

Czech foreign agricultural trade after joining the European Union

Český agrární zahraniční obchod po vstupu do Evropské unie

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Abstract: The objective of the paper is to assess how the Czech agricultural sector has withstood keen competition in the EU single market as measured by the basic indicators of foreign trade exchange. The impacts expressed by the indicators of active and/or adverse balance of trade were monitored for the post-accession period (the average of the years 2005–2007) in comparison with the pre-accession period (the average of the years 2001–2003). The assessment of the impacts of the accession to the EU is based on an analysis of the commodity and territorial structure of Czech agricultural foreign trade. The comparison of agricultural balance before and after the accession to the EU for our major trading partners shows that the active balance of the CR with Slovakia increased to 12.0 billion CZK per year; on the contrary, in relation to Poland, the trade deficit of 6.4 billion CZK per year was recorded while Germany strengthened its position in relation to the CR by an increase in the negative balance to 5.4 billion CZK and in relation to Austria, our adverse balance is maintained at the level of 1.1 to 1.2 billion CZK per year for a long time. After the accession to the EU, it was confirmed that the former EU 15 countries took a greater advantage of the customs union enlargement in the framework of the EU 27.

Key words: foreign agricultural trade, pre-accession period (2001–2003), post-accession period (2005–2007), structure, European Union, active and/or adverse balance of trade, agricultural commodities

Abstrakt: Příspěvek si klade za cíl posoudit, do jaké míry český agrární sektor obstál v ostré konkurenci na jednotném trhu EU poměřováno základními ukazateli zahraničně obchodní směny. Dopady vyjadřované ukazateli obchodních pasiv, resp. pasiv jsou sledovány za povstupní období (průměrem let 2005–2007) ve srovnání s předvstupním obdobím (průměrem let 2001–2003). Vlastní posouzení dopadu vstupu do EU se opírá o analýzu zbožové teritoriální struktury českého agrárního zahraničního obchodu. Z porovnání agrární bilance před a po vstupu do EU za naše rozhodující obchodní partnery plyně, že vůči Slovensku Česko prohloubilo aktivum na 12,0 mld. Kč ročně, naopak v relaci k Polsku se za stejné období vytvořil obchodní deficit ve výši 6,4 mld. Kč ročně, svou pozici vůči ČR si Německo posílilo růstem záporného salda na 5,4 mld. Kč ročně a v relaci k Rakousku zůstává naše pasivum dlouhodobě na úrovni 1,1 až 1,2 mld. Kč ročně. Se vstupem do EU se potvrdilo, že výhod z rozšíření celní unie v rámci EU 27 využívají ve větší míře bývalé země EU 15.

Klíčová slova: agrární zahraniční obchod, období před vstupem (2001–2003), období po vstupu (2005–2007), struktura, Evropská unie, obchodní aktivum, resp. pasivum, agrární komodity

Five years have elapsed since the CR joined the EU, and it will certainly be useful to consider what the participation in this advanced integration group has brought for the Czech foreign agricultural trade (FAT). If an extraordinary openness is generally typical of national economy, the agricultural sector remains an industry of the national economy with the permanently adverse balance of trade.

The aim of the present paper is to assess how the agricultural sector has withstood the keen competition in the single market as measured by the basic indi-

cators of foreign trade exchange. Impacts expressed by the indicators of active and adverse balance of trade were monitored for the post-accession period (the average of the years 2005–2007) compared to the pre-accession period (the average of the years 2001–2003).

The analysis of the Czech FAT was done by a routine method. In the introductory part, basic macroeconomic characteristics of Czech FAT before and after the CR joining the EU are given. The assessment of the impact of the accession to the EU is based on an

analysis of the commodity and territorial structure of Czech FAT, namely agricultural export, import and balance of trade. Agricultural trade is defined by Chapters 01 to 24 of the "EU Combined Nomenclature (CN)" and on the basis of a 4-digit code in the detailed classification.

MATERIAL AND METHODS

As the system of data collecting by the Czech Statistical Office (CSO) regarding agricultural trade of the CR with the EU member countries after the 1st May 2004 is different from that of the preceding years, longer-term analyses of the development of the CR foreign agricultural trade are distorted by certain inaccuracies. The statistics of the intra-European Union trade (Intrastat) monitors only the movement of goods of the firms that have exceeded the set turnover, the so-called assimilation threshold, which was set for the CR at 4 million CZK in the case of "arrivals" (import), and at 2 million CZK in the case of "despatches" (export). The trade of those firms that have not exceeded the threshold is additionally calculated by the CSO using specific mathematical and statistical methods. So the terms "despatches" and "arrivals" should be used for business transactions realized in the EU single market, but for the reasons of continuity and simplification of the text, the terms "export" and "import" are used in the following (Tuček 2007; Pohlová 2009).

All foreign agricultural trade was monitored without distinguishing the customs tariff regimes, i.e. including the active and passive improvement and other business operations that do not represent import and export to the free circulation of goods.

The present analysis is exclusively based on the aggregate values of agricultural trade that are included in the "Database of Foreign Trade" (CSO) without a possibility of assessing the influence of the price or quantity factor on the FAT development. This database provides information on imports and exports of agricultural commodities in kg only at the level of the eight-digit items of the CN and therefore it is not possible to evaluate the development of trade in weight units at higher levels of aggregation. If changes in the balance are evaluated as "improvement", it is an increase in the active balance or a decrease in the adverse balance, while a decrease in the active balance or an increase in the adverse balance is considered as the "worsening" of this indicator. The increase or decrease in import and/or export always means the increase or decrease in their money value.

The analysis of the Czech FAT is based on the official data for the period 2001–2007 as they were published by the CSO (as to the 31st Oct. 2008). Additionally, the latest preliminary data for 2008 were included in the evaluation (as to 5th Feb. 2009). These data are updated subsequently, i.e. they are usually incomplete, but because of their actuality, they significantly enhance the informative value of the drawn conclusions.

Territorially, the Czech FAT is divided into the trade with the EU 15 member countries, the EU 12 member countries, with the countries of the European Free Trade Association (EFTA consists of Iceland, Liechtenstein, Norway and Switzerland), with the "Other advanced market economy countries" (OAMEC), the "Commonwealth of Independent States" (CIS), developing countries (DC) and the "European Transition Economies" (ETE comprises Albania, Bosnia and Herzegovina, Montenegro, Croatia, Kosovo, Macedonia and Serbia).

RESULTS AND DISCUSSION

Basic pre- and post-accession macro characteristics of FAT

A brief analysis of the basic macroeconomic characteristics of the Czech FAT presented in this part, based on the longer time series, aims at describing the impacts of the CR joining the European integration space on the development of its basic indicators (Table 1).

The evaluation of the Czech FAT development for the period 2001–2007, and especially the assessment of the influence of the CR accession to the EU on the basic indicators of the FAT have documented in general that:

- Joining the EU brought about a substantial increase in the dynamics of the FAT turnover growth with the slightly higher dynamics of growth of agricultural exports compared to imports. These are obvious implications of the implementation of single market rules enhancing the mutual trade;
- In spite of the generally very dynamic growth of the total foreign trade, the share of agricultural export in the total Czech export takes up a stable position at the level of 3.7 to 3.9%. Similarly, on the side of imports, the position of agricultural import is also stabilized with the long-term higher percent share in the total imports in the range of 5.1 to 5.5%.
- In the post-accession period characterized by the average dynamics of agricultural export and/or import, the dynamics of agricultural export was slightly

Table 1. Basic indicators of the development of the CR foreign agricultural trade

Year	Export		Import		Balance mil. CZK	Counterbalancing of imports by exports (%)
	mil. CZK	share of agricultural export in total export (%)	mil. CZK	share of agricultural import in the total import (%)		
Ø 2001–03	47 799	3.7	70 793	5.1	-22 994	67.4
Ø 2005–07	84 647	3.9	115 197	5.5	-30 550	73.5
2008*	106 612	4.3	129 909	5.4	-23 296	82.1

*preliminary data as to 15. 2. 2009

Source: CSO, Statistics of Foreign Trade; Pohlová et al. (2007)

higher (Index 177) compared to agricultural import (Index 163) for the period 2005–2007 in comparison with the pre-accession period 2001–2003;

- Higher dynamics of agricultural export compared to import must have been reflected in the indicator of counterbalancing of agricultural import by exports. This indicator expressed by three-year averages was improved by ca. 6 percentage points; nevertheless, the Czech FAT permanently remains at the position of a sector with the negative balance of foreign trade, which is increasing. For the observed three-year averages, the deficit of agricultural balance increased by one third (Kraus 2008);
- The preliminary data of the CSO on agricultural balance for 2008 show a year-on-year decrease in the negative balance by 7.2 billion CZK. It mainly resulted from the movement of the Chapter CN 24 “Tobacco and tobacco products” from the negative balance of trade to the positive balance (5.4 billion CZK), and the same movement occurred in the Chap. CN 17 “Sugars and sugar confectionery”, where the active balance was recorded (1.9 billion CZK). But it is possible that the preliminary data will change in connection with their updating.

It is to note that the dynamic development of Czech foreign trade including agricultural trade started immediately after the foreign trade monopoly was abolished, so the adaptation process to the conditions of the European integrated market already began in the early nineties. The above outlined basically positive development does not, however, reveal certain serious structural problems of the Czech FAT reducing its efficiency with serious implications for the competitiveness of the traditional agricultural commodities. The following more detailed analysis of the commodity and territorial orientation of the Czech FAT will try to identify some emerging problems in connection with the CR accession to the demanding environment of the EU single market.

Development of the pre- and post-accession territorial structure of FAT

In introduction, it will certainly be useful to elucidate the position of the Czech FAT in the framework of the EU agricultural trade and the role Czech agricultural trade is playing within the total agricultural trade of the EU 27. In average for the period 2004–2006, the share of the CR in the total agricultural import to the EU 27 was 1.2% (1.4% in 2007), while the share in the total agricultural export of the EU was 0.9% (1.1% in 2007). Obviously, the given share characteristics clearly document to what extent we can influence the EU agricultural trade or what real weight is attributed to our potential suggestions for the improvement of trade conditions in the single market.

Table 2 shows the development of the territorial structure of the Czech FAT in the period before and after the accession of the CR to the EU by regions and/or countries of the main business concern.

The above-mentioned territorial structure of the FAT before and after the CR accession to the EU implies a number of important conclusions, namely:

- the rules of the single market are promoting mutual trade of the member countries, which in the specific case of the CR led to the strengthening of our trade orientation to the EU countries in the observed period, in agricultural exports by 5.6 p.p. to 88.7% and in agricultural imports by 8 p.p. to 84.3%;
- due to a deeper integration, our foreign trade relations with the majority of the third countries were reduced, particularly with developing countries, when in the same period the share of Czech agricultural exports in the total agricultural exports to DC decreased by 1.6 p.p. and that of agricultural imports by 3.9 p.p.;
- the shares of the groups of the third countries in Czech agricultural trade, with the exception of DC, are of little significance. In average for the period 2005–2007, measured by the turnover of the total

Czech agricultural trade, the countries of the EFTA accounted for 0.7%, the OAMEC for 1.2% and the CIS for 2.2%.

In connection with the accession to the EU, it is important to answer the question whether there were any changes in the basic territorial orientation of the Czech FAT from the aspect of the particular countries.

The detailed analysis of the FAT development after the CR accession to the EU in comparison with the pre-accession period shows that in the observed period, there were no substantial structural changes in agricultural exports and imports by our major trading partners (Table 3). It is confirmed that the long-term stability of goods flows is high and that a crucial role in agricultural trade is played by the neighbouring countries, which is applicable to Czech agricultural export to a yet greater extent.

Among the 12 top destinations, Slovakia, Germany and Poland take up the leading positions in the Czech agricultural export as well as in agricultural import. These three countries account for more than 70% of the total agricultural exports among the 12 countries in question, both in the pre- and the post-accession period. Due to the generally higher diversification of agricultural imports, the share of these three countries decreases to little more than one half. Our closest neighbours, including Austria and also Hungary, account for more than a four-fifth share in agricultural export for the observed countries and period and for an about two-third share in agricultural import (Table 3).

To illustrate the weight of these TOP 12 countries in the Czech agricultural export, it is to be stated that they had in average more than a four-fifth share (86%) for the three-year period 2005–2007. In relation to the 2001–2003 average, their share in the total agricultural export increased by ca. 7 p.p. For the same time period, these countries had a three-quarter share in the total agricultural import and their share increased by ca. 9 p.p.

In a more detailed insight, i.e. in relation to the TOP 12 countries, where except Russia these are exclusively the EU member states on the side of exports, it can be stated in general that we maintained higher export dynamics in connection with the accession to the EU (Index of Growth 192) compared to agricultural imports (Index of Growth 182).

It can be concluded from the aspect of the CR, that in the framework of the foreign trade exchange with the above-mentioned top 12 trading partners, our negative balance increased by 6.7 billion CZK in total. The comparison of agricultural balance before and after the accession shows that the active balance of the CR with Slovakia increased by 7.5 billion CZK per year, on the contrary, the trade deficit of 6.4 billion CZK per year was recorded in relation to Poland; Germany strengthened its position in relation to the CR by the growth of the negative balance by 2.2 billion CZK per year, and in relation to Austria, our adverse balance remains at the level of 1.1 to 1.2 billion CZK per year for a long time. Among the most important trading partners of the CR, Poland and Germany benefitted from the enlargement process to the highest extent. As for Hungary, the accession

Table 2. Development of the territorial structure of the Czech FAT before and after CR accession to the EU (in %)

	EU 27	EU 15			EU12			Developing countries		
		total	Germany	Austria	total	Slovakia	Poland			
Turnover	Ø 2001–03	78.4	46.6	19.7	3.6	31.8	16.1	9.2	3.7	9.4
	Ø 2005–07	85.7	50.9	22.9	4.7	34.8	16.6	11.9	4.2	6.3
	2007	87.2	51.5	23.3	4.6	35.8	16.8	12.3	4.3	5.3
Export	Ø 2001–03	83.1	38.7	21.2	3.3	44.4	24.8	11.4	3.2	4.9
	Ø 2005–07	88.7	43.5	23.8	4.9	45.1	26.7	10.2	4.7	3.3
	2007	91.2	44.6	24.4	4.7	46.5	27.1	10.7	4.6	2.1
Import	Ø 2001–03	75.5	51.9	18.7	3.9	23.6	10.2	7.8	4.0	12.3
	Ø 2005–07	83.5	56.0	22.3	4.6	27.2	9.1	13.1	3.9	8.4
	2007	84.3	56.6	22.5	4.6	27.7	9.0	13.5	4.1	7.6

Note: The remainder to 100% is "Other countries"

Source: CSO, Statistics of Foreign Trade

to the EU led to a reduction in the Czech agricultural deficit by 0.8 billion CZK.

Figure 1 illustrates the changes in the development of the foreign trade agricultural balances of the CR with

the major trading partners for the three-year period after the accession in comparison to the three-year average before the CR accession to the EU; the data for 2007 are included.

Table 3. The shares of the TOP 12 countries in the total agricultural export and/or import of the CR in the pre- and post-accession period

	\varnothing 2001–2003	\varnothing 2005–2007	\varnothing 2001–2003	\varnothing 2005–2007
	mil. CZK	%		
Czech agricultural exports to.....				
Slovakia	11 848	22 590	31.2	31.1
Germany	10 123	20 211	26.7	27.8
Poland	5 429	8 671	14.3	11.9
Austria	1 551	4 154	4.1	5.7
Hungary	1 541	3 986	4.1	5.5
Italy	604	2 705	1.6	3.7
United Kingdom	1 298	2 213	3.4	3.0
Netherlands	1 336	1 881	3.5	2.6
Romania	737	1 356	2.0	1.9
France	778	1 783	2.0	2.4
Russia	1 047	1 905	2.8	2.6
Belgium	1 620	1 256	4.3	1.8
TOP 12 in total	37 912	72 711	100.0	100.0
Czech exports in total	47 798	84 647	*	*
Czech agricultural imports from				
Germany	13 298	25 668	26.3	27.9
Poland	5 524	15 194	10.9	16.5
Slovakia	7 244	10 520	14.3	11.4
Netherlands	3 826	7 577	7.6	8.2
Italy	4 093	6 884	8.1	7.5
Spain	4 163	6 060	8.3	6.6
Austria	2 788	5 275	5.5	5.7
Hungary	2 836	4 481	5.6	4.9
France	2 482	4 115	4.9	4.5
Belgium	1 814	3 000	3.6	3.3
United Kingdom	946	1 618	1.9	1.8
Denmark	1 461	1 566	2.9	1.7
TOP 12 in total	50 475	91 958	100.0	100.0
Czech imports in total	70 793	115 197	*	*

Source: CSO, Statistics of foreign trade; rank of countries according to 2005–2007 average; Pohlová et al. (2007)

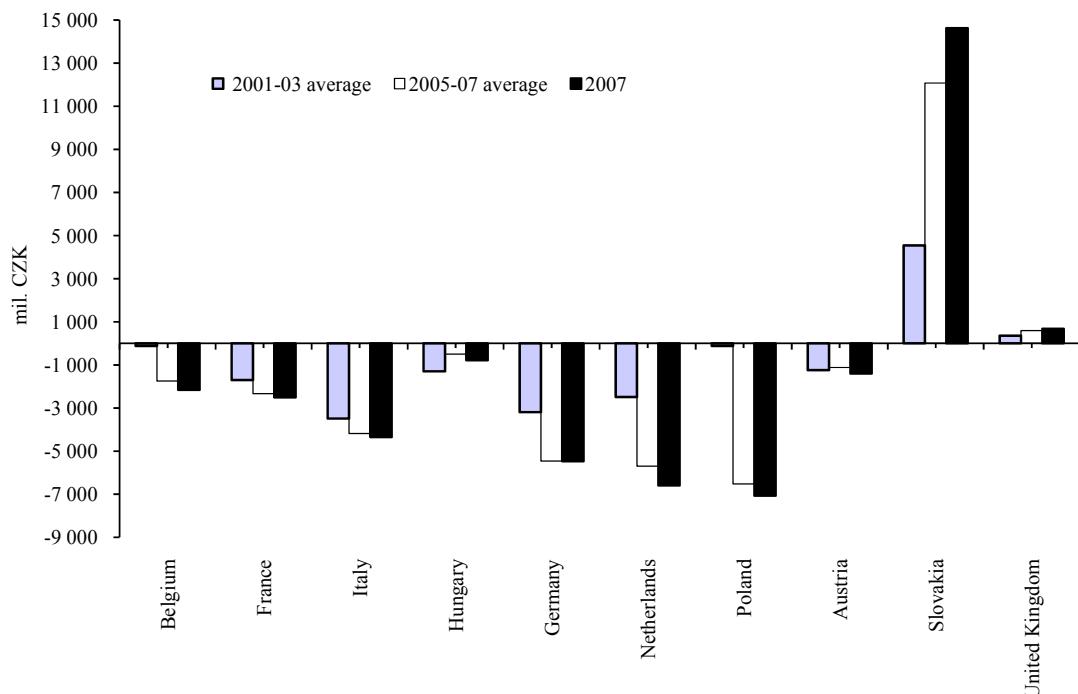


Figure 1. Development of agricultural balances of the CR with selected countries of the EU 27 (mil. CZK)

Source: Pohlová et al. (2007)

Development of the commodity structure of the Czech FAT¹ before and after the accession

In the established structure and in the latest rank according to the results of the Czech FAT for 2007, the commodity aggregations with the active balance of foreign trade will be analyzed at first, and then the analysis of the aggregations with the adverse balance will follow. In the established structure, it means that the development of the FAT will be evaluated in the two-digit code of CN (Chap. 01–24) at first and then in the four-digit code, while the drawn conclusions will be derived from the movement of agricultural trade for the three-year average of 2005–2007 compared to the average of 2001–2003, when the CR was not the EU member country yet.

Selected commodity aggregations in the two-digit code

The development of trade balances in the two-digit code for the periods before and after the CR accession to the EU shows that the traditionally exporting agricultural chapters maintained privileged positions for the observed period and significantly participated in the agricultural active balance. The comparison of the situation on the basis of the three-

year averages for the periods before and after the accession shows that the development of the balance of trade in the crucial export chapters had markedly different dynamics in some chapters with an obvious impact on the structure of the positive balance. In the framework of our active participation in the foreign trade exchange of agricultural products, the membership of the CR in the EU brought about the following structural changes for the commodities with the more significant export volume:

- Our insignificant exports of cereals before joining the EU increased to such a volume after the CR accession to the EU that they form a crucial component of the active balance at a ca. 28% share.
- The Chapter CN 04 “Dairy produce, eggs, honey” lost its privileged position given by its share in the agricultural active balance, specifically there is shown a decrease by 6.4 p.p. compared to the pre-accession period, nevertheless, it continues to take up the top positions in the long run.
- The Chapter CN 01 “Live animals” significantly contributes to the active balance, by a substantially higher volume than in the pre-accession period (an increase by 7.3 p.p.). It increased its share in the positive balance to more than one fifth, confirming the trend that in the single market, we realize less profitable exports of the lower value-added commodities to a greater extent.

¹Background data see source 3 and 4.

- The Chapter CN 12 "Oil seeds and oleaginous fruits" is an important bearer of the active balance in the long run. Exports in this chapter are highly fluctuating, but the given aggregation contributes more than one sixth to the active balance of agricultural trade.
- After the accession to the EU, the position of the Chapter CN 22 "Beverages, spirits and vinegar" worsened, where the active balance of the item "Beer" was markedly increasing but it was diminished by the adverse balance in the trade in wine and spirits and by lower exports of the non-alcoholic beverages.
- The accession to the EU changed the position of the Chapter 17 "Sugar and sugar confectionery" with respect to its share in the active balance. The common market organization (CMO) for sugar, effective since the accession to the EU, led to the twofold growth of the active balance (Index of Growth 198) for the observed period. The quota was cut after the CMO reform, and subsequently sugar export decreased. In 2007 the aggregation showed the adverse balance for the first time (ca. -15 million CZK).
- Substantially more diversified agricultural imports compared to exports caused that the satisfaction of the essential import needs of the sector² is connected with an increase in the number of aggregations with the adverse balance. The analysis of the FAT development in the given commodities before and after the CR accession to the EU indicated the following changes:
 - The Chapter CN 08 "Edible fruit and nuts" remained at the position of the greatest net import in the observed period and this fact did not change even after the CR accession to the EU. As the dynamics of the increase in deficit in the Chap. CN 08 was lower, the share of the given negative balance in the total volume of the negative agricultural balance slightly decreased.
 - From a slightly net import position of the Chapter CN 02 "Meat and edible meat offal" at the level of ca. 1 billion CZK in average for the period 2001–03, the chapter becomes the second (after CN 08 "Edible fruit and nuts") heaviest import item in average for the period 2005–2007. The negative balance dropped by 7.1 billion CZK in the same period, and according to the preliminary data, this negative balance increased from year to year by further ca. 0.5 billion CZK in 2008.
- In most years, usually the third heaviest import chapter CN 07 "Edible vegetables and roots and tubers" with the adverse balance for the observed period increased with the approximately same dynamics as the total negative agricultural balance (Index 149); the growth rate of the negative balance in the Chapter CN 20 "Preparations of vegetables" was almost the same (Index 147).
- The Chapter CN 23 "Residues and waste from the food industries, prepared animal fodder" is characterized by a high volume of the negative balance, when mainly the soya-bean oilcake is imported. The negative balance decreased in average by 1.0 billion CZK in the observed period, and similarly the deficit in the Chapter CN 06 "Live trees and other plants" dropped by ca. 0.9 billion CZK in the same period.
- The dynamics of the growth of imports in the Chapter CN 18 "Cocoa and cocoa preparations" was also high, in average from 1.5 billion CZK per year in the initial period to 2.4 billion CZK per year for the average of the years 2005–2007 (Index 156).
- In the observed period, when the relation between exports and imports in the Chapter 24 "Tobacco and tobacco products" was roughly balanced in average for the period 2001–2003, the chapter moved to an adverse balance of 1.9 billion CZK per year in average for the period 2005–2007. The Chapter CN 24, belonging by the nomenclature to the FAT, currently has a positive balance of 3.6 billion CZK resulting from the export expansion of the aggregation "Cigars, cigarettes".

Selected commodity aggregations in a more detailed classification

In this subchapter³, we present a more detailed evaluation of the agricultural balance in the selected commodity aggregations and/or items in the detailed classification in the pre- and post-accession period, while the post-accession period is updated by the 2008 data. The evaluation in the four-digit code is based on the average values for the period 2005–2008 (Table 4). Those commodities were selected that traditionally belong among the underlying products of Czech agriculture, but in spite of this fact, they increasingly worsen the adverse balance of the sector by their massive imports. The evaluation based on less aggregated commodity groups is more specific and

²These are mainly imports of commodities that cannot be grown in our climatic conditions (subtropical fruits, bananas, seasonings etc.) and imports of raw materials designed for the non-agricultural use.

³The order of commodity aggregations is the same as in the customs tariff.

enables to reveal more easily some of the causes of the continuing losses of positions of Czech agriculture in the segment of the foreign trade relations.

CN 01 "Live animals": The positive balance of trade in live bovine animals, swine and poultry accounts

for ca. 95% of the total value of the Chapter CN 01 (in average for the period of 2005–08). Joining the EU brought about an obvious opportunity for increasing the exports of commodities valorising national labour to a smaller extent. The active balance of trade in

Table 4. Development of balance for selected commodity aggregations (four-digit code) in the period 2001–2008

CN	Commodity	2001	2002	2003	Ø 2001–2003	2005	2006	2007	2008	Ø 2005–2008
0102	Live bovine animals	514	436	547	499	1 920	1 954	1 878	2 104	1 964
0103	Live swine	119	233	133	161	401	205	158	-163	150
0201	Meat of bovine animals	576	198	-54	240	-1 033	-1 105	-1 319	-923	-1 095
0202	Meat of swine	-338	-435	-939	-571	-4 260	-4 890	-5 319	-5 952	-5 105
0203	Meat and edible offal of poultry	-247	-463	-692	-467	-1 319	-1 655	-1 537	-1 808	-1 580
0401	Milk, cream, not concentrated nor containing sugar	-48	-344	-585	-325	2 468	3 711	4 589	4 107	3 718
0402	Milk, cream, concentrated or containing sugar	3 961	2 186	2 851	2 999	2 507	1 787	2 478	1 928	2 175
0403	Fermented milk products	-471	-536	-549	-518	-196	491	829	933	514
0405	Butter	947	620	615	727	133	152	-55	-318	-22
0406	Cheese and curd	184	-251	-553	-207	-1 863	-2 393	-3 101	-2 833	-2 548
0407	Eggs in shell and not in shell	63	158	200	140	-150	-285	-451	-451	-334
10–1006	Cereals excluding rice	-178	-24	2 564	787	5 982	4 063	4 883	5 029	4 989
1107	Malt	1 412	1 547	1 732	1 564	1 482	1 652	1 686	2 429	1 812
1205	Rape seeds	2 429	1 725	224	1 459	1 360	-453	3 162	3 266	1 834
1210	Hops (cones)	795	719	599	704	709	676	556	667	652
1514	Rape, colza or mustard oil	476	173	2	217	735	1 032	1 467	1 191	1 106
1701	Cane, beet sugar, sucrose	774	399	81	418	3 791	2 493	372	1 110	1 941
1702	Sugar, other syrups, molasses	-388	-409	-414	-404	-704	-805	-1 349	-571	-857
1704	Confectionery, not containing cocoa	835	1 173	1 642	1 217	1 373	1 268	1 107	1 432	1 295
1806	Chocolate, food preparations containing cocoa	-1 328	-1 127	-1 160	-1 205	-1 784	-2 000	-1 768	-1 074	-1 656
1902	Pasta	-21	-69	-66	-52	-155	-209	-198	-167	-182
1905	Bakers' wares	-1 032	-1 053	-1 258	-1 114	-1 992	-1 947	-2 128	-1 927	-1 998
2004	Preserved vegetables, frozen or not frozen	-678	-725	-789	-730	-909	-1 032	-1 357	-1 419	-1 179
3005										
2202	Non-alcoholic beverages	1 000	1 202	431	878	191	521	856	405	493
2203	Beer	2 490	2 423	2 599	2 504	3 355	3 833	4 132	3 972	3 823
2204	Wine	-1 217	-1 315	-1 457	-1 330	-2 414	-2 506	-2 850	-2 860	-2 657
2207	Spirits	-551	-502	-595	-549	-785	-1 126	-764	-750	-856
2008										
2304	Soya-bean oilcake	-4 048	-4 081	-3 709	-3 946	-3 553	-3 465	-3 676	-4 061	-3 689

Source: "FAT Yearbooks" (VÚZE, ÚZEV); Pohlová et al. (2007)

living bovine animals (CN 0102) increased 3.9 times in average for the period 2005–2008 compared to the 2001–2003 average, and in the same period, the active balance of trade in *live swine* (CN 0103) did not basically change, while in 2008 the Czech Republic took the position of the **live swine importer** for the first time. In average for the period of 2005–2008, the active balance of trade in *live poultry* (CN 0105) also increased to 0.7 billion CZK per year. In average for the period of 2005–2008, the active balance of trade in live bovine animals, swine and poultry reached 2.8 billion CZK per year. Currently, for the last two observed years (2007, 2008), 90% of our balance of trade in live animals is realized in the EU single market (80% of our trade is with the EU 15).

CN 02 “Meat and edible offal”: The negative balance of trade in the meat of bovine animals, swine and poultry currently accounts for a ca. 90% share in the Chapter CN 02. Trade in these competitive items has been dynamically increasing since our accession to the EU and it is the bearer of the negative balance of trade, which represents approximately one third of the total agricultural deficit by its volume. In the commodity aggregation, the CR accession to the EU led to an expected high increase in the negative balance (Foltýn 2009) with serious consequences for the production dimension of the particular industries of animal production. In the commodity *meat of bovine animals* (CN 0210 and 0202,) the CR switched from the position of net exporter in the pre-accession period to the position of net importer when the average negative balance amounted to ca. 1.1 billion CZK per year for the period 2005–2008. Compared to the pre-accession period, the average negative balance of trade in *meat of swine* (CN 0203) increased 8.9 times and it amounted to 5.1 billion CZK per year for the last four years. In the observed period, the negative balance of trade in *meat of poultry* (CN 0207) also increased, 3.4 times. These three commodities weighed down the negative balance of the sector with 8.4 billion CZK per year in average for the period of 2007–2008.

CN 04 “Dairy produce, eggs⁴, honey”: It is the second most important export aggregation, where the particular items play a different role in how they contribute to the active or adverse balance of trade. Some problems in the evaluation of this chapter arise from its definition in the customs tariff because it comprises heterogeneous goods that were aggregated without any technological or nutritional alliance. After the CR accession to the EU, there occurred crucial

structural changes with cardinal implications for the economics of agricultural enterprises in the Chapter CN 04, while the causes of these implications cannot be interpreted sufficiently exactly without a more detailed classification.

The participation in the EU single market led to a crucial change in the flows of trade in the commodity aggregation *CN 0401 “Milk, cream, not concentrated nor containing sugar”* when the market in consumer milk was opened and milk became an important trade commodity. After the accession to the EU, this food item is exposed to a keen competition with price impacts on the participants in the given market segment, regardless of frontiers. An increasing interest in milk in our neighbours completely changed the position of this commodity in our active agricultural trade. The aggregation in question was permanently in the adverse balance in average for the period 2001–2003, but after the accession to the EU, the situation cardinally changed and milk became a crucial bearer of the positive balance at the average amount of 3.7 billion CZK per year for the period 2005–2008 (at the level of 4.3 billion CZK in average for the period 2007–2008). Territorially, our active balance in this aggregation is recorded in the trade with the EU 15. The commodity aggregation *CN 0406 “Cheese and curd”* was markedly afflicted regarding its contribution to the agricultural active balance because the loss of positions in the international agricultural market already occurred before our accession to the EU, similarly like in a number of other commodities. In the Czech Republic, the adverse balance of ca. 0.2 billion CZK per year for the period 2001–2003 increased to 2.5 billion CZK per year, i.e. more than 12 times compared to the pre-accession period. The negative balance of cheeses amounted to 3.1 billion CZK in 2007, followed by a year-on-year decrease to 2.8 billion CZK in 2008.

CN 10-1006 “Cereals excluding rice”: This strategic commodity underwent a crucial structural change; it gradually transformed to an export position and became an important part of the active balance of the agricultural sector. In spite of high inter-year balance fluctuations, the ten-year period of 1993–2002 can be described as an equalized period whereas our balance of trade in cereals has been permanently active since 2003 showing the trend of a marked growth in connection with the EU membership. For the pre-accession period of 2001–2003, the average active balance of cereals was 0.8 billion CZK per year, which would subsequently exceed the level of

⁴The commodity eggs currently accounts for about fifth of the Chapter CN 04 measured by the turnover, and honey accounts for ca. 4%.

5.0 billion CZK per year in average for the period 2005–2008 (Index 634).

CN 17 “Sugar and sugar confectionery”: As stated above, our balance of trade increased approximately twice after the CR accession to the EU and after the new market organization was adopted. The balance of trade equalized after an insignificant decrease in 2007, and in 2008, the positive balance amounted to 1.9 billion CZK per year. Changes in the internal structure of the trade balance of the Chapter CN 17 subsequently influenced the overall position of our trade in sugar.

Joining the EU did not basically influence our balance of trade in the aggregation *CN 1704 “Confectionery not containing cocoa”*, where the positive balance remained approximately at the level of 1.3 billion CZK per year, and it implies that we failed to increase the balance of trade in these products in the framework of the FAT similarly like in other higher-processed commodities.

CN 22 “Beverages, spirits and vinegar”: Commodities of quite different properties and also of a different position in the foreign trade are included in the Chapter CN 22 according to the customs tariff.

After CR accession to EU, this chapter was losing its importance as a traditionally exporting one and if it did not contain the item “Beer”, it would be largely loss-making.

The commodity aggregation *CN 2202 “Non-alcoholic beverages”* is a bearer of the positive balance, but compared to the pre-accession period, the positive balance decreased by less than 0.4 billion CZK per year in average for the period 2005–2008.

The CN 2203 “Beer” is a heavy export item. After the accession to the EU, the item beer maintained its relevant export dynamics and position, permanently appurtenant to this commodity in agricultural trade. In average for the period 2005–2008, it had the active balance of 3.8 billion CZK per year, which was an increase by 1.3 billion CZK per year compared to the period 2001–2003. Beer is produced under the capital participation of foreign brewery groups that contributed to the modernization of this industry and to the increase in beer output.

In the aggregation *CN 2204 “Wine”*, compared to the pre-accession period when the average negative balance of the years 2001–2003 was 1.3 billion CZK per year, the average balance increased about twice

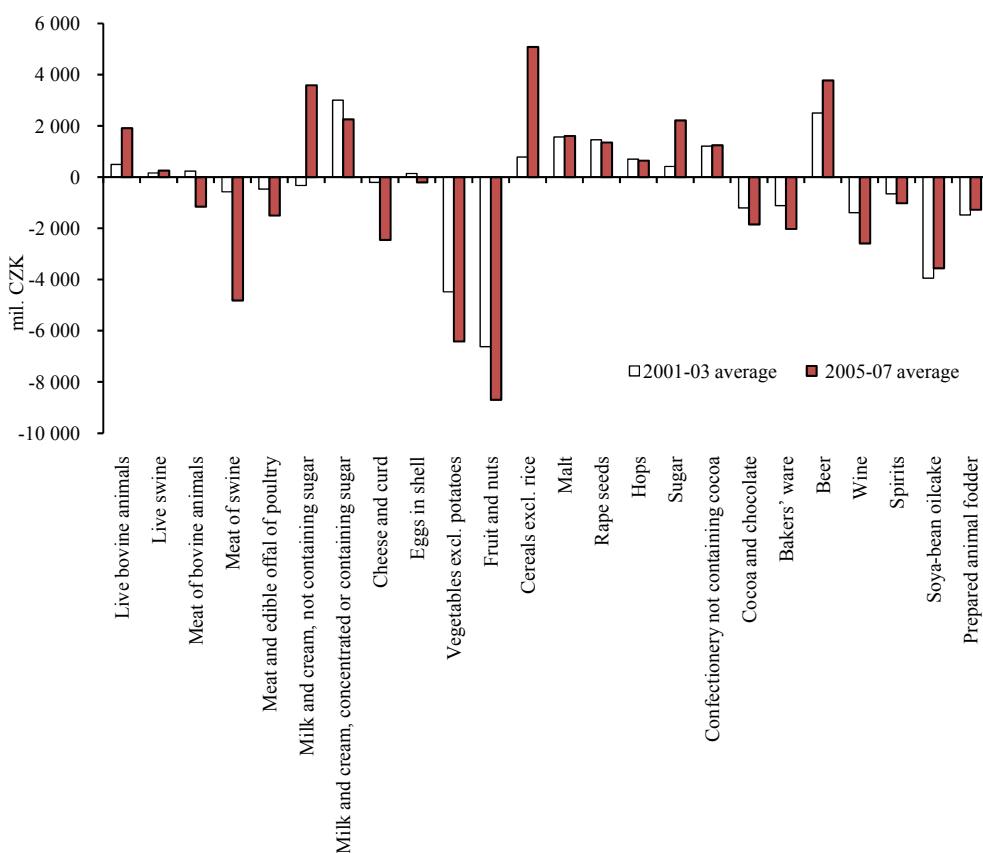


Figure 2. Development of the balances of the Czech FAT for the selected aggregations before and after the EU accession (mil. CZK)

Source: Pohlová et al. (2007)

for the period 2005–2008. At approximately 50% self-sufficiency in wine production, the entry to the single market brought about a further enrichment of the supply of quality wines.

The commodity aggregation CN 2204, 2208 "Spirits" permanently weighs down our total agricultural balance in the long run, while in average for the period 2005–2008 the negative balance amounted to the value 0.9 billion CZK per year. It is a cost of the enrichment of the assortment supply to match the European standard by this trade.

CN 2304 "Soya-bean oilcake": This item is a crucial import item in the Chapter CN 23 "Residues and waste from the food industries, prepared animal fodder", whereas this chapter was the fifth largest originator of the negative balance of trade in 2007. The soybean meal is basically an irreplaceable source of proteins in feed mixtures, which is also reflected in the long-term stable volume of the negative balance. For the period of our membership in the EU, a certain decrease in this negative balance was recorded, obviously related to the decreasing production of pigs and/or to the potential price movements. Compared to the average of 2001–2003, when the negative balance amounted to 3.9 billion CZK per year, it decreased in average to 3.7 billion CZK per year in 2005–2008.

Figure 2 illustrates the development of trade balances of the FAT for the selected aggregations and/or items before and after the CR accession to the EU.

CONCLUSION

The position of agricultural trade in the framework of the total foreign trade was maintained after the accession to the EU. The share of agricultural export in the total export maintained its stable position at the level of 3.7 to 3.9%, while the share of agricultural imports slightly increased in the range of 5.1 to 5.5%.

The dynamics of the total negative balance of the FAT substantially increased after the accession to the EU. The higher dynamics of growth of agricultural export compared to import was reflected in the indicator of counterbalancing agricultural imports by exports in the post-accession period; expressed by the three-year averages, the counterbalance improved by 6 p.p. to 73.5% in average for the period 2005–2007.

In connection with joining the EU, no cardinal structural changes occurred in the FAT in relation to our major trading partners. Trade flows of agricultural goods appear to maintain the long-term high stability and are mostly directed at the neighbouring countries.

The comparison of agricultural balance before and after the accession to the EU with our major trading partners shows that the active balance of the Czech Republic with Slovakia increased to 12.0 billion CZK per year; on the other hand, the trade deficit with Poland amounted to 6.4 billion CZK per year for the same period; Germany strengthened its position in relation to the CR by an increase in the negative balance to 5.4 billion CZK per year, and our adverse balance with Austria remains at the level of 1.1–1.2 billion CZK per year for a long time. Obviously, these countries maintain an important position from the aspect of our trade policy interests.

Massive imports of meat of all types are a serious consequence of the CR accession to the EU. The meat of bovine animals as a net export commodity in the pre-accession period moved to a deficit position, the negative balance in the pork meat dramatically increased, by 8.9 times for the observed period, and the deficit of the balance of trade in the poultry meat increased 3.4 times.

Increasing imports of the above-mentioned commodities, and of many others, are a result of the loss of competitive positions of both Czech farmers and Czech processors in the home market. The industrially advanced EU 15 countries, mainly Germany, mostly benefitted from the comparative advantages realized through the foreign trade exchange, but at the present time, it is also Poland that takes advantage to an increasing extent. In connection with the greater purchasing power, on the one hand, these cheaper imports allow the chain stores to realize profitable trade margins and to maintain consumer prices of food at such a level that will ensure the required sales but, on the other hand, they cause that domestic producers lose markets for their production and the food security of the CR is diminishing.

Great structural changes after the accession to the EU occurred in the traditional pro-export aggregation of dairy produce. Exports of the consumer milk, mainly to the EU 15 countries, were substantially increasing. In the aggregation of fermented milk products, the Czech Republic became a net exporter after the accession to the EU, compared to the adverse balance before accession. It applies exclusively to the trade with the EU member countries, when from the negative balance of trade with Germany the Czech Republic moves to the total active balance of the given commodity by increasing exports to the EU 10 countries.

Cereals become the second most important export commodity in the single market when the average positive balance increased 6.3 times for the observed period. There may be some exceptions, but this trade

is practically exclusively realized in the single market. According to a simple estimation, at the average export value of 5.0 billion CZK per year and at the current intervention price of 101.3 EUR/t, the sales of the surplus production of cereals of the relevant quality are ensured in the Czech agricultural sector, which represents a minimum export volume of ca. 1.7 million tons at the exchange rate of 28.0 CZK/EUR. The export of cereals accounts for ca. one fifth of the cereal harvest at the given price parameters. For illustration, at the appreciation of the Czech crown exchange rate (e.g. to 23 CZK/EUR) and if the other conditions are applicable, it would be necessary to export ca. 2.1 million tons, i.e. about one quarter of the cereal harvest. Obviously, the diminishing stocks of monogastric animals reduce the use of cereals for feeding, but it is true at the same time that the sales of increasing cereal surpluses are ensured within the existing safety network through exports at guaranteed prices.

The traditionally heavy export item "Beer" is an example of a commodity that maintained the adequate export dynamics and also the profitable territorial orientation. The average active balance of 3.8 billion CZK per year increased by 1.3 billion CZK per year compared to the 2001–2003 average. After the accession to the EU, beer as a crucial export commodity successfully accelerated the dynamics of growth of the balance in relation to the EU 15 countries at a decrease in the positive balance with the EU 12 and at an almost twofold increase in the positive balance with the CIS.

It cannot be expected in the short run that the negative agricultural balance of the sector in question would markedly decrease. Any liberalization measure on the side of exports, aimed at opening of the world agricultural market, implies that the price relations are determined by the highest-performing world producers and by those who supply goods of excellent quality with the high value added, brand products, national specialities or other commodities of the excellent quality. Potentially, our opportunity for increasing the active balance of the FAT is similar to that of our rivals, i.e. under the very demanding conditions, but we are aware of the fact that the potentially depreciating exchange rate of Czech crown will make all exports cheaper. The volume of agricultural imports from the weight aspect is quite constantly influenced by the irreplaceable imports of the so-called necessitated goods that cannot be produced in our climatic conditions (subtropical fruit etc.) and by the increasing imports of agricultural commodities entering the direct competition with domestic producers of bulk products and

represented by the higher-processed products to a great extent.

The depreciating exchange rate of the Czech crown makes especially the imports of the necessitated goods more expensive, which worsens the trend of the trade deficit growth due to the considerable dominance of agricultural imports over exports – a phenomenon typical of the Czech agricultural sector. From the dynamic aspect, an opposite trend is also applicable: at the increasing prices of import, the competitiveness of domestic producers increases and there arise opportunities for Czech farmers.

If the situation after the accession to the EU was such that our disposable export resources did not find higher sales either in the single market or in the markets of the third countries and that the imports of the underlying agricultural commodities increased rapidly, then a conclusion should be drawn that the Czech agricultural sector and the food industry in general lose their competitiveness in the home and foreign markets. Joining the EU confirms not only the continuation of the negative trend of reducing the dimension of Czech agriculture, but also a further dynamization of the given trend. It was confirmed after the accession to the EU that the industrially advanced countries would benefit to a greater extent from the advantages of the customs union enlargement in the framework of the EU 27. The CR, similarly like the majority of the other new member countries (NMC), except Poland, was not able to take advantage of the agricultural single market and the common trade policy. It was the EU 15 countries to which the vast consumer market of the NMC brought about a sufficient opportunity for the export expansion of especially higher-processed products.

REFERENCES

- Foltýn I. (2009): Dopady agrární politiky na vybrané zemědělské komodity před a po vstupu ČR do EU (Impacts of agrarian policy on chosen agricultural commodities before and after accession of the Czech Republic to EU). Výzkumná zpráva č. 94. ÚZEI, Praha.
- Kraus J. (2008): K rozdílu záporného salda českého agrárního zahraničního obchodu (To the dimension of negative balance of the Czech foreign agrarian trade). Ekonomika polnohospodárstva, 8 (1): 21–33.
- Pohlová K. (2009): Ročenka agrárního zahraničního obchodu ČR za rok 2007 (Czech Foreign Agrarian Trade Yearbook 2007). Výzkumná informace, VÚZE, Praha.

Pohlová K., Tuček P., Kraus J. (2007): Český agrární zahraniční obchod dva roky po vstupu do EU (Czech foreign agrarian trade two years after the accession of the CR to the EU). Výzkumná studie č. 87. VÚZE, Praha

Tuček P. (2007): Možné dopady změn mezinárodního agrárního trhu na český agrární zahraniční obchod (Possible impacts of changes in international agrarian trade on Czech agrarian foreign trade). Výzkumná studie č. 88. VÚZE, Praha.

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