculture was calculated for each country according to the formula:

$$CI_i = (SC_i + CE_i)\sqrt{2} \quad (3)$$

where: SC_i denotes sources of competitiveness of agriculture, and CE_i–competitiveness effects for this sector for *i*-th country.

Data used in the study derives from Eurostat and FADN (Farm Accountancy Data Network). The time range of the study was 2010–2019. The study involved 28 member states of the European Union, but ultimately, Malta-an outlier-was not included in the analysis. The United Kingdom was included in the study as in the years covered by the study, it was still a member of the EU. All calculations were made using the Statistica 13.1 package [37], and the results were represented as charts in Excel 365 (Microsoft Corporation, Redmond, WA, USA).

3. Results and Discussion

Table 2 presents descriptive statistics of variables adopted for determining the level of competitiveness of agriculture in the member states of the European Union. It also shows in which countries the specific variable assumed the minimum and the maximum value. The presented data implies that in the study years, the share in the GVA of EU's agriculture (X15), percentage of UAA after land improvement (X12), and share in EU food exports (X17) were the most variable indicators. The least variable feature was capital productivity (X16).

Table 2. Descriptive statistics of study variables.

Variable	Average	Min.	Min. (Country)	Max.	Max. (Country)	Standard Deviation	V (Variation Coefficient) [%]
X1	5.99	0.92	Luxembourg	27.09	Romania	5.72	96%
X2	7.61	1.70	United Kingdom	43.08	Malta	8.23	108%
X3	14.95	0.44	Romania	51.40	Luxembourg	12.88	86%
X4	21.95	10.24	Portugal	37.56	Poland	6.30	29%
X5	48.69	8.31	Finland	74.36	Denmark	15.11	31%
X6	7.30	0.28	Malta	20.98	Austria	5.13	70%
X7	33.77	1.05	Malta	142.70	Czechia	32.13	95%
X8	144.09	14.97	Romania	506.83	Netherlands	137.73	96%
X9	1666.95	456.90	Latvia	8709.02	Netherlands	1677.71	101%
X10	435.27	61.02	Romania	2054.53	Netherlands	422.91	97%
X11	12,147.13	1280.42	Slovakia	65,689.90	Malta	15,023.79	124%
X12	5.87	0.00	Ireland, Luxembourg	31.38	Malta	8.44	144%
X13	2779.68	585.04	Latvia	13,730.98	Netherlands	2845.46	102%
X14	23,550.82	4493.67	Latvia	124,709.91	Belgium	25,860.03	110%
X15	96.99	0.22	Malta	1696.20	Netherlands	314.13	324%
X16	1.08	0.76	Finland	1.52	Italy	0.17	16%
X17	3.57	0.05	Malta	15.80	Netherlands	4.55	128%
X18	13,111.35	1366.98	Slovakia	29,063.87	Belgium	7743.60	59%

Source: Own elaboration.

Since the variables X5, X6, X12 and X16 showed a low correlation with other indicators (correlation coefficient < 0.3), they were eliminated from further studies. The other fourteen parameters were used in factor analysis: sources of competitiveness (SC) were elaborated for indicators X1–X11 (except X5 and X6), and competitiveness effects (CE) for variables X13–X18 (excluding X16). Table 3 contains own values determined for groups of factors and percentage of the explained variance calculated by principal component analysis.

Table 3. Extraction sum of squared loadings in 2010–2019.

Factor	Extraction Sum of Squared Loadings	
	Own Value	Accounting for Variance (%)
HR	2.12	53.1
FC	1.64	81.9
CO	2.75	91.5
SC	1.49	49.7
CE	3.24	64.9

Source: Own elaboration.

The presented data shows that capital outlays (CO) had the highest share in explaining the variance of original variables (more than 91%), whereas the source of competitiveness (SC)-the lowest (49.7%). The human resources (HR) factor explained more than 53% of the variance of input variables, farming conditions (FC)-as much as 82% of the information contained in input indicators, and competitiveness effects (CE)-nearly 65%. Thus, only one factor-sources of competitiveness (SC)-accounted for slightly less than 50% of the variance of original variables, and for CO and FC initial data compression was very efficient. In all the cases, the values of the factors were higher than 1 (Table 3).

Table 4 compares factor loadings identified by principal component analysis. They are simultaneously coefficients of correlation between input variables and factors. This implies that the first factor (human resources) shows the highest loading for X4 (share of farm managers aged under 44) and X3 (percentage of farms where the operator has full agricultural training). These variables describe the quality of human capital shaped by the level of education and by age and experience. Experience is particularly significant in agriculture, where specific features of production processes are due to their links to natural conditions. Many scientific monographs underline the significance of human capital in agriculture [38–40]. They imply that human resources directly influence agriculture productivity due to how farmers utilize and combine outlays. Human resources also impact the adaptability of new technologies to the needs of farms. Farming conditions (FC) are most strongly correlated with X7 (average area of holding of a farm). Authors, such as Delvaux at al. [41] observed a strong relationship between a farm's land resources and its economic performance. A variable with the highest contribution to the third factor (CO) is X9 (intermediate consumption per 1 ha UAA), although the other two variables: X11 (fixed assets per 1 ha UAA) and X10 (gross investment per 1 ha UAA) are also very strongly correlated with CO. The variable X9 describes production intensity and expresses the level of costs incurred per 1 ha UAA. Many scientific papers described the impact of capital outlays and investments. It was emphasized that these factors determine the size of agricultural production and technical efficiency [42,43]. Studies by Pawlak et al. [29] indicate that in most of the countries, making the EU-13, capital outlays per farm worker are lower on average than in the whole EU. However, the impact of this factor on the competitiveness of agriculture or farms has not been sufficiently explored. As regards the structure of the sources of competitiveness (SC), human resources (HR) are the most significant. The last of the analyzed factors (CE) in the first place conveys information contained in the input variables: X18, X14. The significance of labor productivity in agriculture and the related need for convergence in the European Union was mentioned in many scientific papers [28,44]. According to Csaki and Jambor [45], differences in that respect between old and new EU member states are due to specific farming production conditions, historical conditions and production models.

Table 4. Structure of factors in 2010–2019.

HR Factor		FC Factor		CO Factor		SC Factor		CE Factor	
X1	0.022	X7	0.941	X9	−0.974	ZL	0.912	X13	0.405
X2	0.399	X8	0.340	X10	−0.937	WG	0.655	X14	0.882
X3	0.771			X11	−0.958	NK	0.006	X15	0.103
X4	0.930							X17	0.601
								X18	0.898

Source: Own elaboration.

The next stage of the study was determining the competitiveness index (CI) of agriculture in 2010–2019. The results are presented in Table 5.

Table 5. Level of the regional competitiveness index (CI) of agriculture and values of its main factors in EU member states in 2010–2019.

No.	Country	SC	CE	CI
1	Austria	1.292	0.362	2.339
2	Belgium	−0.149	3.183	4.291
3	Bulgaria	−0.392	−0.976	−1.934
4	Croatia	−1.181	−0.932	−2.987
5	Cyprus	−1.968	−0.698	−3.770
6	Czechia	2.325	−0.594	2.448
7	Denmark	−0.181	1.330	1.626
8	Estonia	0.637	−0.643	−0.008
9	Finland	0.564	0.036	0.849
10	France	1.157	1.110	3.206
11	Germany	0.717	1.017	2.453
12	Greece	−0.685	−0.460	−1.619
13	Hungary	−0.875	−0.604	−2.093
14	Ireland	0.518	0.292	1.145
15	Italy	−1.152	0.639	−0.726
16	Latvia	0.173	−0.854	−0.963
17	Lithuania	−0.303	−0.731	−1.463
18	Luxembourg	1.590	1.023	3.695
19	Netherlands	−0.171	0.468	0.419
20	Poland	1.322	−0.732	0.834
21	Portugal	−1.500	−0.518	−2.855
22	Romania	−0.345	−0.966	−1.854
23	Slovakia	0.065	−1.137	−1.516
24	Slovenia	−0.617	−1.006	−2.296
25	Spain	−0.888	0.701	−0.264
26	Sweden	−0.168	−0.010	−0.252
27	United Kingdom	0.216	0.699	1.294

Source: Own elaboration.

The highest level of the synthetic measure of agricultural competitiveness in 2010–2019 was recorded for Belgium (above 4), and the lowest for Cyprus (−3.77). The former was the result of the highest index describing competitiveness effects (3.183). Looking at the index describing sources of competitiveness, Belgium ranked only 13th (−0.149). Cyprus ranked 19th according to CE (−0.698) and last according to SC (−1.967). It is worth noting that Czechia featured the highest SC (2.325) but ranked 16th from the point of view of CE (−0.594). Luxembourg, France, Germany, and Austria have a high synthetic index value. Countries with a low level of competitiveness are Croatia, Hungary, Portugal and Slovenia.

At the next stage of the study, a ranking of countries was developed in terms of the competitiveness of agriculture based on the synthetic competitiveness index (CI). This ranking shows how the level of competitiveness increases with the increase in the value of the synthetic index. It is presented in Figure 1.

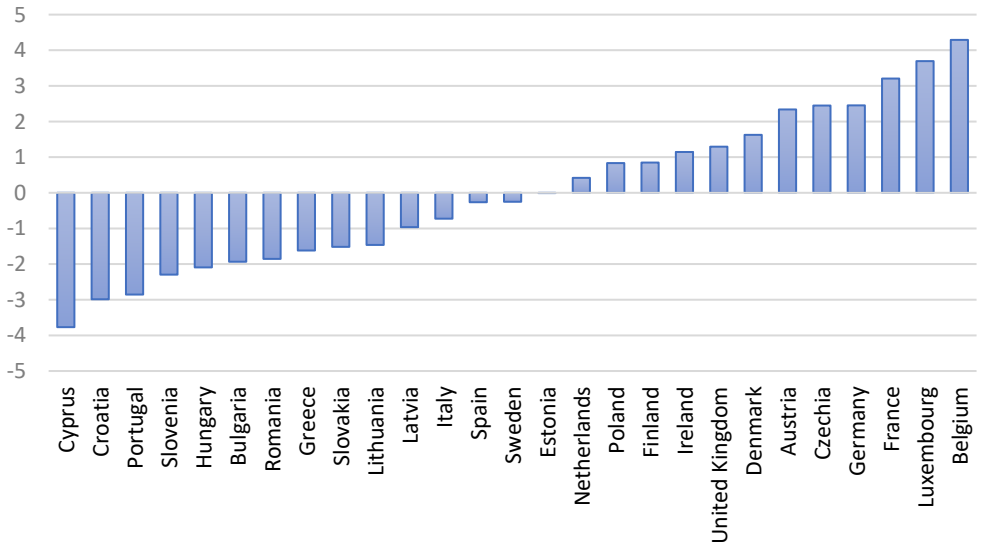

Figure 1. Ranking of EU member states according to competitiveness index (CI) of agriculture in 2010–2019.

Figure 2 illustrates the position of EU member states on the plane delimited by SC (sources of competitiveness) and CE (competitiveness effects).

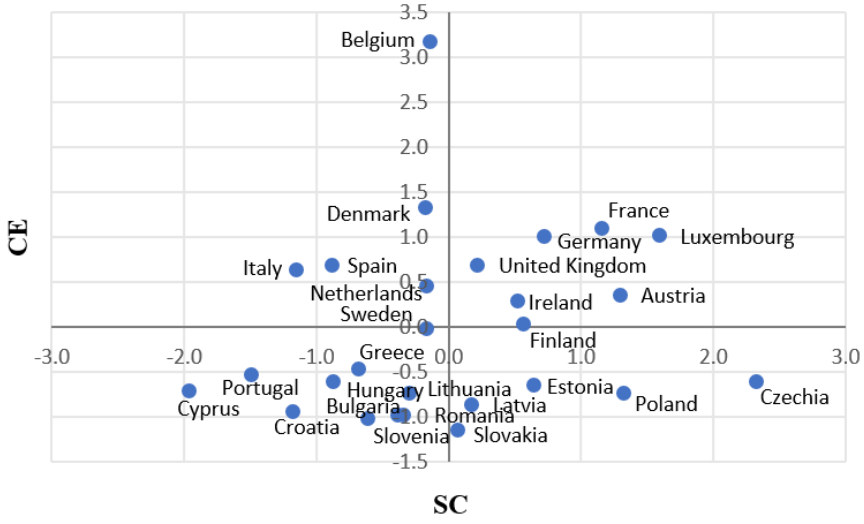

Figure 2. The position of EU member states on the plane delimited by SC (sources of competitiveness) and CE (competitiveness effects).

Figure 2 shows that some countries have high agricultural potential, but at the same time, their index of competitiveness effects is low. It points to the ineffective usage of agricultural resources and to potential options of improving the competitiveness of these countries. Variations in the production potential of agriculture in member states of the European Union were mentioned by many authors [29,46,47]. This potential, in a sense, defines the sources of competitiveness. This study analyses the sources of competitiveness from the perspective of three groups of factors, which allowed a deeper analysis of the impact of respective resources and relationships between them on competitiveness. Countries with a high index reflecting sources of competitiveness and relatively lower effects of competition are Czechia, Poland, Estonia, Latvia and Slovakia. Their competitiveness effect index was a negative value. This is probably a result of socio-economic and historical conditions. Csaki and Jambor [45] demonstrated that the political system's transformation and accession to the European Union greatly influenced the present agriculture situation in Central and Eastern Europe. Belgium should be mentioned in connection with its high competitiveness effects and a negative index referring to the sources of competitiveness. A similar relationship was observed in Denmark. These countries featured very high land productivity that in 2010–2019 was nearly three and two times higher, respectively than on average in the EU. Disparities in labor productivity between the countries mentioned above and its average level in the whole EU were even higher. Gołaś [44] noted that in 2005–2016 Denmark and Belgium, in addition to the Netherlands, had the highest labor productivity among EU member states. The competitiveness is also considerably worse in new member states than in the so-called old EU-15. Pawlak et al. [29] underline that the most important determinants of international competitiveness of the agricultural sector are the quality, structure and efficient utilization of production resources. In countries admitted to the EU in 2004 and later, most indicators describing competitiveness effects were lower than in the EU-15.

4. Conclusions

The interest in the competitiveness of agriculture is due to its significance to the economies of EU member states and the challenges this sector faces. This paper is an assessment of the competitiveness of agriculture in EU member states using the 'pyramid of competitiveness' model. The study contributes to studies on the competitiveness of agriculture in three ways. Firstly, it uses a synthetic measure contrary to many studies analyzing competitiveness from the perspective of single indicators. Multidimensional models have a decisive advantage over single indicators since they allow a more comprehensive treatment of the problem, considering various aspects and an aggregated assessment of competitiveness. Secondly, the analysis involves 27 member states (Malta was finally excluded from the analysis due to deviations in the values of the examined features), which allowed comparing old and new members of the EU. Thirdly, the competitiveness pyramid model, based on a multidimensional factor analysis, allowed evaluating the impact of respective partial factors on the overall competitiveness of agriculture. Based on factor loadings identified by the principal component analysis, it was established which variables determined respective components of competitiveness to the greatest extent.

On the one hand, this allowed designing a synthetic measure of competitiveness, and on the other hand, a separate analysis of sources and effects of competitiveness. The studies revealed that EU agriculture varies both in terms of resources and relationships between production factors and the efficiency of their utilization. A clear difference in the level of competitiveness was observed between old and new member states, although some of them ranked relatively high in terms of sources of competitiveness. This points to a possibility of improving the competitiveness of this sector. It was demonstrated that human resources were of utmost importance in the structure of the sources of competitiveness. In turn, farming conditions were most strongly determined by the average farm area. This leads to the conclusion that structural transformations should be continued in most new member states. Competitiveness effects were determined to a great extent by labor productivity,

which corroborates the need for more dynamic convergence processes. Instruments of the common agricultural policy and cohesion policy are highly significant in this respect. CAP is a policy subject to continuous reforms as a result of the changing internal conditions in the Commonwealth and dynamic global transformations. One of its objectives was to improve the competitiveness of agriculture. Currently, further reorientation of the EU policy towards increased care for the natural environment and climate can be observed. Thus, we should consider the potential consequences for leveling differences in the level of development and competitiveness of EU agriculture as well as the international competitiveness of EU agriculture. On the other hand, however, efficient use of cohesion policy instruments should continue contributing to reducing disparities in the development level and improving the competitiveness level, especially in the least developed countries and regions. Particular attention should be paid to countries with a high competitive potential (sources) and simultaneously having relatively low competitiveness effects. This notably refers to new member states. Most of these countries feature structural issues and excessive employment levels in agriculture. Thus, to improve the competitiveness of agriculture, attention should be paid to aligning structural policy instruments to the needs of respective member states. One of the main objectives of the European Union's structural policy is to reduce disparities in development between member states and their regions. At the same time, it is worth noting that this policy is not only pursued at the EU but also at the national level.

This paper is subject to certain methodological limitations, which can establish the directions for future surveys. Firstly, the subject of analysis is the agricultural sector in respective EU countries. Considering the differences in agriculture, it would be advisable to examine the competitiveness for more uniform groups of countries, e.g., delineated according to the level of their socio-economic development. Secondly, such an analysis would allow assessing the impact of public policies in the EU on reducing differences in agricultural competitiveness between member states.

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