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DEVELOPMENT AND POSITION OF AGRARIAN FOREIGN TRADE OF THE "VISEGRAD FOUR" COUNTRIES

VÝVOJ A POSTAVENÍ AGRÁRNÍHO ZAHRANIČNÍHO OBCHODU ZEMÍ „VISEGRÁDSKÉ ČTYŘKY"

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This paper deals with the problems of development of agrarian foreign trade in the Central European region. The subject of this paper is an analysis of agrarian trade development of selected Central-European countries (the Czech Republic, Slovakia, Hungary, and Poland – referred to in the text as the V4 countries – because these states are the founders and members of the Visegrad Group). The paper analyses not only the foreign trade relations among these countries, but also considerable development trends in the agrarian trade of particular V4 countries within the EU-27 and behind this area. Besides the changes in the territorial structure of the agrarian trade, attention is also paid to the development analysis of the value of the change of agrarian foreign trade. Furthermore, the development of kilogram prices and the volume of agrarian exports and imports are analysed. Moreover, the problems of the commodity structure of foreign trade exchange are briefly outlined. The paper is written as a part of the research project VZ 6046070906 granted by the Ministry of Education, Youth and Sports (MŠMT ČR).

Key words: Visegrad group, agrarian trade, European Union, value, volume, development, structure

This paper deals with the problems of the development of the agrarian foreign trade in the Central European Region. The subject of this paper is an analysis of the agrarian trade development of selected Central-European countries (the Czech Republic, Slovakia, Hungary and Poland – referred to in the text as the V4 countries). These countries have come through many changes in last two decades, which significantly influenced their political and especially economic character. The events connected with the transition from the centrally planed economy to the market economy, and the subsequent period of preparations for accession to the EU greatly influenced the economic structure of these particular countries. Together with these changes there were also important changes in the development of their foreign trade with territorial and commodity structures. During the last two decades, the analysed countries have completely changed the commodity structure of their foreign trade. Furthermore, there have been also changes of choice of their foreign trade partners. These countries reoriented their production capacities to the dominant position of consumer goods and services, whilst at the same time they initiated very intensive business conections with the countries of the EU. Eventually, these contacts were extended and took up a dominant position within the territorial structure of the foreign trade of the particular countries. During 1996–2006 these countries greatly increased the values of their foreign trade exchange as it can be seen in the Table 1. From the table it is obvious that the countries of the Visegrad group increased the total turnover of foreign trade exchange by more than 300 % during the eleven year period. The growth of foreign trade turnover value was in this group highly significant: the Czech Republic 280 %, Hungary 420 %, Poland 280 %, and Slovakia 400 %. In the case of all the analysed countries we can see that in the monitored period a significant increase occurred of year-on-year accruals of foreign trade exchange. The year-on-year growth rate of exports reached about 16.3 % in the case of the Czech Republic, 16.7 % in the case of Hungary, Poland reached 17 %, and accruals of the value of the Slovak exports, which were on average at about 18 %. If we compare

Table 1 Foreign trade basic indicators of development trend in selected countries during 1996–2006 in billion USD

Country Name (1)	Flow (2)	1996	1998	2000	2002	2004	2005	2006
The Czech Republic (3)	Export (7)	21.9	28.31	29.07	38.51	65.76	78.21	95.13
Hungary (4)	Export (7)	12.63	23.01	28.08	34.33	55.46	62.28	74.06
Poland (5)	Export (7)	24.39	28.21	31.6	40.26	73.78	89.38	109.58
The Slovak Republic (6)	Export (7)	7.5	10.71	11.88	14.48	27.89	32.01	41.72
The Czech Republic (3)	Import (8)	27.73	30.52	32.23	40.74	66.71	76.53	93.44
Hungary (4)	Import (8)	16.05	25.7	32.09	37.61	60.27	65.9	76.97
Poland (5)	Import (8)	37.01	47	48.83	55.09	88.16	101.54	125.65
The Slovak Republic (6)	Import (8)	9.41	13.09	12.78	16.63	29.45	34.44	44.37

Source: WTO, Comtrade Zdroj: WTO, Comtrade

Tabulka 1 Základní ukazatele vývojových trendů zahraničního obchodu ve vybraných zemích (miliardy USD)
(1) země, (2) tok, (3) Česká republika, (4) Maďarsko, (5) Polsko, (6) Slovensko, (7) export, (8) import

the development of growth in the value of the exports of these countries to the world average, which in that period was at about 8–9 %, it can be definitely stated that the growth of the export value of the V4 group countries highly significantly exceeded the trade growth trend in the world.

In the case of imports, we can see that during the monitored period particular economies significantly opened their markets for foreign good imports (the growth of the imports could be influenced by many factors, for example the growth of purchasing power of the population, the growth of level of living, liberalisation due to the accession of particular countries to the EU, intensification in the foreign trade relationships due to the inflow of a large volume of direct foreign investments, the change of ownership structure of many industries within particular economies, the dominant position of foreign subjects not only in the area of trade but also in the area of GDP growth, etc.). The average year-on-year growth rate of imports in the case of this group reached in the monitored period the following levels: the Czech Republic 16.3 %, Hungary 15.9 %, Poland 13.5 %, and Slovakia 16.3 %). When comparing these figures with the average growth rate of exports value, we can see that these countries have significantly shifted through the years. The export growth rate exceeds the imports growth rate in the long term, and particular economies have gradually decreased or even completely eliminated the negative remainders of foreign trade activities from the previous years. As the exports growth rate exceeds the imports growth rate, significant structural changes happen in the case of these particular countries. The countries engage more and more in the international division of labour, and use advantages resulting from specialisation and international cooperation in production, consumption, exchange of experience, know-how, technologies, etc.

By means of continuous intensification of foreign trade activities, particular economies highly significantly increased their share of foreign trade in the GDP of the country during the analysed years. From Tables 2–4 it is obvious that throughout the monitored period the share of foreign trade activities in the resulting product of particular countries continuously increased. The share of foreign trade turnover in the resulting GDP value increased highly significantly, maybe in the case of particular countries almost "dangerously", because currently the particular economies are highly dependent on their foreign trade relations with a very small group of states, which can in case of any regional economic-political problems lead to highly significant vulnerability of the economies of the particular states. From the Tables 2–4 it is obvious that the share of foreign trade turnover in the GDP of particular countries increased during the monitored period from 80 % to 132 % in the case of the Czech Republic, from 64 % to 134 % in the case of Hungary, from 40 % to 70 % in the case of Poland and from 80 % to 157 % in the case of Slovakia. From the data it is seen that throughout the monitored period, the Czech Republic reached a positive trade balance when the share of exports in

Table 2 The share of exports in total GDP of every analysed country in %

Country Name (1)	Series Name (2)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
The Czech Republic (3)	Export/GDP (7)	35.3	39.8	45.8	44.6	51.3	54.0	51.1	53.3	60.1	62.7	66.5
Hungary (4)	Export/GDP (7)	27.9	41.8	49.0	52.1	58.6	57.2	51.5	51.0	54.3	56.4	65.6
Poland (5)	Export/GDP (7)	15.6	16.4	16.4	16.3	18.4	18.9	20.3	24.7	29.2	29.5	32.4
The Slovak Republic (6)	Export/GDP (7)	35.0	44.6	47.8	48.8	58.2	59.9	59.1	66.4	66.4	67.5	75.9

Source: WTO, Comtrade Zdroj: WTO, Comtrade

Tabulka 2 Podíl exportu na celkovém HDP pro každou analyzovanou zemi v %
(1) země, (2) název serie, (3) Česká republika, (4) Maďarsko, (5) Polsko, (6) Slovensko, (7) export/HDP

Table 3 The share of imports in total GDP of every analysed country in %

Country Name (1)	Series Name (2)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
The Czech Republic (3)	Import/GDP (7)	44.7	47.6	49.4	47.9	56.8	59.0	54.1	56.0	60.9	61.4	65.3
Hungary (4)	Import/GDP (7)	35.5	46.5	54.7	58.4	67.0	63.2	56.5	56.5	59.0	59.6	68.2
Poland (5)	Import/GDP (7)	23.6	26.9	27.3	27.3	28.5	26.4	27.8	31.4	34.9	33.5	37.1
The Slovak Republic (6)	Import/GDP (7)	44.0	54.3	58.4	54.0	62.6	70.0	67.9	68.5	70.1	72.7	80.7

Source: WTO, Comtrade Zdroj: WTO, Comtrade

Tabulka 3 Podíl importu na celkovém HDP pro každou analyzovanou zemi v %
(1) země, (2) název serie, (3) Česká republika, (4) Maďarsko, (5) Polsko, (6) Slovensko, (7) export/HDP

Table 4 The share of total trade turnover in total GDP of every analysed country in %

Country Name (1)	Series Name (2)	1996	1997	1998	2000	2001	2002	2003	2004	2005	2006
The Czech Republic (3)	Turnover/GDP (7)	80.0	87.4	95.2	108.1	113.0	105.2	109.3	121.0	124.1	131.9
Hungary (4)	Turnover/GDP (7)	63.5	88.2	103.6	125.6	120.4	108.0	107.5	113.2	116.0	133.8
Poland (5)	Turnover/GDP (7)	39.2	43.2	43.7	47.0	45.3	48.2	56.1	64.1	63.0	69.5
The Slovak Republic (6)	Turnover/GDP (7)	79.0	98.9	106.3	120.9	129.9	127.0	134.8	136.5	140.2	156.5

Source: WTO, Comtrade Zdroj: WTO, Comtrade

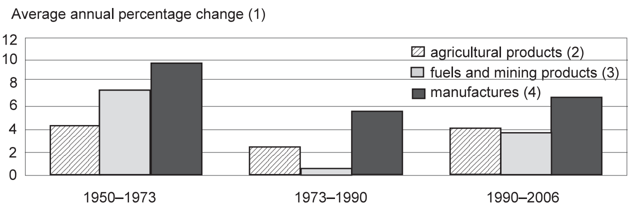
Tabulka 4 Podíl celkového obratu na celkovém HDP pro každou analyzovanou zemi v %
(1) země, (2) název serie, (3) Česká republika, (4) Maďarsko, (5) Polsko, (6) Slovensko, (7) export/HDP

GDP exceeded the share of imports in GDP, and furthermore, the information shows that except for the specific case of Poland, which in the Central-European region represents a natural sovereign with a significantly strong internal market, all economies are open and foreign trade relations represent a driver for further economic growth of these countries.

As regards the position of particular segments of foreign trade exchange in the context of foreign trade activities of particular analysed countries, the genesis of development is recorded in the Tables 5 and 6. From the data it is clearly seen that a dominant position of commodity structure of the trade of particular countries is occupied by their trade with processed industrial products. The share of these products in foreign trade activities of particular countries constantly increases, and presently it ranges between 80–90 % in the case of all analysed countries. The share of trade with fuels, energies and raw materials in the case of all countries cosntantly decreases, despite the fact that the value of both the exported and the imported fuels and raw materials constantly increases. The characteristic feature of all analysed countries is the large difference between the import and export value in this category of goods, which is greatly at the expense of exports, because not all analysed countries are fully self-sufficent, especially in the raw-materials.

The last large group of traded products is represented by agricultural and foodstuff products. The share of agrarian products in the total foreign trade of particular countries changed significantly in 1996–2006. In the case of the Czech Republic, the share of agrarian export decreased from 5.2 to 3.4 %; in Hungary the share of agrarian exports decreased even more significantly from 19 % to 5.4 %; the share of Polish agrarian export decreased from 10.7 % to 9.2 %, and in the case of Slovakia the decrease was from 5.1 % to 4 %. In the case of agrarian imports, shares of this segment of goods in the value of total imports to these particular countries also decreased. The share of agrarian imports decreased in the case of the Czech Republic from 6.9 % to 5 %; in the case of Hungary from 5.2 % to 3.9 %; in the case of Poland from 9.7 % to 5.8 % and in the case of Slovakia the share decreased from 8.1 % to 5 %.

In spite of that, the role of the agrarian sector in national economies is inconsiderable, because it contributes to the development of society, and to prosperity and growth of other branches of human activities, but in the case of particular countries it tends to decrease. There is a gradual reduction of the number of people working in this sector; and also the volume as well as the growth rate of agrarian production is decreasing. Because the growth rate of the agrarian production tends to grow less intensively in comparison to the growth rates of industrial production, there is logically also a decrease in the share of the agrarian sector in both world trade and world production (the growth rate of agricultural trade is lower in comparison to the growth rate of manufactured products growth – see Graph 1).



Graph 1 Development trends of world merchandise trade
Sources: World Trade Organisation

Graf 1 Vývojové trendy evropského komoditního trhu
Zdroj: WTO
(1) průměrná roční procentní změna, (2) zemědělské produkty, (3) paliva a produkty těžby, (4) výrobky

If we do not consider the analysis of the Central-European region and look at the development of the world production and trade, it is needed to state that the share of the agrarian production in the world trade compared to the total trade decreased from 25 % to less than 7 % during the years 1950–2006, and that the volume of the agrarian production increased only "insignificantly" in comparison to the growth of the volume of the world industrial and fuels and raw-material production. The Table 7 shows a huge disproportion in the area of the growth of the nominal value of the world trade in particular segments of goods. It is obvious from the table that while the value of agrarian trade in 1990–2006 increased by 127 %; in the case of industrial products it was 366 % and in the case of fuels and raw-materials 245 %. Concerning absolute accruals, the resulting values are much more extreme. While the value of the world trade in processed products increased by almost 6 trillion USD and the value of fuel and raw-material trade increased by less than 2 trillion USD, in the case of the trade with agrarian production the value of actual trade in the world trade increased "only" by 500 billion USD, which is for comparison only about 30 % of accrual of the value of fuel and energies trade, and only less than 10 % of value of accrual of trade with processed products over the same period.

Materials and methods

An aim of the paper is, with the aim of the evaluation of development trends in agrarian foreign trade of the V4 countries (Hungary, Poland, Slovakia and the Czech Republic), to carry out an analysis of the development of the territorial and commodity structures, not only of the mutual agrarian trade, but at the same time also of the agrarian foreign trade exchange within the common market of the EU-27 countries and behind. The aim is to reveal the main trends leading to the increase of the value of actual foreign trade exchange.

The analytical part of the paper is elaborated on several basic levels. The first of them is the development of agrarian trade in the EU-27 countries (although not all the countries were members of the EU-27 in 1999–2006, for the analysis of agro-business development this territory was chosen mainly considering the fact that already from 1999 all the present member states of the EU-27 were preparing intensively for the accession to the EU, and therefore the whole period 1999–2006 is in token of a mutual trade liberalisation which culminated in 2004 when ten members accessed the EU including the V4 countries, and in 2007 when Romania and Bulgaria entered the EU).

The second level is represented by the analysis of the trade development with the territories outside the EU-27, and the third level deals with the analysis of mutual agrarian foreign trade exchange between the V4 countries. The period 1999–2006 is chosen for the analysis considering the fact that the authors were not able to acquire relevant and sufficiently consistent data concerning the matter of traded goods from the earlier periods for all the analysed countries. Besides the development of the value of actual agrarian exchange (in Euro) the paper also analyses the development of actual agrarian exchange volume (in tons) and the development of export and import kilogram prices (Euro/kg). The results of these analyses are in connection to the development of the value of commodity and territorial structures of agrarian trade of the V4 countries. To elaborate the paper the authors used basic methods, as an analysis and a synthesis of problems and subsequent induction and deduction. For the analytical purposes the authors used basic statistical-mathematical methods as various types of averages, chain and basic indexes and a regression analysis. As the main information sources for the paper, the data from the OSN COMTRADE database, and further data obtained from the Eurostat database were used.

Results and discussion

Agrarian foreign trade of V4 countries

Particular V4 countries have rich traditions in the area of agrarian foreign trade exchange. While in the case of Hungary and Poland the balance of agrarian trade is positive in the long term, in the case of agrarian trade of Slovakia and the Czech Republic it is just the opposite. Poland and Hungary reached accrued results of surpluses of agrarian trade at a level of about +4.1 bil. Euro, and +8,5 bil. Euro respectively in 1999–2006. In the case of Slovakia and the CR it was the opposite. The accrued value of agrarian trade balance reached a negative result in 1999–2006; in the case of the CR it was almost -6 billion Euro and in the case of Slovakia the accrued value of negative remainder reached about -3.4 bil. USD. Agrarian foreign trade of the particular V4 countries has many common features, however one of them is particularly important – it is the relatively limited and highly concentrated territorial structure of agrarian foreign trade exchange. In the case of territorial structure of all these countries, there is a prevailing long-term orientation to countries of the current EU-27, whereas it is important to note that even the V4 countries are important business partners to each other. From data over the period 1999–2006 it results that the V4 countries conducted 75 % of the value of foreign trade exchange in the EU-27 territory, whereas the share of trades conducted only among the members of V4 mutually reached a level of about 20 % in total trade (individual countries' total trade) and approximately 27 % in the case of intra trade (individual

Table 5 Shares of main groups of products in total trade activities for selected countries – in 2006 in %

2006		The Czech Republic (3)	Hungary (4)	Poland (5)	The Slovak Republic (6)
Export (1)	Agricultural and foodstuff products (7)	3.4	5.4	9.2	4.0
	Fuels and raw materials (8)	5.2	3.9	6.7	7.7
	Manufactured goods (9)	91.4	90.7	84.1	88.3
Import (2)	Agricultural and foodstuff products (7)	5.0	3.9	5.8	5.0
	Fuels and raw materials (8)	11.7	8.8	13.4	16.7
	Manufactured goods (9)	83.3	87.3	80.9	78.3

Source: Comtrade (UN) Zdroj: Comtrade (UN)

Tabulka 5 Podíl hlavních skupin produktů v celkové obchodní aktivitě vybraných zemí v roce 2006 v %
(1) export, (2) import, (3) Česká republika, (4) Maďarsko, (5) Polsko, (6) Slovensko, (7) zemědělské a potravinářske produkty, (8) paliva a suroviny, (9) výrobky

Table 6 Shares of main groups of products total trade activities for selected countries' – in 1996 in %

1996		The Czech Republic (3)	Hungary (4)	Poland (5)	The Slovak Republic (6)
Export (1)	Agricultural and foodstuff products (7)	5.2	19.2	10.7	5.1
	Fuels and raw materials (8)	9.4	7.9	10.3	10.4
	Manufactures (9)	85.4	72.9	79.0	84.5
Import (2)	Agricultural and foodstuff products (7)	6.9	5.2	9.8	8.1
	Fuels and raw materials (8)	12.4	17.3	13.9	19.0
	Manufactures (9)	80.7	77.6	76.4	72.9

Source: Comtrade (UN) Zdroj: Comtrade (UN)

Tabulka 6 Podíl hlavních skupin produktů v celkové obchodní aktivitě vybraných zemí v roku 1996 v %
(1) export, (2) import, (3) Česká republika, (4) Maďarsko, (5) Polsko, (6) Slovensko, (7) zemědělské a potravinářske produkty, (8) paliva a suroviny, (9) výrobky

Table 7 Development of world merchandise trade by commodity

US dollar at current prices in Millions (1)				Shares in total merchandise trade in % (2)		Changes in % (3)
Indicator (4)	1990	2000	2006	1990	2006	1990/2006
Manufactured items (5)	2 391 150	4 697 696	8 256 850	73	72	245.3
Fuels and mining products (6)	488 320	866 118	2 277 120	15	20	366.3
Agricultural products (7)	414 723	552 345	944 531	13	8	127.7

Sources: World Trade Organisation and own processing Zdroj: WTO a vlastní výpočty

Tabulka 7 Vývoj světového komoditního trhu podle jednotlivých komodit
(1) US dolar v aktuálních cenách (milióny), (2) podíl na celkovém komoditním trhu, (3) změna v %, (4) ukazatel, (5) výrobky, (6) paliva a těžba nerostů, (7) zemědělské produkty

countries' trade – only within the EU27 countries). The dependence of particular countries on the agrarian foreign trade exchange only within the EU-27 and V4 territory, differs. The most dependent countries on the EU internal market considering the actual values of agrarian exports and imports are Slovakia and the Czech Republic. In the period 1999–2006 in the case of Slovakia approximately 90 % of exports were aimed at the markets of the EU-27 countries and 88 % of import value; in the case of the Czech Republic it was approximately 84 % in the case of exports and 88 % of imports.

The share of EU-27 countries in the agrarian foreign trade exchange in the case of Poland and Hungary was also significant, but not so extreme as in the case of the CR and Slovakia. In the case of Poland, the share of EU-27 countries in agrarian exports and imports moves at the level of about 72 %, and 70 %, respectively. The share of EU-27 countries in agrarian exports and imports of Hungary is then 71 %, and 76% respectively. From the viewpoint of analysis of the agrarian trade only within the V4, it is worth also noting the different significance of V4 markets for particular members of this coalition. The V4 country which trades the most important shares of its agrarian exports and imports in the long term is Slovakia (61 % of export and 54 % of agrarian import). Immediately behind it is the CR for which the territory of V4 countries also represents a significant trade destination because within these countries the CR trades about 41 % of agrarian exports value and 25 % of agrarian imports value. In the case of Poland and Hungary, the share of V4 countries in their total agrarian foreign trade exchange is not so significant. In the case of Poland, the share of territory of V4 countries is about 11 % in the case of exports and 9 % in the case of imports. In the case of Hungary, the share of V4 countries in the total Hungarian agrarian trade moves about 11 % in the case of exports and 19 % in the case of imports. Above-average shares of territory of V4 countries in agrarian trade in the case of the CR and Slovakia are given mainly by the fact that up to 1992 these two economies represented one economy, and there are still very strong foreign trade relations given by mutual cohesion of both economies from the time of being a united state. Tables 8 to 15 contain data on the development of agrarian trade of the particular analysed countries.

If we focus on the development of agrarian trade of particular countries, we can see that the accession to the EU significantly influenced agrarian trade throughout the whole region. While in the period before the accession of V4 countries to the EU the year-on-year average growth rate of agrarian export and import moved at a level of 10.6 %, and 7 % respectively, in the year of accession the value of exports and imports increased by 24 %, and 28 % respectively. In the period after accession, the growth rate slowed down and values of average year-on-year growth rate moved during 2004–2006 at a level of 23 % in the case of exports and 22 % in the case of imports. The accession, besides the fact that it significantly influenced the growth of value of agrarian trade between particular V4 countries and the EU-27, highly significantly contributed to an increase in growth rate and mainly of actual volume of trades between the V4 countries. While in 1999–2003 the average year-on-year growth rate of V4 countries' mutual trade moved at a level about 11 %, in the period 2004–2006 it was already 30 %, whereas the year-on-year accrual in 2003–2004 reached a value of about 35 %. A nonrecurring elimination of trade obstructions which happened among EU member states at the moment of accession of particular new members to the EU contributed to a huge increase in growth rate of actual agrarian foreign trade exchange. The accession to the EU meant a highly significant increase in the value of actual foreign trade exchange, mainly within the territory of the EU – the total value of actual exports and imports of particular V4 countries with the EU-27 recorded a highly significant increase in the period of preparations and their accession to the EU. In 1999–2006, the average growth rate of exports and imports of the V4 countries with the territory of the EU-27 increased by about 10 or 11 %; their own accession to the EU then meant a nonrecurring increase in the value of exports by 32 % and the value of imports by 46 %, and the subsequent period after their accession to the EU by the end of 2006 was then in token of still high year-on-year accruals of actual foreign trade exchange (an average of year 2004–2006: export 27 % and import 30 %), whereas in the following years the growth rate started to draw near to the values from the period before the accession to the EU. During 1999–2006 the value of agrarian trade (without differentiating whether it is dealt with by extra- or intra- trade (export + import)) of the V4 countries increased by approximately 10 bil. Euro in the case of exports and by approximately 8 bil. Euro in the case of imports. While in 1999 the total value of agrarian trade turnover of the V4 countries reached only 11.5 bil. Euro, in 2006 it was almost 30 bil. Euro. A positive phenomenon in this development is the fact that through the monitored period the growth rate of agrarian export (16 %/year) of the V4 countries exceeded the growth rate of agrarian import (13.4 %/year), in the case of particular countries the results of agrarian foreign trade differed in the following way (see details in Tables 8 to 15).

The Czech Republic

Czech agrarian foreign trade increased its nominal value in the analysed period, in the case of exports by about 180 %, and in the case of imports by about 146 %. The export value increased during the years from 950 million Euro to about 2.7 bil. Euro, and in the case of imports from 1.5 bil. Euro to 3.7 bil. Euro. The main reason for this value increase was the development of intra trade with the EU-27. The value of agrarian intra trade increased by more than 220 %. Trade throughout the V4 countries shared an increase of the total value of trade with the EU-27 highly significantly. There was an increase by more than 200 % in the case of exports and approximately 235 % in the case of imports. The share of territory of the V4 countries in CR agrarian exports increased from 38 % to 43 %, and in the case of imports there was an increase in the V4 territory share in total agrarian imports from 22 % to 30 %. The dominant items of Czech agrarian exports in both the extra- and intra- trade were in the long term: beverages, cereals, milk and milk products, food preparations, and fruits and vegetables. The share of these commodities in Czech agrarian exports moves in the long term at a level of about 87 % in the case of extra trade (outside the EU27 market), 70 % in the case of intra trade (within the EU27 market), and 66 % in the case of exports within the group of V4 countries. In the case of agrarian imports, the dominant position in the long term is occupied by the following commodities and products: beverages, cereals and cereal preparations, and fruits and vegetables. Shares of these items in agrarian imports in intra trade move at a level 56 %, in the case of extra trade it is about 43 %, and in the case of imports from the V4 countries the size of the share of these items is about 60 %. Apparently, the territorial structure of CR agrarian trade is considerably concentrated and a very high share of exports is taken by high-volume items with a minimal level of added value while in the case of imports it is the opposite.

Table 8 Development of Czech Agricultural Exports Value

Export in Millions EURO (1)	Reporter (2)	The Czech Republic (3)	The Czech Republic (3)	The Czech Republic (3)	The Czech Republic (3)	The Czech Republic (3)	The Czech Republic (3)
Period (4)	Partner/Product (5)	EU27_EXTRA	EU27_INTRA	Hungary (6)	Poland (7)	The Slovak Republic (8)	V4
Jan.–Dec. 1999	agro and food (9)	205	745	16	83	258	357
Jan.–Dec. 2000	agro and food (9)	260	938	27	180	287	493
Jan.–Dec. 2001	agro and food (9)	260	1 050	31	160	354	546
Jan.–Dec. 2002	agro and food (9)	216	1 099	49	152	361	561
Jan.–Dec. 2003	agro and food (9)	241	1 191	58	165	347	570
Jan.–Dec. 2004	agro and food (9)	242	1 572	119	176	455	750
Jan.–Dec. 2005	agro and food (9)	331	2 136	129	231	680	1 041
Jan.–Dec. 2006	agro and food (9)	290	2 374	121299	287	719	1 134

Source: Eurostat, own processing Zdroj: Eurostat a vlastní výpočty

Tabulka 8 Vývoj hodnoty českého zemědělského exportu

(1) export v mil. euro, (2) reportovaná země, (3) Česká republika, (4) období, (5) partner/produkt, (6) Maďarsko, (7) Polsko, (8) Slovensko (9) zemědělské a potravinářske produkty

Table 9 Development of Czech Agricultural Imports Value

Import in Millions EURO (1)	Reporter (2)	The Czech Republic (3)	The Czech Republic (3)	The Czech Republic (3)	The Czech Republic (3)	The Czech Republic (3)	The Czech Republic (3)
Period (4)	Partner/Product (5)	EU27_EXTRA	EU27_INTRA	Hungary (6)	Poland (7)	The Slovak Republic (8)	V4
Jan.–Dec. 1999	agro and food (9)	443	1 075	75	112	147	334
Jan.–Dec. 2000	agro and food (9)	462	1 226	78	136	166	380
Jan.–Dec. 2001	agro and food (9)	492	1 387	74	154	186	414
Jan.–Dec. 2002	agro and food (9)	488	1 581	93	170	219	481
Jan.–Dec. 2003	agro and food (9)	530	1 703	96	189	240	524
Jan.–Dec. 2004	agro and food (9)	403	2 362	116	278	276	670
Jan.–Dec. 2005	agro and food (9)	345	2 915	133	414	329	876
Jan.–Dec. 2006	agro and food (9)	283	3 451	148	557	414	1 118

Source: Eurostat, own processing Zdroj: Eurostat a vlastní výpočty

Tabulka 9 Vývoj hodnoty českého zemědělského importu

(1) import v mil. euro, (2) reportovaná krajina, (3) Česká republika, (4) obdobie, (5) partner/produkt, (6) Maďarsko, (7) Polsko, (8) Slovensko, (9) zemědělské a potravinářske produkty

Hungary

Hungarian agrarian trade also increased its values during the monitored period (1999–2006), in both the cases of exports and imports. The agrarian exports value increased from about 2 bil. Euro to about 3.2 bil. Euro, and in the case of imports there was an increase from 800 million Euro to about 2.4 bil. Euro. Exports grew in the analysed period by 61 %, while imports grew by 190 %. Trade with the EU-27 played a dominant role in the increase in the total values of agrarian trade. Through 1999–2006 there was an increase in intra exports by about 70 %, and intra imports by about 400 %, which leads to a highly significant reduction of the positive balance of Hungarian agri-business. The share of intra trade in the total Hungarian agrarian trade increased through the seven years from 65 % to 82 %. Concerning the territory of V4 countries, Hungarian foreign trade operations with this territory also increased their values. The share of the V4 countries in Hungarian agri-business increased from 16 % to 18 % in the case of exports and from 22 % to 28 % in the case of imports. The exports value with the V4 increased by about 93 % and in the case of imports there was an increase of 550 %. The commodity structure of Hungarian agri-business concentrates mainly on the following items: cereals and cereal preparations, meat and meat products, and fruits and vegetables. The share of these items in agrarian exports in the case of intra trade (trade within EU27) is at the level of about 60 %, in the case of extra trade (trade outside EU27) the share moves at a level of about 63 %, and in the case of trade with the V4 it is 32 %. In the case of agrarian imports, the dominant position is taken up by the following commodity groups: coffee, tea, cocoa, spices, food preparations, fruit, and vegetables and feeds. The share of these commodity groups in imports within EU intra trade moves at a level of about 50 %, in the case of EU extra trade it is about 65 % and in the case of trade within the V4 countries it is 40 %. Other items of agri-business in both the cases of exports and imports do not have such a dominant role in comparison to the above mentioned groups of products, but it is necessary to point out that Hungarian export structure is considerably diversified in comparison to, for example, the Czech commodity structure.

Poland

Polish agrarian trade increased its values during the preparation period for accession to the EU and in the period after accession from 2.3 bil. Euro in 1999 to about 8.2 bil. Euro in 2006 (i.e. by 255 %) in the case of exports, in the case of imports there was an increase from 2.9 bil. Euro to about 6 bil. Euro (i.e. by 105 %). The Polish agrarian market changed from a nett-importer with negative reminders of agrarian trade to a nett-exporter with a significant surplus of agrarian trade, reaching to about 2,3 bil. Euro. Intra trade with the EU-27 played a key role in the case of the increase of Polish agri-business value. The share of trade with the EU-27 increased from 60 % to 80 % and the value of turnover within the EU-27 market increased from 3 bil. Euro to about 11 bil. Euro (by 336 % exports and by 176 % imports), whereas the export growth rate through the years 1999–2006 reached a level of about 24 % per year, in the case of imports then 17 % per year. A highly significant increase of values of agribusinesses within the EU-27 happened in 2004 when the export value jumped by 44 % and the import value by 46 %. In the following years there was a "modulation" of growth rate. Agrarian trade within the V4 group played a supplemental role for Polish agrarian trade. The share of this group of countries in Polish agri-trade increased through the years from 9 % to 14 % in the case of exports and from 8 % to 9 % in the case of imports. The value of trade with the V4 group increased through the years by about 450 % in the case of exports and by 154 % in the case of imports. It is only the V4 territory which shares about 25 % in the positive balance of Polish agri-business. The most important items of Polish agrarian trade in long term in the case of exports are: cereals and cereal preparations, stimulants and spices, milk and milk products, meat and meat products, food preparations, sugar, tobacco, and fruits and vegetables. The share of thesegroups of products in values of extra trade (out of the EU27 territory) is about 86 %, in the case of intra trade (trade within EU27 market) it is 80 %, and in the case of trade within the V4 countries the share of these products is about 85 %. In the case of imports, the situation is the following. The dominant role is occupied by imports of the following items: stimulants and spices, feeds, fish, and fruits and vegetables. A share of these groups in agrarian imports is in the case of extra trade about 80 %, in the case of intra trade about 50 %, and in the case of trade within the V4 group the highest share of these products is about 33 %. In the case of commodity structure of Polish agri-trade, a considerable concentration is seen in the case of agrarian exports as opposed to a considerable diversification in the case of exports.

Slovakia

Slovakia and its agrarian trade play only a minority role in agrarian trade with the EU countries. On the other hand, it is important to point out that during the period 1999 to 2006,

Table 10 Development of Hungarian Agricultural Exports Value

Export in Millions EURO (1)	Reporter (2)	Hungary (3)	Hungary (3)	Hungary (3)	Hungary (3)	Hungary (3)	Hungary (3)
Period (4)	Partner/Product (5)	EU27_EXTRA	EU27_INTRA	Poland (6)	The Slovak Republic (7)	The Czech Republic (8)	V4
Jan.–Dec. 1999	agro and food (9)	576	1 400	105	43	73	221
Jan.–Dec. 2000	agro and food (9)	714	1 477	118	43	76	236
Jan.–Dec. 2001	agro and food (9)	807	1 806	98	63	73	234
Jan.–Dec. 2002	agro and food (9)	821	1 712	109	50	90	248
Jan.–Dec. 2003	agro and food (9)	758	1 804	95	51	95	242
Jan.–Dec. 2004	agro and food (9)	728	2 041	126	62	113	298
Jan.–Dec. 2005	agro and food (9)	705	2 130	114	101	113	329
Jan.–Dec. 2006	agro and food (9)	806	2 374	140	149	138	427

Source: Eurostat, own processing Zdroj: Eurostat a vlastní výpočty

Tabulka 10 Vývoj hodnoty maďarského zemědělského exportu
(1) export v mil. euro, (2) reportovaná země, (3) Maďarsko, (4) obdobie, (5) partner/produkt, (6) Polsko, (7) Slovensko, (8) Česká republika (9) zemědělské a potravinářske produkty

Table 11 Development of Hungarian Agricultural Imports Value

Import in Millions EURO (1)	Reporter (2)	Hungary (3)	Hungary (3)	Hungary (3)	Hungary (3)	Hungary (3)	Hungary (3)
Period (4)	Partner/Product (5)	EU27_EXTRA	EU27_INTRA	Poland (6)	The Slovak Republic (7)	The Czech Republic (8)	V4
Jan.–Dec. 1999	agro and food (9)	396	442	56	24	16	96
Jan.–Dec. 2000	agro and food (9)	397	608	67	35	25	127
Jan.–Dec. 2001	agro and food (9)	422	732	88	40	30	158
Jan.–Dec. 2002	agro and food (9)	422	843	88	52	47	187
Jan.–Dec. 2003	agro and food (9)	416	948	101	54	56	211
Jan.–Dec. 2004	agro and food (9)	321	1 547	170	102	121	392
Jan.–Dec. 2005	agro and food (9)	230	1 957	236	137	119	491
Jan.–Dec. 2006	agro and food (9)	213	2 234	355	157	111	623

Source: Eurostat, own processing Zdroj: Eurostat a vlastní výpočty

Tabulka 11 Vývoj hodnoty maďarského zemědělského importu
(1) import v mil. euro, (2) reportovaná země, (3) Maďarsko, (4) období, (5) partner/produkt, (6) Polsko, (7) Slovensko, (8) Česká republika (9) zemědělské a potravinářske produkty

Slovak agrarian trade value highly significantly increased. Agrarian exports grew from 350 million Euro to 1.3 bil. Euro – i.e. by 284 %, and imports increased the resulting value from 670 million Euro to 1.8 bil. Euro – i.e. by 174 %. Although agrarian export growth rate exceeded import growth rate, still a typical result for Slovak agri-business is negative remainders, which in 2006 reached approximately 500 million Euro. The EU-27 countries play a highly important role in Slovak agri-business, and their share through the monitored period increased from 83 % to about 93 % (the turnover value increased from 850 million Euro to 2.95 bil. Euro). Slovakia also has very intensive foreign trade relations within the V4 group. It can be seen that the Slovak share in values of agrarian trade within the V4 group remains stable in the long term - 23% in the case of exports and 33 % in the case of imports. For comparison, the shares of other countries are (export/import): the CR (32 %/33 %), Hungary (12 %/ 18%), Poland (32 %/16 %). The share of V4 countries in the total agrarian trade of Slovakia in 2006 reached about 62 % in the case of exports (given especially by intensive business relations with the CR), and 60 % in the case of imports. The value of turnover with the V4 countries increased through the years from about 530 million Euro to about 2 bil. Euro. The resulting balance of Slovak agri-trade is negative in the long-term, whereas the share of negative reminders of trade with other V4 countries (2006, about 300 million Euro) in the total negative reminders constantly increases (in 1999 it was 30 %, in 2006 it was about 60 %). The commodity structure of Slovak agri-business is considerably diversified in both the cases of agrarian exports and imports. In the case of agrarian exports, especially cereals and cereal preparations, stimulants and spices, milk and milk products, live animals, food preparations, sugar and confectionery, and fruits and vegetables dominate the commodity composition. The share of these aggregations in the case of exports outside the EU is at a level of about 92 %, in the case of intra trade (export within EU27) it is about 82 %, and in the case of the V4 territory the share of these products in total agrarian exports is about 81 %. Agrarian imports are especially dominated by the following product groups: stimulants and spices, fish, food preparations, and fruits and vegetables. The share of these items in agrarian imports from territories outside the EU27 is about 77 %, in the case of import flows from the EU27 territory their share is about 40 % and in the case of imports from V4 countries the share of mentioned aggregations is about 35 %.

Development of agrarian trade volume and value of V4 countries

Besides development of their own agrarian trade value it is necessary also to observe the development of actual trade concerning the volume (matter) and the value of sold goods (kilogram prices). It is particularly relavent to find whether the agrarian trade value growth of the V4 countries is mainly due to constantly increasing volume of exported and imported goods, or if growth of the value is due particularly to the means of growth of prices of traded goods.

The following part of the paper deals with development of actual trade volumes and the development of kilogram prices of exports and imports, and it puts all in connection with development of the resulting values of agrarian trade of the V4 countries. There are considerable differences among the V4 countries in the traded volume of goods and actual kilogram prices of agrarian trade.

The Czech Republic

In the case of the Czech Republic it is obvious that the volume of exports have increased highly significantly through the years, from about 2.655 mil. tons in 1999 to about 9.3 mil. tons in 2006. In the case of agrarian imports the increase is not so remarkable, however, it still shows a highly significant increase from about 2.6 mil tons to 4.2 mil. tons. The share of V4 countries in the total volume of trade operations is constantly increasing. The share of V4 countries in the total volume of exported products (in tons) increased from 25% in 1999 to 65% in 2006. In the case of agrarian imports we can see the following changes in shares – in 1999, 26 % and in 2006, 31 %. The share of intra trade (trade within EU27) in both the cases of exports (92 %) and imports (75 %) highly significantly dominates over volumes of trade with partners outside the EU-27, whereas the share of extra trade constantly decreases at the expense of intra trade.

Concerning kilogram prices, we cannot avoid the fact that kilogram prices of agrarian exports are much lower in comparison to agrarian import prices. The prices of exports oscillate in the long term in an interval 0.4–0.85 Euro for kilogram in the case of exports outside the EU, in the case of

Table 12 Development of Polish Agricultural Exports Value

Export in Millions EURO (1)	Reporter (2)	Poland (3)	Poland (3)	Poland (3)	Poland (3)	Poland (3)	Poland (3)
Period (4)	Partner/Product (5)	EU27_EXTRA	EU27_INTRA	Hungary (6)	The Slovak Republic (7)	The Czech Republic (8)	V4
Jan.–Dec. 1999	agro and food (9)	831	1 489	59	30	118	207
Jan.–Dec. 2000	agro and food (9)	958	1 774	72	36	149	258
Jan.–Dec. 2001	agro and food (9)	1 080	2 071	88	37	174	300
Jan.–Dec. 2002	agro and food (9)	1 098	2 180	92	49	186	327
Jan.–Dec. 2003	agro and food (9)	1 210	2 568	104	55	199	358
Jan.–Dec. 2004	agro and food (9)	1 303	3 698	168	96	277	541
Jan.–Dec. 2005	agro and food (9)	1 636	5 215	296	167	388	851
Jan.–Dec. 2006	agro and food (9)	1 750	6 491	370	214	559	1 143

Source: Eurostat, own processing Zdroj: Eurostat a vlastní výpočty

Tabulka 12 Vývoj hodnoty polského zemědělského exportu
(1) export v mil. euro, (2) reportovaná země, (3) Polsko, (4) období, (5) partner/produkt, (6) Maďarsko, (7) Slovensko, (8) Česká republika (9) zemědělské a potravinářske produkty

intra trade the kilogram prices oscillate in an interval 0.2–0.4 Euro, whereas the trend is at a level of about 0.3 Euro for kilogram of export in the long term. The very bad situation is in the point of view of kilogram prices development in the case of the V4 countries where kilogram prices of agrarian export highly significantly decrease and presently they are even below the margin of 0.2 Euro. The prevailing share of commodities with a high weight but a low added value, and also a very high share of water, which is exported for minimal prices from Poland in huge volume – millions of tons (low kilogram prices of water negatively influence the development of total agrarian trade kilogram prices. There is even a question of whether water should not be completely excluded from statistics of agrarian trade because water is neither an agrarian nor food product.) have a negative influence on the development of kilogram prices of agrarian trade. In the case of agrarian import prices we can see an opposite development trend. Kilogram prices of agrarian imports grow in both cases of extrastate (prices oscillates in an interval 0.8–1.2 Euro/kg) and intrastate (0.5–0.9 Euro/kg), and even in the case of trade with the V4 countries (0.5–0.88 Euro/kg).

From the above mentioned data it results that while in the case of agrarian import the growth of total value is given from 64 % by growth of trade volume (tons) and from 35 % by growth of value of imported goods (kilogram prices), in the case of agrarian export the growth of value of actual trades is "pushed" explicitly by means of the growing volume (quantity) of traded goods, because export kilogram prices tend to keep at a low level (in this direction the Czech Republic has kilogram prices comparable with many developing countries due to the low added value of exported agrarian and foodstuff products).

Hungary

In the case of Hungary we can observe that actual volumes of agrarian trade (both the exports and the imports) have increased in recent years. In the case of agrarian imports, there was an increase of volume of trades in 1999–2006 from 1.6 million tons to about 2.7 million tons, in the case of exports it was an increase from 4.9 mil. tons to about 7.5 mil. tons. The share of the V4 countries in volume of trades has developped dynamically mainly in the case of agrarian exports. At the beginning of the analysed period the V4 countries shared of the trade volume with 10 % in the case of export and 8 % in the case of imports, and at the end of the observed period it was already 8 % in the case of exports and 20 % in the case of imports. The share of intra trade with the EU-27 countries significantly dominated the whole volume of actual exchange. In 2006, the EU-27 countries represented a destination for 70 % of volume of exports, and at the same time more than 88 % of import volume originated from these countries. In the case of Hungary it is worth pointing out a change of territorial structure of the actual volume of goods. Before accession into the EU in 1999, the trade share of the EU-27 countries in volumes of goods was 42 % in the case of imports, and 62% in the case of exports – it means accession to the EU not only influenced the value, but also the volume of exchange. Furthermore it is important that the share of the so called "third countries" in Hungarian agrarian trade reduces highly significantly. This reaction can be seen mainly in the case of import operations where the trade is strongly limited by EU common rules.

Kilogram prices development represents a highly important feature of Hungarian agrarian trade. Through 1999–2006, kilogram prices increased especially in the case of Hungarian imports. During this period Hungary significantly increased the volume and value of imported goods, whereas exports kilogram prices increased during the monitored time period in the case of extra trade from 0.4 Euro to 0.7 Euro; in the case of intra trade from 0.6 Euro to 0.94 Euro, and in the case of trade within the V4 countries kilogram prices even grew from 0.75 Euro to 1.13 Euro (however, it is necessary to point out that the growth is not continual, there are considerable oscillations especially because of unpredictable changes in production and demand).

In contrary to the import prices, the kilogram prices of agrarian exports during the observed period did not tend to grow significantly. In both cases, the extra trade and the intra trade prices tend to oscillate around an average value of 0.4 Euro/kg, and 0.49 Euro/kg respectively; only export kilogram prices within the V4 countries teritorry recorded during the monitored period showed a consistent growth from 0.45 Euro/kg to 0.7 Euro/kg.

If we analyse the growth of Hungarian export and import values, we can say, that the growth of export operations value in 1999–2006 was influenced (about 93 %) by the increase of traded goods volume and the influence of the kilogram prices growth was only 7 %. In the case of value of import operations, the situation was as follows: The growth of the value was stimulated from 54 %

Table 13 Development of Polish Agricultural Imports Value

Import in Millions EURO (1)	Reporter (2)	Poland (3)	Poland (3)	Poland (3)	Poland (3)	Poland (3)	Poland (3)
Period (4)	Partner/Product (5)	EU27_EXTRA	EU27_INTRA	Hungary (6)	The Slovak Republic (7)	The Czech Republic (8)	V4
Jan.–Dec. 1999	agro and food (9)	1 238	1 658	109	40	70	219
Jan.–Dec. 2000	agro and food (9)	1 164	2 005	123	50	158	331
Jan.–Dec. 2001	agro and food (9)	1 291	2 199	107	66	135	308
Jan.–Dec. 2002	agro and food (9)	1 262	2 217	119	63	133	316
Jan.–Dec. 2003	agro and food (9)	1 168	2 045	103	63	132	299
Jan.–Dec. 2004	agro and food (9)	1 063	2 978	132	62	159	353
Jan.–Dec. 2005	agro and food (9)	1 090	3 939	135	82	224	440
Jan.–Dec. 2006	agro and food (9)	1 360	4 577	156	122	278	556

Source: Eurostat, own processing Zdroj: Eurostat a vlastní výpočty

Tabulka 13 Vývoj hodnoty polského zemědělského importu

(1) import v mil. euro, (2) reportovaná země, (3) Polsko, (4) období, (5) partner/produkt, (6) Maďarsko, (7) Slovensko, (8) Česká republika (9) zemědělské a potravinářske produkty

by means of growth of the volume of traded goods and from 46 % by the growth of import kilogram prices. From the data it results that while Hungary did not significantly improve the value structure of its exports, concerning the import operation, the accession to the EU led to an opening of the Hungarian market imports from abroad (the EU accession especially enabled import of goods with a relatively higher added value).

Poland

Through the monitored period, Polish agrarian trade recorded a significant increase in volumes of both imports and exports. During the analysed period, the export volume grew from 4.1 mil. tons to 8.8 mil. tons; in the case of imports we can see an increase from 5.3 mil. tons to almost 13 mil. tons. The share of trade within the EU-27 changed significantly over the years. In the case of exports, the share of the countries increased from 55 % to 70 %. In the case of imports there was an increase in share of the EU-27 countries from 70 % to 82 %. The share of actual trade within the group of V4 countries in the total volume of actual agrarian trade also grew. In 1999 these countries shared only 7 % of Polish exports; in 2006 it was already more than 12 %; in the case of imports, the share of these countries increased from 17 % in 1999 to 46 % in 2006 (here it is necessary to point out that the results are significantly distorted by "huge" imports of untreated water, both the ordinary and the mineral, which are imported from the CR regarding the volume for minimal prices).

Kilogram prices of Polish agrarian trade through the observed years significantly changed. In the case of exports to the EU-27 countries, there was through the period 1999–2006, an increase in kilogram prices from 0.46 Euro/kg in 1999 to 0.7 Euro/kg in 2006. In the EU-27 market, the export kilogram prices had a strong for-growth trend, when during the analysed period export prices increased from 0.66 Euro/kg to about 1.05 Euro/kg. The V4 countries represent for Poland a very interesting market from the view-point of exports because Poland is successful in export of goods whose unit prices constantly grow on these markets. In the observed years, there was an increase in export kilogram prices within these territories from 0.7 Euro to 1.07 Euro. Development of kilogram prices of Polish import has more or less an opposite development trend in comparison to export prices. Poland focusses mainly on imports of goods with a low added value. In the case of imports originating from a territory outside the EU-27, in 1999–2006 there was a reduction of kilogram prices from 0.8 Euro/kg to about 0.55 Euro/kg, whereas the prices during the monitored period considerably oscillated. Also, with

Table 14 Development of Slovak Agricultural Exports Value

Export in Millions EURO (1)	Reporter (2)	The Slovak Republic (3)	The Slovak Republic (3)	The Slovak Republic (3)	The Slovak Republic (3)	The Slovak Republic (3)	The Slovak Republic (3)
Period (4)	Partner/Product (5)	EU27_EXTRA	EU27_INTRA	Hungary (6)	Poland (7)	The Czech Republic (8)	V4
Jan.–Dec. 1999	agro and food (9)	58	291	26	39	154	219
Jan.–Dec. 2000	agro and food (9)	55	335	34	47	162	244
Jan.–Dec. 2001	agro and food (9)	56	403	44	62	190	296
Jan.–Dec. 2002	agro and food (9)	59	434	54	58	209	321
Jan.–Dec. 2003	agro and food (9)	72	486	57	59	232	349
Jan.–Dec. 2004	agro and food (9)	67	693	117	62	272	451
Jan.–Dec. 2005	agro and food (9)	92	1 024	197	93	363	653
Jan.–Dec. 2006	agro and food (9)	108	1 232	237	166	422	825

Source: Eurostat, own processing Zdroj: Eurostat a vlastní výpočty

Tabulka 14 Vývoj hodnoty slovenského zemědělského exportu
(1) export v mil. euro, (2) reportovaná země, (3) Slovensko, (4) období, (5) partner/produkt, (6) Maďarsko, (7) Polsko, (8) Česká republika (9) zemědělské a potravinářske produkty

Table 15 Development of Slovak Agricultural Imports Value

Import in Millions EURO (1)	Reporter (2)	The Slovak Republic (3)	The Slovak Republic (3)	The Slovak Republic (3)	The Slovak Republic (3)	The Slovak Republic (3)	The Slovak Republic (3)
Period (4)	Partner/Product (5)	EU27_EXTRA	EU27_INTRA	Hungary (6)	Poland (7)	The Czech Republic (8)	V4
Jan.–Dec. 1999	agro and food (9)	115	558	40	30	244	314
Jan.–Dec. 2000	agro and food (9)	120	637	37	41	264	342
Jan.–Dec. 2001	agro and food (9)	150	769	61	44	333	438
Jan.–Dec. 2002	agro and food (9)	148	768	48	55	340	442
Jan.–Dec. 2003	agro and food (9)	149	740	49	60	323	432
Jan.–Dec. 2004	agro and food (9)	128	1 055	67	97	473	637
Jan.–Dec. 2005	agro and food (9)	117	1 539	116	168	723	1 007
Jan.–Dec. 2006	agro and food (9)	134	1 709	151	227	741	1 118

Source: Eurostat, own processing Zdroj: Eurostat a vlastní výpočty

Tabulka 15 Vývoj hodnoty slovenského zemědělského importu
(1) import v mil. euro, (2) reportovaná země, (3) Slovensko, (4) období, (5) partner/produkt, (6) Maďarsko, (7) Polsko, (8) Česká republika, (9) zemědělské a potravinářske produkty

the EU-27 market, the import kilogram prices tended to oscillate considerably, in an interval 0.3–0.5 Euro/kg, whereas in recent years the prices tend to settle at about 0.4 Euro/kg.

A very specific development can be recorded in the case of price development of imports from the V4 countries. Kilogram prices of imports, especially thanks to imports of untreated water from the CR as already above mentioned, tend to constantly decrease and the resulting import prices reduced from 0.42 Euro/kg to 0.1 Euro/kg. If we analyse the causes of the growth of Polish agrarian trade value, we cannot avoid the fact that in the case of agrarian exports that growth of value is stimulated 60 % by the increase in volume (quantity) of goods and from by about 40 % by the increase of unit prices. In the case of imports the situation is that the growth of value is "pushed" from 100 % by the increased volume of imported goods.

Slovakia

Slovak agrarian trade through 1999–2006 recorded huge accruals of actual volumes of both exports and imports. Export volume increased through the years from 1.15 mil. tons to about 3 mil. tons. In the case of imports there was an increase from 1.05 mil. tons to 2.3 mil. tons. The EU-27 countries' share in Slovak agrarian trade is traditionally very high; in the period 1999–2006 these countries kept its share steady between 80–90 % in the case of export volumes and in the case of imports the share of these countries was at a level between 84–93 %. The V4 countries represent highly important trade partners for Slovakia, especially thanks to Slovak relations with the CR and thanks to its geographic, position as Slovakia neighbours with all the member countries of the V4 group. The share of the V4 countries in actual volumes of exports and imports through the years increased from 788 thous. tons to 1.6 mil. tons in the case of exports and from 429 thousand tons to 1.4 mil. tons in the case of imports. The share of the V4 territories in export volumes has remained in the long term above the level of 55 % (during the monitored time period the share of V4 countries decreased from 68 % in 1999; this decrease is especially due to a gradual orientation of Slovakia onto the markets of other EU-27 countries); in the case of imports we can see an increase in the share of this territory from 40 % in 1999 to 61 % in 2006.

The development of kilogram prices of Slovak agrarian trade is highly specific. Agrarian export prices have, in relation to "third countries", tended to oscillate widely. Over the period 1999–2006, export prices ranged in the interval by 0.8–0.24 Euro/kg, whereas there is a prevailing trend of low kilogram prices. In the case of exports to the EU-27 markets, we note that kilogram prices are very unsteady, thoiugh we can see a prevailing trend of kilogram prices growth which in 1999–2006 moved in an interval 0.28–0.69 Euro/kg, whereas the mean value was at a level of 0.5 Euro/kg. In the case of the V4 countries it is obvious that the development trend of export kilogram prices is also growing, nevertheless it is necessary to emphasise that the prices tend to vary widely around their mean value. In the case of imports kilogram prices, imports from countries outside the EU-27 remain priced at a permanently high level and they move between 0.7–1 Euro/kg; in the case of imports from the EU-27 countries there is a clear growth trend of kilogram prices of imports when through the monitored years the prices increased from 0.6 Euro/kg to 0.8–0.9 Euro/kg.

In the case of imports from the V4 countries we can see that kilogram prices keep steady at an above-average level and through the observed years they have moved in an interval 0.7 Euro/kg and 0.9 Euro/kg, whereas there is an unambiguous for-growth trend. Concerning the development of value of both Slovak exports and imports, we note that the growth of value in the case of agrarian exports is "pushed" mainly by means of growth of trade volume (from 65 %), the share of price growth is somewhere around 35 %. In the case of import value development, we can see that the growth is "pushed" especially by means of the increase in quantity of traded goods (influence 78 %), while the influence of kilogram prices growth is only minor, at about 22 %.

Conclusion

Agrarian trade represents only a minor part of the total foreign trade of the V4 countries. Despite this, it is necessary to emphasise that these countries pay highly significant attention to foreign trade operations in the segment of agrarian and foodstuff products. Through the observed years in the case of all analysed countries there was a highly significant increase in the value and the volume of agrarian foreign trade exchange. This increase can be particularly observed in foreign trade operations with the market of the EU-27 countries, and also within the group of V4 countries. In all analysed countries it is apparent that the growth of both the export values and the import values is driven mostly by the growth of actual trade volumes (quantity of products). Concerning the added value of traded goods, there is a growing trend in most analysed cases, however, it is important to emphasise that in the long term higher kilogram prices on the side of imports prevail over the exports kilogram prices. Nevertheless, it is necessary to point out that it is mainly the huge increase in exported production volumes, which in the analysed countries leads to stabilisation or even decrease of negative reminders of agrarian trade, which to a great extent wipes out higher unit prices of imported goods – and even contributes to the growth rate of agrarian export value exceeding in the long term the growth rate of agrarian import value. In short, it is important to mention that the accession into the EU meant a highly significant change for all the analysed countries. Not only was the market of the "old" EU-15 opened for these countries, but also the enlargement of the EU (through the years 2004–2007) by 12 new members stimulated the export and the import activities among the new EU members (at the moment of EU accession, all new EU members removed their mutual trade barriers). Presently, just the EU-27 countries are those which represent the most important business partners for the particular analysed V4 countries, and the share of this territory in agrarian trade of the individual analysed countries is constantly increasing (especially because of the obligations resulting from the common trade and agricultural policy).

Súhrn

Autory zpracovaný článek se věnuje problematice vývoje agrárního zahraničního obchodu v rámci středoevropského regionu. Předmětem článku je analýza vývoje agrárního obchodu vybraných středoevropských zemí (Česká republika, Slovensko, Maďarsko a Polsko – v textu také rovněž zmiňovaných jako zemí V4 – neboť zmíněné země jsou zakladateli a členy Visegradské skupiny). Článek analysuje nejen vzájemné zahraničně obchodní vazby mezi zmíněnými zeměmi, ale rovněž je věnována značná pozornost vývojovým trendům v oblasti agrárního obchodu realizovaného jednotlivými zeměmi V4 v rámci teritoria EU 27 a mimo toto teritorium. Vedle změn v teritoriální struktuře agrárního obchodu je rovněž věnována pozornost analýze vývoje hodnoty realizované agrární zahraničně obchodní směny, dále jsou analysovány vývoj kilogramových cen, objem realizovaných agrárních exportů a importů a stručně je rovněž zmíněna problematika komoditní struktury realizované zahraničně obchodní směny. Příspěvek je zpracován v rámci výzkumného záměru VZ 6046070906, který byl udělen MŠMT ČR a na kterém autoři dlouhodobě spolupracují.

Klíčová slova: Visegradská skupina zemí, agrární obchod, Evropská unie, hodnota, objem, vývoj, struktura

References

SVATOŠ, M. 2008. Selected trends forming European agriculture, In: Agric. Econ. – Czech, vol. 54, 2008, no. 3, p. 93–101

JENÍČEK, V. 2007. World comodity trade in the globalasation processes. In: Agric. Econ. – Czech, vol. 53, 2007, no. 3, p. 101–110

KUNEŠOVÁ, H. – CIHELKOVÁ, E. et al. 2006. Světová ekonomika ("World economy"), C. H. Beck, 2006. ISBN 80-7179-455-4

VARADZIN, F. et al. 2004. Ekonomický rozvoj a růst ("Economical development and growth"), Praha : Professional Publ., 2004. ISBN 8086419614

SVATOŠ, M. – SMUTKA, L. 2008. The analysis of external trade development among the Czech Republic, Slovakia, Hungary, Poland and Ukraine. In: Agricultural market and trade: evidence and perspectives of V4 region and its neighbour – Ukraine, Warsaw 2008, p. 119–151.

WB, WDI online database. 2008. available at: ddp-ext.worldbank.org, accessed February 2009

International Trade Statistics. 2007. WTO. 2008. ISBN 978-92-870-3407-6

UN, Comtrade database. 2008. Available at: comtrade.un.org/db, accessed February 2009

Atlas economique mondial. 2007. Le nouvel Observateur, Paris 2007, Fortune, vol. 156, no. 2, July 23, 2007

International Financial Statistics, IMF, vol. 61, no. 4, April 2008

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VNÍMANIE ROZDIELOV MEDZI DOMÁCIM A DOVOZOVÝM OVOCÍM MIERNEHO PÁSMA SPOTREBITEĽMI NA SLOVENSKU: PRÍPADOVÁ ŠTÚDIA Z NITRIANSKEHO REGIÓNU

SLOVAK CONSUMER'S PERCEPTION OF DIFFERENCES BETWEEN HOME MADE AND IMPORTED SOFT CLIMATE FRUIT: CASE STUDY FROM THE NITRA REGION

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Fruit consumption and production in Slovakia has been very low for many years, and it is still decreasing. Paradoxically, population consumes less fruit than in 1990, although the supply of home made and imported fresh fruit has been improved. The aim of the paper is to identify and analyse the attitude and behaviour of the Slovak fruit consumers from the Nitra region on the base of questionnaire research focused on the consumers' perception of the differences between home-made and imported soft climate fruit. An association analysis was used to find out the dependence between individual answers and identification characteristics (sex, age, education, residence) of the respondents.

Key words: consumption, soft climate fruit, Nitra region, home production, import

Nízka produkcia ovocia na Slovensku má za následok neustále zvyšovanie objemu dovezeného ovocia do našej krajiny. Naopak, vývoz ovocia medziročne klesol. Hlavnou úlohou súčasného ovocinárstva na Slovensku je zabezpečiť vlastnou produkciou dostatok kvalitného ovocia, pre ktoré sú u nás vhodné pôdno-klimatické podmienky na pestovanie a napriek tomu sa do krajiny dováža ovocie, ktoré si vieme doma dopestovať. Najväčšie producentské krajiny ovocia vyvážajú spravidla 10–20% svojej výroby, ostatné spotrebúvajú či spracúvajú v krajine. Či to bude podobne aj na Slovensku záleží od toho, ako rýchlo sa bude vedieť náš pestovateľ prispôsobiť novým požiadavkám v rámci európskeho trhu, ale hlavne požiadavkám domáceho spotrebiteľa, ktorého dopyt ako aj kúpna sila sú rozhodujúce. Perspektívnosť trhu s ovocím na Slovensku spočíva v tom, že doterajšia domáca spotreba na obyvateľa je výrazne nižšia ako v krajinách EÚ a aj v porovnaní s Českou republikou.