

Production Resources and Competitive Position of Food Industry in EU Countries

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Abstract

Research problem presented in the article was about interaction between production resources of food industry in EU countries and the level of their competitiveness. Production resources was evaluated on the basis of number of subjects and hired people in food industry enterprises. The measurement of effectiveness of their usage was made by productivity indexes. The competitive position was evaluated on the basis on evaluation of resulting measures of foreign trade situation, which is relative share in export of one's country food producers among other countries in EU market. There were no statistical dependences between measurements of production potential and its competitive position of food industry stated. Comparison of classification of EU countries among the indicators allowed to form conclusions about dependence between analyzed factors. The biggest impact on the share of export market within food products, has effectiveness of usage of labor factor. The level of this indicator along with low production potential within food industry of evaluated countries, causes that their share in export market is rather irrelevant.

Keywords: production resources, competitive position, competitiveness, food industry

Introduction

Processes of market globalization and dynamic extension of IT and communication technologies causes enlargement of scale and intensity of competitiveness. Talar (2011, p. 19) points out that it is the result among other of: increase of the number of present and potential competitors, presence and expansion of international corporations, wider range of possible substitutions, increase of barriers of enter, difficulties in analyzing the competitors and appearance of new competitive strategies. One the macroeconomic level – sectors, branches, regions – there are in accordance to Yip (2004, p.43) four groups of factors inducing to globalization and internationalization. They are :

- market factors for example: assimilation to other styles of life and tastes, increase of regional and global distribution networks, appearance of global brands, development of global advertisement,
- cost factors: endeavor for getting the scale benefits, acceleration of the pace of technological innovations, progress in transportation, appearance of new-industrialized countries,
- governmental factors: removal of tariff barriers, occurrence of market unions and monetary ones, increase in institutionalization of world trade,
- competitive factors: increase in turnover of world trade, interdependence of branches and countries,

Gorynia, Jankowska and Tarka (2011, s.42) highlight that the enter in the new markets and transformation of company character from local to international causes more profits and minimalization of the risk of profits loss. Similar tendencies relate to food industry, which has an important place in EU economy. The present processes of integration and regulation in EU market contribute to the fact of economical, technological and institutional factors in which enterprises are functioning and compete are more and more similar. On the other hand, different parameters of various countries, among many which are: natural factors or the level of economic development allow to compete and grow of the following enterprises in varied ways. Johnson and Others (2011, p.270) shows

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that among other, countries are characterized by competitiveness in some of the areas of activities, and huge part in creation of international advantages have by the thought of Hollensen (2007, p.98) national conditions. Important research problem in this context is evaluation of causes of differentiation of competition and competitiveness based on resource advantage (Hunt and Morgan, 1995, p.8), in which the meaning of competition on manufacturing factors. Resources in these theories are widely considered as all material and immaterial goods which allows the effective and efficient production of market offer showing some of the value in the market. In this article the focus was on the production potential which (in accordance to the theory of scale benefits of production and market) relates to the growth of production numbers inside the enterprise and growth of production quantity of whole branch, and therefore among others: reduction of unit costs, growth of labor efficiency, ability to installation of new machines and betterment of production technology. Budnikowski (2006, p.101) and Misala (2009, p.120) highlight that the scale benefits may result from the possibilities of usage of cheaper services and goods from suppliers. The attention was turned not only on the level of production potential but also the effectiveness of its usage. Such assumption is used in many empirical elaborations by the evaluation of competitive potential of sectors (Wijnands and Others 2008, p.427, Mroczek and Tereszczuk, 2013, p.p.52-57, Łukiewska and Juchniewicz, 2016, p.p.156-163, Wijnands and Verhoog, 2016, p.23). Competitiveness of food industry were evaluated by comparison of abilities of gaining and holding the market shares of food industry in various countries of EU. Such approach refers to various theories of international exchange (Kim and Marion, 1995, p.5, Martin and Others, 1991, p.1456, Fischer and Schornberg, 2007, p.475, Heckscher, 1919, p.p.497-512, Ohlin, 1933, p.p.1-617) in which competitiveness is interpreted by prism of results of international trade. Aim of this elaboration was the evaluation of level and effectiveness of usage of productivity potential in food industry (identified on the national level of EU countries aggregation) in comparison to competitiveness on EU market. The following research thesis was accepted: *between production potential of food industry in given country of EU and its competitive position there is positive dependence.*

Methodological assumptions of research

production potential of sector may be considered by use of many indicators. In this article the most common indicators were used, mainly: number of subjects involved in food articles production and involvement in its labor resources. Effectiveness of usage of production potential of food industry was measured on the basis of measurement of partial productivity (Latruffe, 2010, p.18). It was calculated by following formula:

$$P = \frac{Q}{N}$$

where:

P – productivity,

Q – production value

N – edition.

Both level of production and its expenditures may be stated with use of many various economical categories. Level of production on the sector level may be evaluated by added value or value of sold production (*Measuring productivity...* 2001, p.13). Expenditures are commonly measured by the number of hired (or labor costs) and the level of other production factors. In article partial productivity was calculated on the basis of sold production value for one hired person and economic subject.

For measurement of competitive position of food industry, the result measurements of situation in foreign trade were used. One of the basic quantity indicators allowing to evaluate the international competitive position of

branch is share in export (*export market share, EMS*). It was calculated in accordance to formula (Banterle, 2005, p.3):

$$EMS = \frac{E_{Fi}}{E_{FW}}$$

where:

E_{Fi} – export of food products of the country i on intra-EU market,

E_{FW} – export of food products of the EU-28 countries on intra-EU market.

This indicator presents the percentage share of export of one country in all the export of examined group of countries of one market. The higher level of this indicator is, the more share in export of one country and better competitive position on EU market.

Level of production potential and competitive position of food industry in various EU countries was evaluated by usage of two parameters of taxonomy meter: arithmetic average (\bar{x}) and standard deviation (S). Countries were divided into four typological groups (Wysocki and Lira 2003, p.173): arithmetic average (\bar{x}) and standard deviation (S) of accepted indicators. They were divided in four groups of: countries of high level of diagnostic variable: $x \geq \bar{x} + S$, countries of average level of diagnostic average: $\bar{x} + S > x \geq \bar{x}$, countries of low level of diagnostic average: $\bar{x} > x \geq \bar{x} - S$, countries of very low level diagnostic average: $x < \bar{x} - S$.

Changes in production resources of food industry in EU countries and effectiveness of its usage were specified in years 2005, 2010 and 2015. For calculations data form Eurostat was used. Dependence between production potential and competitive position was measured using Pearson correlation coefficient.

Potential and scale of production of food industry

Production resources of food industry in UE countries, identified by the number of subjects involved in production of food articles and involvement in it labor resources were diverse. There is clear concentration in some of the countries. Takin into consideration the number of enterprises of food industry, total share of three biggest countries (Italy, France and Germany) was in 2015 51,7% (table 1). Average level of number of economic subjects producing food was in Spain, Greece, Poland and in Portugal. Share of these countries in the number of enterprises in the number of enterprises of food industry was over two times lower than the formerly mentioned. It is worth to highlight yet, that totally it was about 74,1% of subjects producing food in EU. The number of enterprises in other countries within EU was relatively small.

Considering the changes in the number of enterprises in analyzed years, general tendency of slight but systematical decrease of numbers was noted. In layout of each member state this phenomenon was inhomogeneous. The biggest reduction of number of subjects producing food was in Romania, Spain, Poland and in Denmark. It is possible to point also the countries in which the number of food industry enterprises increased. It was above all: Ireland, Slovenia, Lithuania, Malta and Czech Republic. Presented changes did not affected in significant way on the rank of the countries.

Table 1. Number of enterprises of food industry in EU countries

No	Specification	Year			Percentage share in 2015	Level in 2015	Total percentage share in 2015
		2005	2010	2015			
1	Italy	59 563	54 349	54 349	20,62	high	51,7
2	France	61 966	57 098	54 113	20,54		
3	Germany	30 864	30 710	27 699	10,51		
4	Spain	25 085	23 471	21 524	8,17	medium	22,4
5	Greece	-	15 325	14 423	5,47		
6	Poland	16 050	13 641	13 934	5,29		
7	Portugal	10 124	9 428	9 224	3,50		
8	Romania	9 801	7 861	8 149	3,09	low	25,9
9	United Kingdom	-	6 385	7 496	2,84		
10	Czech Republic	5 633	6 508	7 410	2,81		
11	Belgium	-	7 373	6 467	2,45		
12	Netherlands	4 496	4 356	5 615	2,13		
13	Bulgaria	5 168	4 714	5 285	2,01		
14	Hungary	4 462	4 326	4 561	1,73		
15	Sweden	3 249	3 329	3 734	1,42		
16	Austria	3 830	3 558	3 521	1,34		
17	Croatia	-	2 851	2 760	1,05		
18	Slovakia	-	2 615	2 237	0,85		
19	Slovenia	782	1 079	2 065	0,78		
20	Finland	1 753	1 650	1 640	0,62		
21	Lithuania	1 320	1 117	1 513	0,57		
22	Denmark	1 700	1 498	1 477	0,56		
23	Ireland	536	1 269	1 464	0,56		
24	Latvia	719	735	1 001	0,38		
25	Cyprus	881	789	812	0,31		
26	Estonia	409	358	552	0,21		
27	Malta	-	402	361	0,14		
28	Luxembourg	162	139	127	0,05		

Source: Own calculation based on data from Eurostat, Structural Business Statistics (27.07.2017 r.)

Important component of production resources of sector is also the number of hired employees (table 2). Level of employment and its effectiveness of usage is affects directly the productivity of labor which is the major

determinant of competitive potential, and as a result the competitiveness of economic subjects (Porter, 2001, p.101).

Table 2. Number of hired in enterprises of food industry within EU (people)

No	Specification	Year			Percentage share in 2015	Level in 2015	Total percentage share in 2015
		2005	2010	2015			
1	Germany	-	799 314	785 041	19,1	high	61,4
2	France	563 611	576 600	576 600	14,1		
3	Poland	399 024	396 635	392 734	9,6		
4	Italy	387 024	393 810	389 736	9,5		
5	United Kingdom	-	381 022	373 983	9,1	medium	11,4
6	Spain	343 577	322 560	305 373	7,4		
7	Romania	173 961	162 904	161 953	3,9		
8	Netherlands	115 683	120 449	121 904	3,0	low	27,2
9	Czech Republic	117 844	102 884	100 230	2,4		
10	Hungary	106 245	89 649	93 107	2,3		
11	Portugal	94 503	96 270	92 337	2,3		
12	Bulgaria	89 235	87 603	82 341	2,0		
13	Belgium	86 231	85 566	80 302	2,0		
14	Greece	-	84 276	80 100	2,0		
15	Austria	67 249	68 901	74 187	1,8		
16	Denmark	83 304	53 389	57 571	1,4		
17	Sweden	61 362	59 466	56 933	1,4		
18	Croatia	-	57 328	54 000	1,3		
19	Ireland	38 850	38 853	43 254	1,1		
20	Lithuania	47 158	38 975	40 516	1,0		
21	Finland	33 069	34 418	36 527	0,9		
22	Slovakia	-	37 343	34 290	0,8		
23	Latvia	31 569	23 164	21 275	0,5		
24	Slovenia	18 234	14 694	14 870	0,4		
25	Estonia	15 375	12 366	13 845	0,3		
26	Cyprus	10 477	11 243	10 477	0,3		
27	Luxembourg	-	4 346	5 096	0,1		
28	Malta	-	-	2 745	0,1		

Source: Own calculation based on data from Eurostat, Structural Business Statistics (27.07.2017 r.)

The highest places in rank of the number of employed people were taken by countries having the biggest number of subject which were: Germany, France and Italy. High level of employment rate was noted in Poland and in Great Britain. Level of involvement of production resources in these countries were 2 times lower than in Germany and similar to Italy. In listed countries there were totally in 2015 61,4% people working in production of food materials in EU. It is worth to mention that Great Britain was on the 5th place in the rank of employment with the relative low number of enterprises (9th position in rank). Consequently, in Great Britain for one enterprise of food industry there was the biggest among all other countries number of employed people (in 2015 it was 49,9 people). Definitely changed situation characterized food industry in Italy. There was hired average of 7 people. In Germany and Poland for one subject producing food there were average number of 8,3 employed and in France it was about 10,7. Significant expenditures of labor were involved in Spain and Romania. As a consequence, in countries of high and medium level of employment rate, total share of employed people in food industry of EU was in 2015 72,8%. Similar as in the number of enterprises, it was observed gradual reduction of employment in food industry of EU in most of the member countries. The biggest reduction of employment was noted in Latvia, Denmark and in Czech Republic. Relative significant growth of workload was in Ireland, Finland and Austria. Presented changes did not affect substantially on the position of countries in the rank of employment and on measured production potential of member states. Level of resources involved in food industry of EU countries and proper use of it should be reflected in gained results of production. The most common result of economic process is value of sold production. Share of EU countries in formation of sector and as well in the number of subjects and employment was clearly diversified (table 3).



Table 3. Value of sold production of enterprises of food industry in EU countries (million euro)

No	Specification	Year			Percentage share in 2015	Level in 2015	Total percentage share in 2015
		2005	2010	2015			
1	Germany	117 950,8	135 678,8	148 213,1	17,2	high	66,2
2	France	116 018,6	122 490,7	134 251,8	15,6		
3	Italy	82 758,6	96 306,4	109 064,4	12,7		
4	United Kingdom	-	78 341,1	98 211,4	11,4		
5	Spain	67 347,1	74 097,4	80 231,8	9,3		
6	Netherlands	38 985,7	46 884,2	58 167,4	6,8	medium	11,8
7	Poland	25 831,8	34 499,1	43 523,5	5,1		
8	Belgium	24 878,9	33 498,7	38 515,1	4,5	low	21,0
9	Ireland	16 376,2	19 007,4	23 288,1	2,7		
10	Denmark	16 772,3	16 789,3	20 847,2	2,4		
11	Austria	9 977,3	12 090,5	15 124,4	1,8		
12	Sweden	11 664,6	12 954,4	14 576,6	1,7		
13	Portugal	8 582,9	9 836,1	10 794,8	1,3		
14	Greece	-	10 622,2	10 230,6	1,2		
15	Finland	6 886,9	8 120,9	9 319,1	1,1		
16	Czech Republic	8 274,8	9 133,2	9 299,0	1,1		
17	Romania	4 798,7	6 513,8	8 609,6	1,0		
18	Hungary	6 877,9	7 045,1	8 508,9	1,0		
19	Bulgaria	1 875,5	3 188,3	3 841,1	0,4		
20	Croatia	-	3 569,8	3 579,8	0,4		
21	Lithuania	1 768,5	2 539,0	3 019,3	0,4		
22	Slovakia	-	2 537,7	2 793,2	0,3		
23	Slovenia	1 425,6	1 485,0	1 614,7	0,2		
24	Estonia	792,5	1 005,6	1 392,5	0,2		
25	Latvia	997,2	1 200,7	1 378,9	0,2		
26	Cyprus	887,8	1 155,8	1 134,6	0,1		
27	Luxembourg	-	489,3	597,8	0,1		
28	Malta	-	-	353,6	0,0		

Source: Own calculation based on data from Eurostat, Structural Business Statistics (27.07.2017 r.)

Biggest makers of food articles were Germany, France and Italy. To the group of countries of high level of sold production value they were also Great Britain and Spain. Total share of listed countries un union production was

in 2015 on the level of 66,2%. It was the consequence of big involvement formerly mentioned countries in food industry of these countries. Group of countries of medium level of value of sold production was created by countries such as: Netherlands and Poland. In spite of Poland such position can be connected with possessed production resources, but in spite of Netherlands such convergence is not present. Country of big production resource of food industry and low production value is Romania. Explanation of such differences may be result of effectiveness of usage of possessed resources which will be taken into consideration in further part of the elaboration.

In all Eu countries there was noted the systematic growth of sold production value, although the pace of changes was different. The biggest increase of sold production value was in Bulgaria, Romania, Estonia and in Poland. Changes which followed in value of sold production and in employment and number of enterprises did not caused significant changes in places they got in ranking.

Effectiveness of usage of production resources in food industry

Effectiveness of usage of possessed by subjects resources is man source of their competitiveness. Conducted research indicates that disproportions between indicators of productivity of labor was present between groups of countries of so called "old" and "new" EU (table 4). Leaders in efficiency of usage of labor resources was Ireland, Belgium, Netherlands and Denmark. Earlier research (Juchniewicz and Łukiewska, 2014, p.63) shows that in these countries there was noted the biggest gross investment outlays on property, plant equipment calculated on hired person. It was the factor increasing the abilities of manufacturing of food producers within these countries.

Another group was made by countries of medium level of productivity of labor. It was the countries of EU – 15 such as: Italy, Spain, Great Britain, Sweden, Finland, France, Austria and Germany. It is worth to mention that among them there are countries with biggest production resources, measured by number of subjects, food producers and the number of employed. Especially unfavorable situation in this area was noted in Germany where productivity of labor was almost 3 times lower than in Ireland. In countries of low level of productivity of labor such difference was even bigger (almost 5 times in comparison to the leaders). Definitely lowest level of productivity of labor in food industry was noted in Romania and Bulgaria. In accordance to the countries of highest level of this indicator, it was almost 10 times smaller. Low level of productivity of labor in Poland and Romania, which are countries of big production resources involved in food industry indicates the need to improve this factor of production as a necessary criterion of improving the competitiveness of these countries on EU market. Juchniewicz and Łukiewska (2016, p.65) highlight that it is "compensated" by the lower level of payment of involved factors of production. Positive phenomenon in this context is almost 2 times correction of indicator of labor productivity in 2015 in comparison to base year. Significant growth of productivity of labor was noted also in other Baltic States and in Denmark. Correction of labor productivity in listed countries was the result of bigger sold production, which was done in terms of lowering the unemployment.

Table 4. Productivity of food industry in EU countries (thousand euro / hired person)

No.	Specification	Year			Level in 2015	Average productivity in 2015
		2005	2010	2015		
1	Ireland	422	489	538	high	464
2	Belgium	289	391	480		
3	Netherlands	337	389	477		
4	Denmark	201	314	362		
5	Italy	214	245	280	medium	243
6	Spain	196	230	263		
7	United Kingdom	-	206	263		
8	Sweden	190	218	256		
9	Finland	208	236	255		
10	France	206	212	233		
11	Austria	148	175	204		
12	Germany	-	170	189		
13	Malta	-	-	129	low	99
14	Greece	-	126	128		
15	Luxembourg	-	113	117		
16	Portugal	91	102	117		
17	Poland	65	87	111		
18	Slovenia	78	101	109		
19	Cyprus	85	103	108		
20	Estonia	52	81	101		
21	Czech Republic	70	89	93		
22	Hungary	65	79	91		
23	Slovakia	-	68	81		
24	Lithuania	38	65	75		
25	Croatia	-	62	66		
26	Latvia	32	52	65		
27	Romania	28	40	53	very low	50
28	Bulgaria	21	36	47		

Source: Own calculation based on data from Eurostat, Structural Business Statistics (27.07.2017 r.)

Ranking of the countries, when taking into consideration the value of food industry attributable for subject, has not changed significantly (table 5). In group of countries of high level of productivity there were again countries such as: Ireland, Netherlands and Denmark. It is possible to state on this basis that independently of chosen measurement of productivity, they are using their resources at the best way. High level of productivity was noted as well In Great Britain. It is worth to mention as well, that only in Denmark the correction of productivity was the result of reduction in analyzed years the number of subjects in food industry. In other countries number of enterprises of food industry was getting bigger (in Ireland almost 2 times). Pace of the growth of production was bigger, what caused the correction in effectiveness of owned resources.

Among the groups of countries, it was noted again significant differences in productivity. They were shaped on similar level as in case of labor productivity. Positive symptom was decrease of differences of productivity (measured by value of production per hired person and as on subject) of food industry of EU countries in reference to the old EU member states. It does not change the situation that they are significant, though.

Table 5. Productivity of food industry in EU countries (million euro/subject)

No	Specification	Year			Level in 2015	Average productivity in 2015
		2005	2010	2015		
1	Ireland	30.55	14.98	15.91	high	13,37
2	Denmark	9.87	11.21	14.11		
3	United Kingdom	-	12.27	13.10		
4	Netherlands	8.67	10.76	10.36		
5	Belgium	-	4.54	5.96	medium	5,20
6	Finland	3.93	4.92	5.68		
7	Germany	3.82	4.42	5.35		
8	Luxembourg	-	3.52	4.71		
9	Austria	2.61	3.40	4.30		
10	Sweden	3.59	3.89	3.90	low	1,77
11	Spain	2.68	3.16	3.73		
12	Poland	1.61	2.53	3.12		
13	Estonia	1.94	2.81	2.52		
14	France	1.87	2.15	2.48		
15	Italy	1.39	1.77	2.01		
16	Lithuania	1.34	2.27	2.00		
17	Hungary	1.54	1.63	1.87		
18	Cyprus	1.01	1.46	1.40		
19	Latvia	1.39	1.63	1.38		
20	Croatia	-	1.25	1.30		
21	Czech Republic	1.47	1.40	1.25		
22	Slovakia	-	0.97	1.25		
23	Portugal	0.85	1.04	1.17		
24	Romania	0.49	0.83	1.06		
25	Malta	-	-	0.98		
26	Slovenia	1.82	1.38	0.78		
27	Bulgaria	0.36	0.68	0.73		
28	Greece	-	0.69	0.71		

Source: Own calculation based on data from Eurostat, Structural Business Statistics (27.07.2017 r.)

Interactions between production potential and competitive position of food industry

There was significant dispersion of countries in spite of accepted indicator of competitive position of food industry. Level of measured quartiles indicates that 25% of countries reached the share in EU export on the level of 0,36% or less, half of countries on the level of 1,52% or less and in 75% of EU member states the share in EU export was 4,51% or less. The highest share in union export of food products was in Netherlands, Germany, Spain, France and Belgium (table 6). The first two countries in 2015 had totally 33,44% of EU export and the first five countries had 62,46%. To the countries of medium level of competitive position, the following can be counted: Italy, Poland and Great Britain. Their share in export of food industry on EU market was 16,56%. It indicates on the phenomenon of export concentration within the range of food industry. Almost 80% of its value is cumulated within eight countries. Among countries of marginal significance of export market were: Malta and Cyprus. In analyzed years there were noted some changes of share of each country in the export of food industry within the whole union market but they were not significant to the places countries had in rank. Especially big growth of share in EU export market was noted in Romania and Bulgaria. Significant correction in this range was noted also in Poland, Slovenia and Latvia. Enterprises of food industry of those countries used, occurring after their accession to EU, possibilities of production placement on foreign markets.



Table 6. Level and changes in share in EU export of food industry of EU member states (%)

No.	Specification	Year			Level in 2015	Total percentage share in 2015
		2005	2010	2015		
1	Netherlands	18.22	18.40	17.56	high	62,46
2	Germany	15.47	15.95	15.88		
3	Spain	9.88	9.70	10.18		
4	France	12.64	10.96	9.68		
5	Belgium	10.64	9.50	9.18		
6	Italy	7.06	7.09	6.74	medium	16,56
7	Poland	2.90	4.03	5.70		
8	United Kingdom	4.41	4.15	4.12		
9	Denmark	4.93	4.09	3.31	low	20,98
10	Ireland	2.98	2.46	2.54		
11	Austria	2.24	2.34	2.30		
12	Sweden	1.41	1.78	1.97		
13	Hungary	1.21	1.82	1.96		
14	Czech Republic	1.05	1.27	1.76		
15	Greece	1.41	1.29	1.28		
16	Portugal	0.79	0.97	1.10		
17	Lithuania	0.44	0.61	0.76		
18	Slovakia	0.55	0.75	0.76		
19	Romania	0.18	0.59	0.72		
20	Bulgaria	0.24	0.61	0.64		
21	Slovenia	0.19	0.38	0.37		
22	Latvia	0.17	0.28	0.34		
23	Luxembourg	0.28	0.29	0.33		
24	Finland	0.29	0.25	0.29		
25	Croatia	0.19	0.16	0.24		
26	Estonia	0.15	0.20	0.24		
27	Cyprus	0.06	0.06	0.06		
28	Malta	0.01	0.01	0.01		

Source: Own calculation based on data from Eurostat, Structural Business Statistics (27.07.2017 r.)

Conducted analysis did not show any statistical relevant dependences between production resources of food industry and its effectiveness of usage and the level of competitiveness of this sector and effectiveness of its usage and the level of competitiveness of this sector in each country (figure 1). This is due to the fact that on the level of competitiveness many factors have impact at the same time. Biggest dependencies were noted between the share in export market and employment rate. Differences in productivity of labor caused that gained results

in foreign trade were different. Comparison of EU countries among used indicators allows to form general conclusions about interactions taking place between analyzed variables

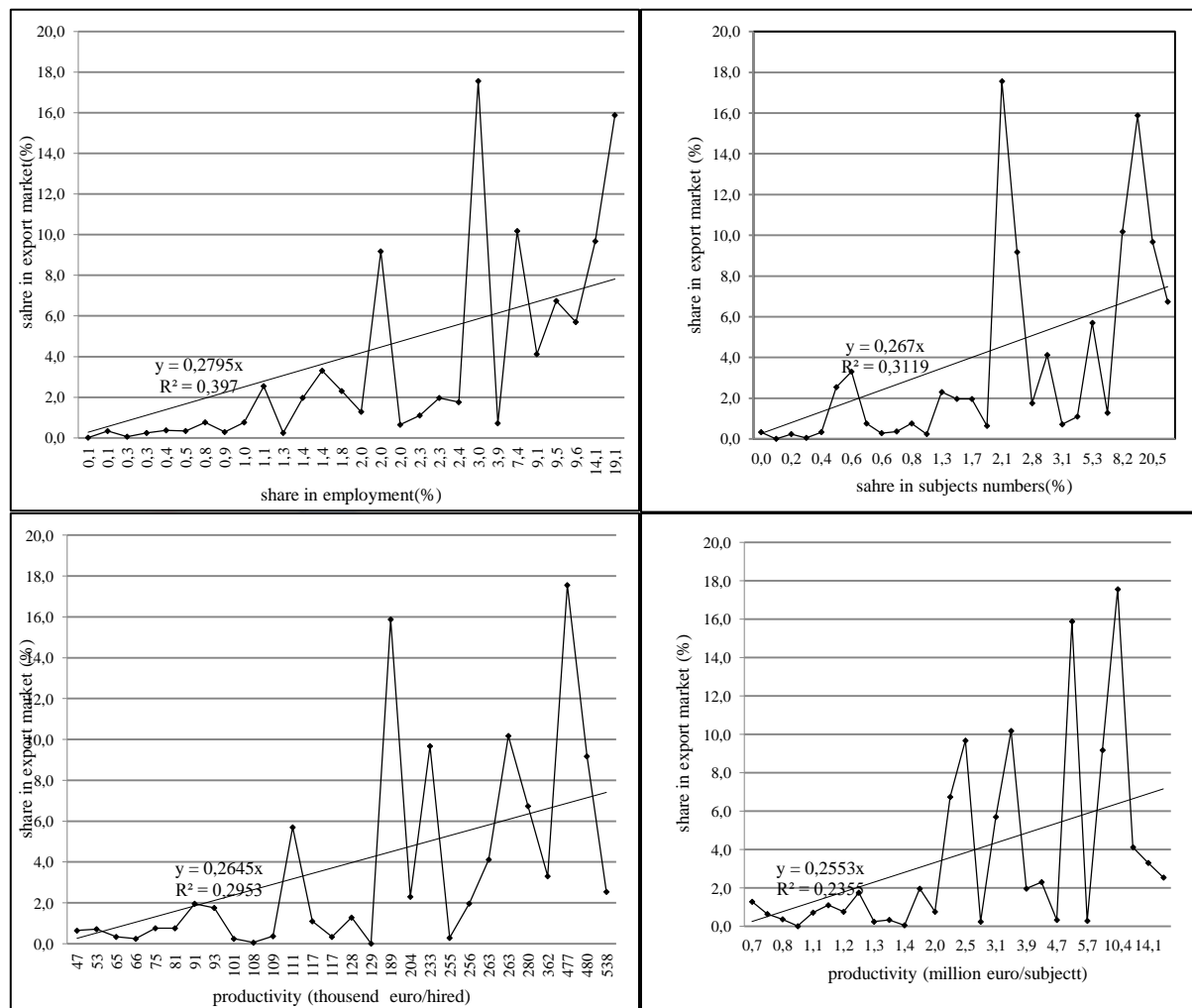


Figure 1. Dependencies between production resources and effectiveness of its usage and competitive position of food industry of EU countries in 2015

Source: Own study based on tables 1-6

In Germany and France, the main source of competitiveness of food industry is scale of production, resulting from number of employed and the number of subjects. Productivity of involved labor resources was similar to the average of EU (figure 2). Another group of countries were Spain, Italy and Great Britain. Average level of production resources and average productivity of labor caused that they were in the group of countries of significant share in EU export market. Poland was among countries with one of the biggest indicators of involvement of labor resources in EU food industry. Low productivity of labor caused that this country did not use fully its potential abilities of expansion to other foreign markets. Different situation was noted in countries characterized in high level of effectiveness of usage of their production resources. Productivity of labor was main determinant, of the highest rank of EU member states, the position of Netherlands. Similar situation was also within Belgium and Denmark. Low production potential of food industry in these countries was

compensated by high effectiveness of their usage what allowed them to export on EU markets. In this context it is necessary to point the other factors responsible for the level and changes in international competitiveness of sector, which was the size of domestic and foreign demand. Arora and Gambardella (1996, p.22) and Dlugosch, Freitag and Kruger (1996, p.56) points out that high domestic demand (present in Netherlands, Belgium, Denmark – countries of low and medium sizes of domestic markets) requires sending some of the production for export. In this situation the size of demand from the side of foreign consumers gains much meaning. This is due to the fact of present theories of foreign trade (among others big share of intra-trade within EU member states). It is accentuated in them that possibilities of export to the foreign markets are determined by its size. Ghose and Kharas (1993, pp.377-398) highlight also that the higher import growth rate of foreign than growth rate of domestic demand may cause the growth of production directed to export.

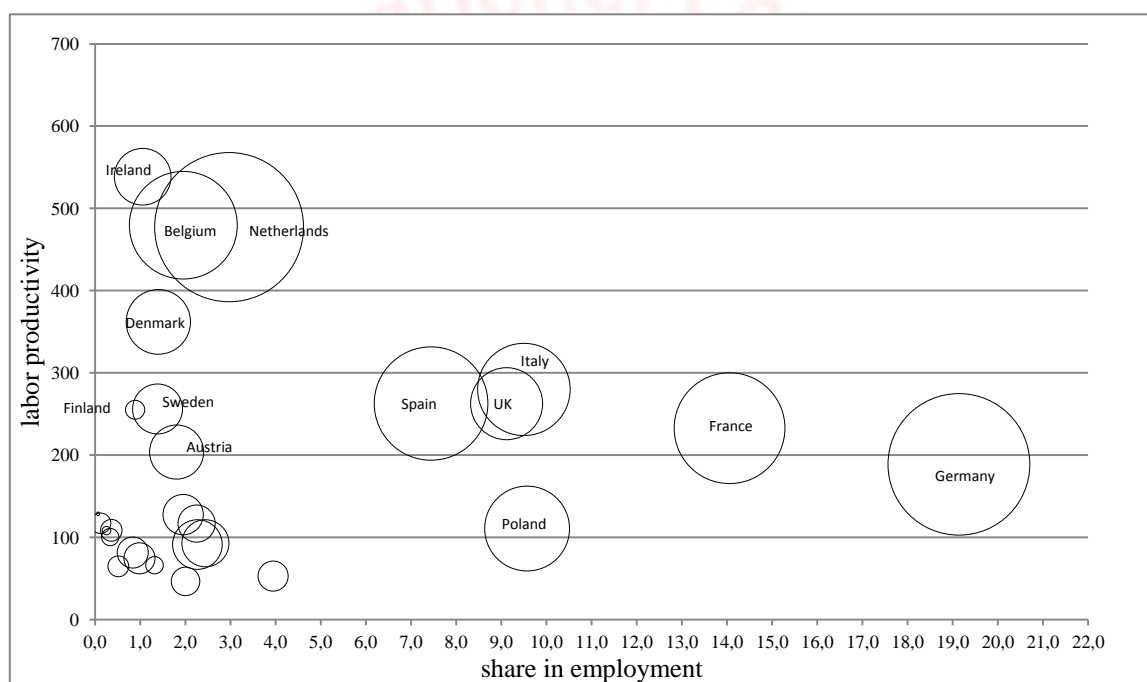


Figure 2. Level of indicators of labor productivity (thousand euro/hired), share in amount of employment (%) and share in export market (size of circle - %) of food industry in EU member states in 2015

Source: Own study based on tables 1-6

In case of other countries, small quantities of production resources were accompanied by low effectiveness of usage. As a result, their share in export market of food articles was insignificant.

Summary

The biggest in scale of EU if it comes to the production resources and size of the food production are Germany, France and Italy (independently from the measurement criteria). In accordance to employment rate the significant position was taken by Poland and Great Britain, in accordance to the number of enterprises – Spain and Greece, and when it comes to the value of production – Great Britain and Spain. The meaning of the production resources of these countries in EU food industry on the other EU member states is relatively big. Other situation was in accordance to effectiveness of these resources. Leaders of rank of productivity of food producers within EU were: Ireland, Denmark, Great Britain and Netherlands. As a consequence, there was not any statistical relevant dependencies between production potential and level of competitiveness of food industry localized in each country noted. Conducted analysis allowed however to define general dependencies and interactions, occurring between accepted indicators of measurement of production resources and competitive

advantage of food industry within EU countries. It was noted that food producers use various factors of competitiveness. Producers of food in countries in which there are many production resources and absorbing intra-market have more opportunities to achieve effects of scale. For this reason, they have inaccessible for others, source of competitive advantages, which translated into their share in export of food articles on EU market. Situation of small and medium size countries, which have small intra-markets is less favorable. In their cases increase in scale of production require to turn production for export. Above average productivity of used resources in food industry of these countries was however an effective action, which led to good competitive position.

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