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COMPARATIVE ADVANTAGES OF THE CZECH AGRARIAN FOREIGN TRADE IN RELATION TO THE EU AND THIRD COUNTRIES

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Abstract

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The Czech agrarian trade represents a variable which has been developing in a very dynamic manner over time. In the time period of 2000–2010 alone, the value of its turnover grew up from about USD 2.7 billion to about USD 11.4 billion. In the course of time, the Czech agrarian foreign trade has gradually adjusted its territorial as well as commodity structure. As regards the importance of trading partners, Member States of the European Union have unequivocally come to the fore. Accession of CR to the EU has also left its marks on the existing form of the commodity structure of realized exports and imports alike, while especially the export structure has still been shaping in a significant manner. The paper deals with issues related to development of the Czech agrarian foreign trade with the aim to identify its comparative advantages in the area of the commodity and territorial structure both in relation to the global market (the market of third countries outside the EU) and in relation to the EU27 countries. Following are the outcomes of the paper conclusions. Although the Czech agrarian trade as the whole does not have any comparative advantages both with respect to the market of the EU27 countries and with respect to third countries (the global market), its individual aggregations are able to win through and gain comparative advantages, especially with respect to individual Member States of the EU. In this respect, it is worth mentioning that in 2010, 190 (i.e. nearly one half) out of 390 studied export flows realized to 26 Member States of the EU were competitive. The comparative advantages are more or less evenly distributed among the new and old Member States of the EU. As regards third countries, it may be stated that the Czech agrarian export has comparative advantages only to a significantly limited scope.

agrarian trade, export, import, Czech Republic, EU, third countries, comparative advantages, LFI, RCA, index, territorial and commodity structure

The Czech Republic is a small central European country. The Czech national economy is heavily dependant on foreign trade activities. The Czech Republic is one of the most opened economies around the world. Czech foreign trade structure is represented especially trade in manufactures. The trade in agricultural and food production represents the least important segment of the Czech commodity trade as regards realized values (Vološin *et al*., 2011). In the long run, agrarian trade contributed about five per cent to the total value of the Czech foreign trade (a detailed overview of development of the value of the Czech commodity trade is shown in Tab. I). The Czech agrarian trade has changed its territorial structure in the course of time when the trade with the EU27 countries currently accounts for the prevailing proportion (Bašek, Kraus, 2009); furthermore, the commodity structure of the realized trade has been restructured when the share of processed products with a higher level of value added in the resulting value of realized agrarian trade gradually increased (Horská, 2010). Another important change which arose in the case of the Czech agrarian trade after accession to the

EU is a significant growth of the value of imports which leads to stabilization of the passive balance (Pohlová, 2010) of the Czech agrarian trade on the level of about USD 1.5 billion and this value has not been increasing in any dramatic manner. It is interesting that the share of the agrarian trade in the total commodity trade has begun growing slightly in the past years because the pace of growth of the agrarian trade value exceeded the pace of growth of the total commodity trade in 2005–2008. In 2009, the agrarian trade then proved its better ability to cope with the crisis when the value of the realized exports or imports in the agrarian trade dropped only by 13% or 8%, respectively as compared to the general commodity trade the value of which decreased interannually, both in the case of exports and imports, by 23% or 26%, respectively. The development is fully in accordance with the fact that agricultural and food products belong among indispensable products with a lower degree of elasticity in relation to the decrease of the global economy and individual incomes (Tvrdoň, 2000).

An important specificity of the Czech agrarian trade is its above mentioned considerable orientation on the market of the EU27 countries (Pokrivčák *et al*., 2008). The countries participate in the resulting realized value of the Czech agrarian trade with more than 85% (91% in export and 85% ain import). The share of third countries is currently marginal, with a long-term tendency to decrease (Drabík, Bártová, 2008; Caetano, Galego, 2006), except for imports of products of the tropical and subtropical character. Nevertheless, also in the case of these products, it is the EU27 countries, playing the role of a reexporter, that have got into a significant trade position.

I: *Development of the growth rate of the Czech commodity trade*

					bil. USD						
World – Export	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Agriculture	1,11	1,17	1,40	1,62	2,18	2,99	3,25	4,37	5,53	4,84	4,94
Fuels and Raw materials	1,91	2,02	3,14	2,77	3,63	4,19	4,96	6,28	8,13	6,94	8,69
Processed products	26,03	30,19	39,72	44,33	59,96	71,02	86,93	110,25	132,43	101,10	118,51
Total	29,05	33,38	44,26	48,72	65,77	78,21	95,14	120,90	146,09	112,88	132,14
World – Import	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Agriculture	1,56	1,69	2,02	2,43	3,27	3,99	4,65	5,99	7,10	6,55	6,65
Fuels and Raw materials	4,13	4,36	7,96	5,28	6,47	7,17	10,90	12,03	18,45	11,88	15,19
Processed products	26,55	30,43	38,25	43,52	56,97	65,37	77,87	98,80	116,28	86,41	103,85
Total	32,24	36,48	48,23	51,24	66,71	76,53	93,43	116,82	141,83	104,85	125,69
					bil. USD						
EU27 Export	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Agriculture	0,86	0,94	1,19	1,35	1,89	2,58	2,88	3,98	5,08	4,45	4,51
Fuels and Raw materials	1,79	1,89	2,95	2,61	3,42	3,91	4,68	5,95	7,75	6,53	8,12
Processed products	22,31	26,01	33,62	38,58	51,84	60,43	72,4	92,88	108,3	82,51	95,11
Total	24,96	28,84	37,76	42,54	57,14	66,92	79,96	102,81	121,12	93,49	107,75
EU27 import	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Agriculture	1,12	1,24	1,55	1,86	2,59	3,27	3,93	5,04	5,98	5,65	5,64
Fuels and Raw materials	1,45	1,53	3,17	1,96	2,8	3,18	3,71	4,81	6,1	4,55	5,18
Processed products	21,31	24,1	29,33	32,96	42,87	48,26	57,66	72,76	81,67	58,23	65,45
Total	23,89	26,86	34,05	36,79	48,27	54,71	65,3	82,61	93,76	68,43	76,27
					bil. USD						
Others Export	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Agriculture	0,24	0,23	0,22	0,27	0,3	0,41	0,36	0,39	0,45	0,39	0,43
Fuels and Raw materials	0,12	0,13	0,19	0,16	0,21	0,29	0,28	0,33	0,38	0,41	0,57
Processed products	3,73	4,18	6,1	5,75	8,12	10,59	14,54	17,37	24,13	18,6	23,4
Total	4,09	4,55	6,51	6,19	8,63	11,29	15,18	18,09	24,96	19,4	24,4
Others Import	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Agriculture	0,44	0,45	0,46	0,57	0,68	0,72	0,72	0,95	1,12	0,91	1,02
Fuels and Raw materials	2,67	2,83	4,79	3,32	3,66	3,99	7,19	7,22	12,35	7,34	10
Processed products	5,24	6,34	8,92	10,56	14,1	17,11	20,21	26,04	34,61	28,18	38,4
Total	8,35	9,62	14,18	14,45	18,44	21,82	28,13	34,21	48,08	36,42	49,42

Source: UN Comtrade, own processing, 2012

OBJECTIVES AND METHODS

The text deals with the issues of development of the Czech agrarian foreign trade with the aim to identify its comparative advantages in the area of the commodity and territorial structure with respect to both the global market (the market of third countries outside the EU) and the EU27 countries.

As regards methodology, the analysis deals not only with the development of the general Czech agrarian trade but it also analyses the agrarian trade development with respect to the EU27 countries, with a special attention given to the existing differences between the development of the agrarian trade with respect to EU15 countries (old Member States – herein under only as EU15) and with respect to new Member States (i.e. the states that accessed the EU in 2004 and 2007 – herein, the Member States are referred to only as EU12 countries). It is also important to mention that from the analytical point of view, the whole text (wherever the data enabled this) was drawn up with respect to the agrarian trade development and other variables related thereto in the time framework including the period of 2000–2010.

For the reasons of homogeneity of the data source, the UN COMTRADE database of the United Nations Organisation was selected as the central data source. The selected database enables to follow development of the commodity trade (including its agrarian and food part) according to the Standard International Trade Classification (SITC) (Tab. II, III).

The selected nomenclature enables to classify the commodity trade into ten basic commodity classes (individual classes then include thousands of individual items representing the final structure of the commodity trade). For the needs of the analysis, there have been processed the data on the level of the agrarian trade (the sum of SITC aggregations 0.1 and 4), the trade with fuels and raw materials (the sum of SITC aggregations 2 and 3) and furthermore the trade with processed industrial products (the sum of SITC aggregations 5, 6, 7 and 8). Taking into account that the main goal of the paper is especially an analysis of competitive ability of agrarian trade, the agrarian trade has been divided into 15 aggregations for the needs of a more detailed analysis – see the below stated table – which enable to analyse the structure of the agrarian trade in CR and especially the statute of individual aggregations as regards their competitive ability with respect to the market of the EU27 countries and also with respect to the global trade.

The data obtained from the above specified database have been processed with respect to the development of the proper value of realized exchange (in the current prices in USD). The prices and values of realized exports are usually expressed in the F.O.B. prices, while the value and prices of imports, if applied, are usually expressed in the C.I.F. prices.

The analysis itself deals with the issues of the agrarian trade of the Czech Republic against the background of the agrarian trade in the world and in the EU countries. It has been drawn up using the basic statistical characteristics such as the basic index and the geometric mean. A significant part of the analysis has also been drawn up by means of indexes the goal of which is the characteristics of comparative advantages of the Czech agrarian export (modified RCA indexes developed by Balassa and also the Lafay index have been applied in the paper).

The comparative or, as the case may be, competitive advantage is analysed by means of the RCA index. The concept of the RCA index is based on the Balassa index dating back to 1965 (Balassa,

II: *SITC – The basic classification of commodity trading*

SITC (code)	Aggregation
0	Food and live animals
1	Beverages and tobacco
2	Crude materials, inedible, except fuels
3	Mineral fuels, lubricants and related materials
4	Animal and vegetable oils, fats and waxes
5	Chemicals and related products, n.e.s.
6	Manufactured goods classified chiefly by material
7	Machinery and transport equipment
8	Miscellaneous manufactured articles
9	Commodities and transactions not classified elsewhere in the SITC

Source: UN Comtrade, 2012

III: *The list of aggregations representing the commodity structure of agrarian trade*

S3-00	LIVE ANIMALS	S3-08	ANIMAL FEED STUFF
S3-01	MEAT, MEAT PREPARATIONS	S3-09	MISC.EDIBLE PRODUCTS ETC
S3-02	DAIRY PRODUCTS,BIRD EGGS	S3-11	BEVERAGES
S3-03	FISH,CRUSTACEANS,MOLLUSC	S3-12	TOBACCO,TOBACCO MANUFACT
S3-04	CEREALS,CEREAL PREPRTNS.	S3-41	ANIMAL OILS AND FATS
S3-05	VEGETABLES AND FRUIT	S3-42	FIXED VEG. FATS AND OILS
S3-06	SUGAR,SUGR.PREPTNS,HONEY	S3-43	ANIMAL,VEG.FATS,OILS,NES
S3-07	COFFEE,TEA,COCOA,SPICES		

Source: UN Comtrade, 2012

1965). The Ballasa index provides a simple overview of the comparative advantage distribution (e.g., Proudman and Redding, 2000; Hinloopen and Marrewijk, 2001; Burianová, 2010).

Revealed comparative advantage index (RCA1 – global/regional level)

$$RCA1 = (Xij/Xnj)/(Xit/Xnt),$$

where:
X ... represents exports
i ..... represents the analyzed country
j ..... represents the analyzed sector of the economy (sector of industry or commodity)
n .... represents the group of countries or world
t ..... represents the sum of all sectors of the economy or the sum of all commodities or the sum of all branches.

The RCA1 index analyzes the exporting of commodity "j" in the case of country "i" in proportion to the total exports of the given country and the corresponding total exports of the analyzed group of countries or of the whole world (Hinloopen, Marrewijk, 2001 and Utkulu, Seymen, 2004). A comparative advantage is then proven if the RCA1 index value is greater than 1. If, however, the result of the calculated index is less than 1, it may be asserted that the given country has a competitive disadvantage in the case of the given commodity or group of commodities (Qineti, Rajcaniova, Matejkova, 2009).

The above specified analysis of the competitive ability of agrarian export is supplemented with an analysis of competitive ability of agrarian trade realized between CR and individual Member States of the EU.

The comparative advantage of individual items of the Czech agrarian export with respect to selected countries is analysed by means of the Lafay index. Apart from export flows, the Lafay index (hereinafter only the LFI index) also takes into account import flows. As opposed to the standard RCA index, its advantage is its ability to take into account the intersectoral trade and also re-export. In this respect, its information value is stronger as compared to the traditional index of the obvious comparative advantage (Balassa, 1965). It is suitable to utilize this index in the cases when a relationship between two business partners is analysed. The advantage of the LFI index as compared to the RCA index is also its ability to include any distortions caused by macroeconomic fluctuations (Fidrmuc *et al.*, 1999).

The LFI index enables to analyse the position of every specific product within the foreign trade structure of every specific analysed country or a group of countries (Zaghini, 2005). The LFI index for the given "i" country and for every "j" analysed product or group of products is defined in the following formula:

$$LFI_j^i = 100\left(\frac{x_j^i - m_j^i}{x_j^i + m_j^i} - \frac{\sum_{j=1}^{N}\left(x_j^i - m_j^i\right)}{\sum_{j=1}^{N}\left(x_j^i + m_j^i\right)}\right)\frac{x_j^i + m_j^i}{\sum_{j=1}^{N}\left(x_j^i + m_j^i\right)};$$

where:
$x^i\ j$ and $m^i\ j$ represent exports and imports of "j" product realized by "i" country or a group of countries with respect to the rest of the world or with respect to a selected business partner (partner country). "N" is the number of analysed items (Lafay, 1992). The positive value of the LFI index indicates existence of a comparative advantage within the analysed traded aggregation or a group of aggregations in question. The higher is the resulting value of the index, the higher is the level of specialization of the country in question as regards trade with the given item or a group of items representing agrarian and food trade in this case. And vice versa, the negative value of the LFI index signals that specialization and hence comparative advantages are lacking (Zaghini, 2005).

RESULTS AND DISCUSSION

The competitive ability of the Czech agrarian trade in the context of development of the total value of commodity foreign trade – analysis and discussion

When focusing on the issues of the competitive ability of the Czech foreign trade in the breakdown by individual commodity segments, we will find out that the Czech foreign trade has comparative advantages only as regards the segment of processed industrial products (aggregations 5, 6, 7 and 8 according to the SITC nomenclature). Here, comparative advantages manifest themselves both with respect to the trade with countries within EU27 and outside the internal market of the EU27 countries (for details see Tab. IV and V). Agrarian trade as the whole, despite its continuously increasing value, when the value of agrarian export has grown from USD 1.1 billion to nearly USD 5 billion in the years 2000–2010, does not have any comparative advantages either with respect to the internal market of the EU countries or with respect to third countries. As regards third countries, results obtained by means of the RCA analysis indicate even a lower level of competitive ability of the Czech agrarian export with respect to the offer of other partners than is the level of competitive ability of the internal market of the EU where the reality of the market has been deformed by concurrent influence of the Common Agricultural Policy and the Common Commercial Policy of Member States of the EU.

If agrarian trade as the whole does not reach any comparative advantages with respect either to the market of the EU27 countries or the global (which is represented by "third countries" in this case), questions arise how it is possible that the value of

IV: *Development of comparative advantages of the Czech foreign trade in 2000–2010 (with respect to the EU27 countries)*

CR RCA in relation to EU27	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agriculture	0,43	0,41	0,43	0,43	0,41	0,51	0,51	0,50	0,35	0,50	0,42
Fuels and Raw materials	1,13	1,18	1,62	1,23	1,00	0,91	0,87	0,85	0,57	1,09	0,88
Processed products	1,09	1,17	1,29	1,31	1,16	1,25	1,28	1,20	0,85	1,20	1,08

Source: UN Comtrade, own processing, 2012

V: *Development of comparative advantages of the Czech foreign trade in 2000–2010 (with respect to countries outside EU27)*

CR RCA in relation to „third countries“	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agriculture	0,99	0,79	0,53	0,69	0,59	0,65	0,45	0,38	0,31	0,30	0,28
Fuels and Raw materials	0,19	0,19	0,20	0,17	0,15	0,14	0,09	0,10	0,07	0,11	0,12
Processed products	1,16	1,17	1,18	1,18	1,21	1,24	1,29	1,28	1,37	1,29	1,30

Source: UN Comtrade, own processing, 2012

the Czech agrarian trade has been continuously increasing and also how it is possible that the negative balance of agrarian trade has not been increasing in any dramatic manner. It is necessary to look for answers to these questions not in the analysis of the general agrarian trade but especially in the analysis of its commodity structure because it is the analysis of the commodity structure both with respect to the market of Member States of the EU and with respect to third countries that emphasises the fact that although the Czech agrarian trade as the whole does not have comparative advantages, selected aggregations or rather their items do have these comparative advantages. Making use of the basic characteristic of the commodity structure of the Czech agrarian trade, the following text enables to understand distribution of comparative advantages among individual aggregations of the Czech agrarian trade, and it also provides information about the manner of distribution of comparative advantages with respect to the market of the EU countries and with respect to third countries.

Last but not least, the analysis provides a detailed overview of distribution of comparative advantages of individual aggregations representing the agrarian trade of the Czech Republic with respect to individual EU Members, representing the most important export partner that participates with more than 90% in the Czech agrarian export (the figure for 2010).

The stated Table VI provides a detailed overview of development of the commodity structure of the Czech agrarian trade in the period of 2000–2010. It follows from the provided data (as it has already been mentioned herein above) that the commodity structure is dominated by both exports and imports realized with respect to the EU27 countries. Furthermore, it follows from the presented data that the Czech agrarian trade is significantly concentrated (both in terms of commodities and in terms of territories). It also follows from the individual data stated in the table that products that have already been processed or partially processed with a relatively not insignificant value added are highly represented in agrarian imports. This contrasts with development of the commodity structure of the Czech agrarian export where the proportion of unprocessed products with minimum process per kilogram and only a limited level of value added is still very high (nevertheless, the data characterizing the development after 2006 show certain improvement, when the proportion of processed products and semi-products in the total export exceeded at least 50 %).

The following aggregations have been shaping as the pillars of the Czech agrarian export over the long period of time: milk, cream and milk products, products from flour and cereals, alcoholic drinks, food preparations, tobacco products, livestock, confections, feedstuff for animals, wheat and chocolate and products containing cocoa (in many cases, the fact that export of the products in question is managed by multinational companies influences the significant status within export). The proportion of the above mentioned aggregations in the Czech agrarian export oscillates on the level of about 70%. Agrarian import is dominated with the following items: vegetables and products from vegetables, fruit and products from fruit, meat and meat products, milk and milk products, wheat and wheat products, coffee, cocoa, chocolate, feedstuff, food preparations, and drinks. The proportion of the above mentioned aggregations in the total agrarian import exceeds 85%. Hence, it follows from what was mentioned herein above that both export and import are highly concentrated in a limited number of aggregations.

If we focus our attention on competitive ability of individual aggregations of the Czech agrarian trade both with respect to the EU27 countries and outside the market, it may be stated that only a limited segment of aggregations has comparative advantages in the Czech agrarian export (Bojnec, Ferto, 2009). The competitive ability of the commodity structure of the Czech agrarian export is summarized in the following table (Tab. VII).

It follows from the table that comparative advantages of the Czech export are limited and, in majority of the cases, their existence is determined

VI: *The commodity structure of the Czech agrarian export and import in 2000–2010 (with respect to partners inside the EU27 and outside the EU)*

Export – Value in million USD											
CR/EU27	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
S3-00	26.3	34.4	43.4	44.4	111.6	143.1	157.6	198	246.2	213.9	199.5
S3-01	37.5	59.9	59.7	57.9	114.4	159.1	173	245.8	343.5	320.3	328.4
S3-02	92.3	97.9	86	111.4	216.3	322.1	467.2	644.7	747.1	603.6	611
S3-03	24.7	29.5	34.1	42.1	47.7	55.3	63.3	77.6	85.3	83.5	87.4
S3-04	145.9	113.1	153	236	205.1	368.9	415.5	637.1	848	827.8	721.4
S3-05	82.6	79.8	85	100.7	163.8	264.6	253.3	338.7	385.2	332	376.1
S3-06	41.2	62.8	80.6	99.6	259.4	289.5	248.8	232.9	302.4	234.8	253.8
S3-07	86.3	97.3	106	168.6	167.1	205.4	219.3	282	358.7	310.4	334.7
S3-08	44.3	50.1	49.2	62.7	77.4	109.6	126.8	185.2	253.4	180.3	251
S3-09	70.1	81.7	128.2	149.3	192.6	215.4	269	384	490.3	434	346.7
S3-11	113.5	123.8	151	161.5	204.3	248.9	302.8	403.7	451.6	411.1	381.4
S3-12	69.8	75.4	187.1	85.9	89.6	128.3	105.3	234.1	401.6	355.2	396.1
S3-41	1	0.4	0.4	1.1	1.6	1.7	2.6	2.5	3.7	3.4	3.7
S3-42	18.1	21.9	11.7	12.5	15.6	47.1	59.6	90	124.7	80	201.7
S3-43	11.4	12.1	12.4	17.1	19.5	19.9	20.3	23	38.5	60.1	19.1
Celkem	865	940.1	1 187.8	1 350.8	1 886	2 578.9	2 884.4	3 979.3	5 080.2	4 450.4	4 512
Export – Value in million USD											
CR/Others	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
S3-00	4.2	5.5	3.6	7.2	4.1	6.4	7	8.4	21.6	22.7	32.3
S3-01	2.9	8.4	9.7	2.4	1.6	2.5	3.3	5.1	8.4	6.7	15.6
S3-02	84.9	108.3	83.1	108.4	97.8	106.7	72.8	116.9	107	62.7	85
S3-03	1.1	1.6	1.6	2.2	2	1.5	1.6	1.4	1.7	1.7	1.6
S3-04	65.5	9.9	17.2	34.9	48.6	98.8	64.1	38.3	41.1	43.7	48.9
S3-05	17.2	16.6	15.2	17.2	24.3	29.9	38.6	34.5	40.2	45.4	41.4
S3-06	15.9	33.8	23.3	23.7	23	52.5	55	24.8	29.7	41.7	43
S3-07	2.3	2.7	4.1	9.7	15.5	16.9	17.4	32.6	32.9	30.6	26.9
S3-08	1.8	4.4	4.9	5	6.4	8.1	9.8	12.6	14.6	15.3	23.3
S3-09	8.3	7.1	7.9	12.6	23.8	24.8	29.6	36.5	40.5	38.8	38.4
S3-11	19.4	20.4	25.2	33.7	36.7	44.2	57.4	71.9	86.5	61.3	63.2
S3-12	14.9	10.3	14.6	11.2	9.3	14.7	6.4	2.9	10	12.8	4.7
S3-41	0	0	0	0.3	0.3	0	0.1	0	0.3	0.2	0
S3-42	1.8	2.9	4.8	3.8	1.6	2.4	0.6	2.4	10.4	0.9	0.4
S3-43	0.2	0.3	0.6	0.9	0.4	0.5	0.4	0.9	1.6	1.7	1
Total	240.4	232.2	215.8	273.2	295.4	409.9	364.1	389.2	446.5	386.2	425.7
Import – Value in million USD											
CR/EU27	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
S3-00	11.8	8.7	13.3	14.8	18.5	35.1	37.1	46.2	82.6	98.6	81.3
S3-01	57.7	64.4	85.3	104.9	254.2	428.8	515.1	639.9	839.2	882.8	893.6
S3-02	71.1	83.1	109.4	146.3	219.2	313.1	392.7	544.8	621.8	571.9	605.2
S3-03	34.2	37.3	41.0	45.3	55.6	75.5	81.7	96.3	114.3	102.4	95.6
S3-04	98.2	113.3	134.7	165.5	220.3	261.7	342.1	455.2	563.0	480.2	486.3
S3-05	265.2	283.7	367.7	428.9	498.3	654.5	828.7	984.7	1 126.8	1 019.7	1 104.0
S3-06	55.2	60.1	80.9	66.5	108.0	138.8	153.1	228.5	197.8	211.7	199.4
S3-07	105.3	117.6	133.8	173.8	230.9	304.6	354.1	497.7	591.0	511.2	511.3
S3-08	124.0	142.5	182.3	201.0	270.9	259.5	278.5	347.3	451.1	393.0	364.0
S3-09	129.3	129.1	153.5	191.5	251.7	273.7	327.1	396.9	526.5	485.2	488.2
S3-11	78.6	90.3	111.5	148.9	217.5	253.4	300.3	386.3	452.0	406.8	393.2
S3-12	33.5	35.9	60.6	56.9	106.3	142.2	166.0	261.4	149.0	201.8	216.5
S3-41	7.1	8.2	10.7	12.7	22.7	15.0	13.4	15.5	28.9	25.4	20.7
S3-42	40.7	48.0	54.4	85.7	83.5	82.4	108.7	103.2	178.7	203.6	132.5
S3-43	12.1	14.6	14.5	21.6	33.3	33.2	32.5	39.8	54.8	50.7	46.1

Import – Value in million USD											
CR/World Others	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
S3-00	0.6	0.7	1.0	1.3	1.5	1.6	1.6	1.9	2.7	1.5	1.2
S3-01	14.8	14.5	18.7	36.8	52.5	39.9	40.2	94.3	110.7	97.9	94.7
S3-02	3.7	3.0	5.1	7.4	6.5	0.8	1.7	1.8	2.1	3.2	2.1
S3-03	32.6	40.1	40.7	44.8	47.3	51.8	61.3	78.0	98.7	91.3	99.0
S3-04	16.5	13.7	12.9	21.8	23.3	14.4	17.4	28.9	39.8	29.8	26.8
S3-05	119.9	134.9	163.4	200.4	259.1	322.8	281.8	377.9	459.2	367.9	425.8
S3-06	7.8	6.1	4.6	8.9	11.3	16.7	21.3	25.9	29.0	15.1	16.7
S3-07	88.1	85.1	76.5	98.6	89.5	86.1	94.1	92.5	106.0	81.5	92.5
S3-08	39.3	42.1	35.5	34.8	37.6	35.5	35.4	37.6	59.3	38.1	53.9
S3-09	25.8	31.2	32.7	36.9	42.9	44.1	50.0	66.0	67.7	69.6	69.9
S3-11	10.7	11.2	13.3	17.7	31.9	34.7	41.7	59.6	83.1	68.7	65.9
S3-12	68.6	53.9	44.8	45.2	55.9	49.3	60.6	71.3	49.9	32.8	48.2
S3-41	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.4	0.4
S3-42	7.1	10.2	10.5	12.0	17.1	17.0	12.9	7.7	8.1	8.4	15.6
S3-43	1.4	1.6	2.3	2.0	3.0	2.8	3.4	4.6	5.9	2.7	3.6

Source: UN Comtrade, own processing, 2012

VII: *Comparative advantages of the Czech agrarian export with respect to the EU27 countries and with respect to countries outside the EU*

CR RCA/EU27	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
S3-00	1,04	1,48	1,39	1,29	2,25	1,97	1,92	1,99	1,99	1,71	1,66
S3-01	0,32	0,47	0,38	0,33	0,45	0,44	0,42	0,45	0,49	0,50	0,52
S3-02	0,90	0,87	0,66	0,71	0,98	1,09	1,44	1,37	1,29	1,26	1,19
S3-03	0,44	0,47	0,46	0,50	0,41	0,34	0,33	0,32	0,31	0,33	0,33
S3-04	1,74	1,26	1,34	1,84	1,13	1,50	1,54	1,60	1,54	1,78	1,60
S3-05	0,49	0,43	0,36	0,36	0,45	0,53	0,45	0,44	0,41	0,40	0,45
S3-06	1,83	2,67	2,48	2,84	4,93	4,07	3,25	2,15	2,28	1,89	2,06
S3-07	1,80	1,92	1,61	2,21	1,56	1,38	1,28	1,17	1,14	1,05	1,08
S3-08	1,17	1,18	0,93	1,10	0,96	1,02	1,06	1,10	1,08	0,87	1,16
S3-09	1,73	1,80	2,10	2,12	1,89	1,53	1,73	1,76	1,72	1,64	1,29
S3-11	1,24	1,26	1,20	1,13	1,04	0,97	1,06	1,02	0,95	1,01	0,94
S3-12	1,65	1,69	3,09	1,38	1,09	1,14	0,90	1,51	2,14	1,94	2,27
S3-41	0,38	0,13	0,10	0,25	0,22	0,20	0,26	0,18	0,16	0,20	0,19
S3-42	0,94	0,96	0,36	0,34	0,30	0,62	0,65	0,72	0,63	0,56	1,38
S3-43	1,84	1,80	1,30	1,59	1,22	1,01	0,92	0,74	0,74	1,75	0,51
CR CRA /World Others	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
S3-00	0.992	1.238	0.891	1.710	0.934	1.056	1.341	1.411	3.713	4.710	5.817
S3-01	0.129	0.362	0.495	0.096	0.055	0.063	0.104	0.135	0.190	0.187	0.367
S3-02	8.080	9.456	8.905	9.201	6.625	5.689	4.834	5.712	4.726	3.952	3.910
S3-03	0.033	0.048	0.054	0.060	0.048	0.029	0.036	0.029	0.035	0.041	0.034
S3-04	2.139	0.316	0.600	1.003	1.181	2.050	1.540	0.644	0.536	0.804	0.835
S3-05	0.483	0.460	0.467	0.405	0.491	0.454	0.678	0.512	0.577	0.732	0.552
S3-06	1.785	3.132	2.642	2.138	1.949	3.146	3.281	1.512	1.853	2.590	1.871
S3-07	0.138	0.173	0.290	0.515	0.707	0.591	0.694	1.079	1.007	1.016	0.757
S3-08	0.148	0.339	0.428	0.353	0.383	0.416	0.593	0.588	0.559	0.642	0.856
S3-09	0.775	0.622	0.768	0.930	1.446	1.155	1.618	1.668	1.682	1.855	1.580
S3-11	1.146	1.168	1.513	1.523	1.432	1.372	2.018	2.095	2.528	2.235	1.943
S3-12	1.177	0.857	1.539	1.071	0.783	1.023	0.537	0.218	0.721	0.958	0.335
S3-41	0.000	0.000	0.000	0.176	0.619	0.000	0.030	0.000	0.191	0.094	0.000
S3-42	0.083	0.307	0.264	0.157	0.226	0.060	0.013	0.343	0.400	0.026	0.036
S3-43	0.117	0.189	0.340	0.371	0.129	0.141	0.131	0.212	0.309	0.511	0.214

Source: UN Comtrade, own processing, 2012

by the fact that the Czech Republic executes most of its own exports within the market of the EU27 countries.

With respect to Member States of the EU, the Czech Republic has comparative advantages in the case of 8 or 9, as the case may be, commodity aggregations out of the total number of the 15 studied aggregations. They are the following aggregations: livestock, milk and milk products, cereals and products from cereals, sugar and confections, products from coffee and cocoa, and also products containing chocolate, feedstuff, food preparations, alcoholic and non-alcoholic drinks and tobacco products. Generally, it may be stated that it is obvious with respect to the EU27 countries that the number of aggregations having comparative advantages is not quite negligible. Nevertheless, fewer aggregations – four or five, as the case may be –have comparative advantages with respect to the market of third countries. They are as follows: livestock, milk and milk products, sugar and confections and alcoholic and non-alcoholic drinks. During some years, there also arises a comparative advantage in exports of cereals and tobacco products. Hence, it follows from the above specified findings that the agrarian trade of the Czech Republic shows comparative advantages mostly with respect to the EU27 countries, representing the major driving force of growth of its value.

Comparative advantages of the commodity structure of the Czech agrarian trade with respect to individual Member States of the EU

So as we could better understand the distribution of comparative advantages of the Czech agrarian trade with respect to the EU27 countries, the drawn up text has been supplemented with the following section dealing with the issues of the current (2010) trade between the Czech Republic and individual Member States of the EU (Tab. VIII and IX).

It follows from the provided data that in the long-term perspective the most important trading partners of the Czech Republic as regards exports are the following countries: the Slovak Republic, Germany, Poland, Hungary, Austria, Italy, Great Britain, France and the Netherlands. In 2005–2010 alone, the countries participated in the Czech agrarian export with 80% (in the case of trading only with the EU27 countries, their share reached even 90 %). As regards agrarian import, the most important partner countries were as follows: Germany, Poland, Slovakia, Italy, the Netherlands, Spain, Austria, Hungary, France and Belgium. The share of these countries in the total value of agrarian imports directed to CR achieved about 75% in 2005–2010 alone. As regards imports realized only from the EU27 countries, the contribution of the above mentioned countries oscillates on the level of 90% or more. If, besides the share of individual Member States, we are also interested in the dynamics of growth of the value of realized transactions, then the following may be stated: At the time after accession of the Czech Republic to the EU, CR showed the highest dynamics of growth of its agrarian export with respect to the following partner countries: Portugal, Luxembourg, Cyprus, Italy, Sweden, Malta, Ireland, France, Denmark and Romania. The growth rate of the value of agrarian export to our traditionally strong export destinations was under the average of the EU27 countries in its majority. As regards the agrarian import in the same period, the highest dynamics of the value growth was shown in the case of the following partner countries: Portugal, Romania, Poland, Ireland, Belgium, the Netherlands, Luxembourg and Austria. The share of our traditionally strong import partners was under the average of the EU27 countries, except for Poland and Austria, as it was in the case of exports.

It follows from what was mentioned herein above that as regards the growth dynamics of the Czech agrarian trade, the statuses of the EU12 and EU15 countries differ. In the case of the agrarian export it is obvious that the growth rate of realized transactions is higher as regards the EU15 countries as compared to the EU12 countries. In the case of development of the value of realized agrarian import, the situation is just the opposite.

Tab. X shows an overview of distribution of comparative advantages with respect to the realized exchange of agricultural and food products between the Czech Republic and individual partner countries of the EU27 (in this case, the analysis of development of the LFI index has not been executed only for the year of 2010 alone but for the whole studied period of 2000–2010 – this has been done in view of the need to compare data about the development of comparative advantages on the bilateral level with data on the development of comparative advantages calculated with application of (the above mentioned) RCA indexes on the level of the market of the EU countries as the whole, and furthermore on the level of the market of third countries).

It follows from the results shown in Table 10 that the Czech Republic does not have comparative advantages either with respect to the market of the EU12 countries or with respect to the market of the EU15 countries. Nevertheless, on the level of individual countries, CR has comparative advantages with respect to the following states: Finland, Ireland, Malta, Romania, Slovakia, and Slovenia (the situation in 2010). With respect to the other countries, the Czech agrarian export as the whole has no comparative advantages. Comparative advantages exist only on the level of the selected segment of aggregations (nevertheless, it is appropriate to emphasise that the values of the calculated LFI index significantly oscillate over time which also leads to a changing status of the Czech agrarian export with respect to individual Member States).

The following Tab. XI shows a detailed overview of the current situation in the area of distribution of comparative advantages of the Czech agrarian

VIII: *The commodity territorial structure of the Czech agrarian export with respect to Member States of the EU in 2010*

in mil. USD	S3-00	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-11	S3-12	S3-41	S3-42	S3-43	Total
Austria	48.49	9.25	12.02	6.43	42.74	8.66	45.55	8.00	4.87	20.38	14.99	0.27	0.08	73.98	4.22	299.92
Belgium	5.48	3.74	4.39	0.90	26.74	2.80	2.66	21.91	4.10	7.01	0.79	0.54	0.00	0.00	0.32	81.37
Bulgaria	0.38	0.63	10.30	1.49	3.46	1.28	1.98	0.13	0.61	2.41	1.19	6.07	0.01	0.04	0.02	30.00
Cyprus	0.00	0.00	0.34	0.01	0.34	0.00	0.03	0.00	0.10	0.19	0.31	0.46	0.00	0.00	0.00	1.78
Denmark	0.00	1.45	2.13	1.03	0.89	0.18	0.95	8.00	6.87	0.89	4.12	7.95	0.00	0.00	0.26	34.73
ES12 2007	87.26	266.19	241.45	52.90	315.85	317.40	87.30	164.51	132.80	212.18	223.78	108.94	3.11	113.37	8.40	2 335.44
ES15 1995	112.26	62.19	369.57	34.46	405.51	58.70	166.48	170.23	118.21	134.48	157.64	287.21	0.54	88.29	10.73	2 176.50
ES27 2007	199.52	328.38	611.02	87.37	721.36	376.10	253.77	334.74	251.00	346.66	381.42	396.15	3.65	201.67	19.13	4 511.95
Estonia	0.10	0.22	0.17	0.09	0.75	0.58	0.27	0.16	0.94	1.02	1.26	0.00	0.00	0.01	0.00	5.57
Finland	0.00	0.11	3.91	0.20	1.67	0.39	0.76	0.05	3.04	0.39	5.39	2.52	0.01	0.00	0.00	18.43
France	3.05	2.63	19.96	6.66	19.97	1.74	10.97	35.68	7.38	15.65	2.05	0.00	0.02	0.00	0.61	126.37
Germany	34.02	30.59	217.82	14.01	268.65	33.41	31.15	58.49	76.43	20.48	71.21	15.20	0.05	4.77	4.63	880.92
Greece	3.97	0.01	0.15	0.02	0.09	0.47	0.48	0.64	0.79	1.14	3.79	0.78	0.00	0.33	0.00	12.67
Hungary	14.69	25.21	38.11	4.80	19.31	15.13	15.34	24.72	4.13	27.01	17.70	2.27	0.06	5.85	1.78	216.11
Ireland	0.00	0.37	0.08	0.43	1.45	0.15	1.84	0.04	0.01	0.48	1.05	13.66	0.00	2.09	0.00	21.67
Italy	7.83	0.98	76.10	2.59	8.50	5.76	1.72	2.05	10.31	24.17	12.65	198.61	0.31	4.51	0.52	356.62
Latvia	0.19	0.11	0.21	0.17	1.00	0.11	0.23	0.17	3.68	1.37	1.65	0.20	0.00	0.50	0.00	9.59
Lithuania	2.24	0.28	1.44	0.45	2.78	2.54	1.22	4.42	2.16	3.90	3.63	1.43	0.00	0.68	0.08	27.24
Luxembourg	0.00	0.02	1.72	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00	1.82
Malta	0.00	0.21	0.00	0.01	0.03	0.04	0.14	0.08	0.11	0.10	0.04	0.00	0.00	0.02	0.00	0.76
Netherlands	6.22	12.15	18.26	0.27	4.10	1.98	10.19	8.59	2.04	10.66	1.52	3.35	0.02	2.60	0.07	82.01
Poland	22.39	15.31	37.30	6.80	147.56	30.88	16.41	33.19	52.20	48.20	36.91	7.47	0.05	23.46	2.47	480.60
Portugal	0.07	0.08	1.49	0.04	3.00	0.00	0.00	0.27	0.08	0.78	0.01	0.00	0.00	0.00	0.00	5.82
Romania	7.71	1.59	6.85	2.12	16.13	20.49	5.10	2.68	4.86	13.54	1.50	3.79	0.10	0.61	0.07	87.15
Slovakia	31.47	221.97	142.42	36.89	119.89	246.08	44.81	98.76	63.72	112.51	157.20	71.28	2.89	77.78	3.89	1 431.53
Slovenia	8.10	0.66	4.31	0.08	4.60	0.27	1.77	0.20	0.31	1.93	2.38	15.96	0.00	4.44	0.10	45.11
Spain	2.53	0.27	4.09	0.79	8.43	1.83	4.11	0.49	0.96	13.86	4.37	0.15	0.04	0.00	0.00	41.92
Sweden	0.29	0.05	6.45	0.28	1.89	0.18	1.86	10.60	0.69	5.18	20.40	6.62	0.00	0.00	0.09	54.59
UK	0.32	0.48	1.01	0.82	17.38	1.15	54.24	15.43	0.64	13.40	15.24	37.54	0.00	0.00	0.00	157.65
World	231.83	343.96	696.00	88.95	770.22	417.50	296.81	361.63	274.35	385.08	444.58	400.81	3.68	202.05	20.09	4 937.53

Source: UN Comtrade, own processing, 2012

IX: *The commodity territorial structure of the Czech agrarian import with respect to Member States of the EU in 2010*

in mil. USD	S3-00	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-11	S3-12	S3-41	S3-42	S3-43	Total
Austria	0.84	67.47	7.76	0.31	36.50	58.12	15.14	24.37	17.38	30.82	21.97	8.00	3.10	5.32	1.09	298.19
Belgium	0.04	43.84	24.37	0.66	25.31	45.10	5.08	33.87	11.25	14.94	2.20	0.55	0.69	6.63	2.27	216.80
Bulgaria	0.00	0.65	0.04	0.00	5.70	5.00	1.22	0.41	0.25	0.12	4.01	1.13	0.07	0.97	0.00	19.56
Cyprus	0.00	0.04	0.01	0.00	0.00	1.84	0.00	0.00	0.00	0.13	0.02	0.00	0.00	0.00	0.00	2.05
Denmark	29.07	16.57	2.82	9.24	0.36	1.46	1.07	5.99	6.52	8.22	2.03	1.95	0.06	0.08	1.10	86.53
ES12 2007	17.78	283.73	272.13	37.37	212.62	210.11	100.38	166.18	60.54	185.28	137.65	93.76	3.59	60.51	5.54	1 847.17
ES15 1995	63.52	609.92	333.06	58.19	273.72	893.88	99.00	345.13	303.46	302.93	255.58	122.72	17.12	72.03	40.54	3 790.80
ES27 2007	81.31	893.65	605.19	95.56	486.35	1 103.98	199.38	511.32	364.00	488.22	393.23	216.48	20.71	132.53	46.07	5 637.97
Estonia	0.00	0.15	0.00	3.26	0.00	0.01	0.00	0.00	0.43	0.11	0.00	0.00	0.00	0.00	0.00	3.96
Finland	0.00	0.11	0.00	0.00	0.42	0.12	0.74	1.69	0.87	1.07	4.48	0.00	0.65	0.00	0.25	10.42
France	2.91	24.35	20.08	3.32	31.66	61.80	12.33	18.20	17.72	14.21	40.22	1.60	0.47	1.19	0.41	250.46
Germany	18.96	329.43	233.62	20.21	96.41	179.16	36.02	132.09	210.04	117.25	50.71	60.65	3.52	28.77	18.14	1 534.96
Greece	0.00	0.01	0.65	0.40	2.25	46.67	0.47	0.10	0.03	0.33	6.50	5.02	0.04	5.10	0.00	67.58
Hungary	2.01	46.48	6.69	0.31	20.03	40.23	19.93	24.20	22.83	22.61	32.98	16.24	0.36	10.25	0.06	265.23
Ireland	0.02	20.54	0.95	3.47	0.00	0.66	1.25	1.95	2.27	6.19	12.16	0.36	0.01	0.00	0.00	49.84
Italy	0.32	19.14	12.81	4.18	59.87	151.91	3.46	20.89	7.06	33.86	62.77	2.47	4.61	5.91	1.14	390.39
Latvia	0.00	0.02	0.12	2.60	0.00	0.03	0.01	0.00	1.53	0.10	0.03	0.00	0.00	0.00	0.02	4.45
Lithuania	0.00	0.43	3.40	1.70	0.49	0.02	0.04	0.18	0.87	1.98	0.11	0.16	0.02	0.28	0.25	9.94
Luxembourg	0.00	0.00	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	1.22
Malta	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Netherlands	10.33	35.77	19.24	5.32	9.90	137.57	11.32	61.18	18.87	44.87	12.20	6.69	1.67	8.38	2.91	386.22
Poland	2.71	192.86	192.98	27.41	96.74	112.11	25.16	103.80	26.69	108.80	37.43	66.31	2.21	9.19	3.06	1 007.45
Portugal	0.00	0.29	1.25	0.01	0.10	0.98	0.00	0.25	0.00	0.73	2.70	32.05	0.00	0.00	0.00	38.37
Romania	0.00	5.76	0.60	0.04	4.44	2.29	1.35	0.84	0.31	1.17	1.45	9.60	0.18	0.04	0.12	28.20
Slovakia	12.77	37.19	67.77	2.04	84.56	46.63	51.40	36.46	7.63	49.46	61.17	0.32	0.75	39.73	2.03	499.91
Slovenia	0.29	0.15	0.51	0.00	0.66	1.92	1.26	0.28	0.00	0.81	0.46	0.00	0.00	0.04	0.00	6.39
Spain	0.04	48.23	7.55	8.52	3.48	200.10	9.04	22.79	4.67	8.53	17.22	1.57	2.07	9.89	0.14	343.85
Sweden	0.00	2.03	0.21	1.03	2.28	2.69	0.22	1.45	0.26	6.20	2.15	0.00	0.10	0.63	12.80	32.03
UK	0.98	2.15	1.75	1.51	5.18	6.41	2.86	20.30	6.54	15.64	18.28	1.81	0.11	0.12	0.29	83.93
World	82.51	988.35	607.25	194.60	513.19	1 529.74	216.10	603.82	417.91	558.07	459.16	264.72	21.14	148.09	49.71	6 654.35

Source: UN Comtrade, own processing, 2012

X: *Comparative advantages of the Czech agrarian export with respect to individual Member States of the EU27 (LFI index)*

LFI index	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	–1,3	–1,3	–0,9	–1,2	–1,1	–1,2	–1,5	–1,3	–1,3	–1,5	–1,1
Belgium	0,4	–0,1	1,8	–0,6	–0,4	–2,1	–2,2	–2,5	–2,2	–3,1	–3,4
Bulgaria	–2,5	–4,1	–3,4	–4,3	–3,2	–5,2	–3,5	–2,0	–2,8	–3,3	–2,0
Cyprus	–24,4	–23,4	–18,6	–17,0	–21,9	–16,5	–5,3	–5,4	–5,4	–2,5	–1,3
Denmark	–7,1	–7,1	–5,4	–4,7	–5,2	–4,4	–2,9	–2,7	–3,0	–4,2	–3,9
Estonia	1,1	–2,7	–0,5	8,8	0,9	–2,8	–2,4	–2,4	–1,7	–2,6	–1,3
Finland	–0,1	–0,3	–0,3	–0,3	0,6	–0,3	–0,7	0,6	1,0	0,8	0,0
France	–1,2	–1,0	–1,3	–1,1	–1,3	–1,3	–1,4	–1,3	–1,4	–2,0	–2,0
Germany	–0,4	–0,5	–0,4	–0,6	–0,9	–0,7	–0,6	–0,8	–1,0	–1,4	–1,3
Greece	–15,8	–18,5	–17,3	–14,0	–15,1	–16,8	–15,6	–13,7	–15,6	–14,0	–15,4
Hungary	–4,7	–3,0	–3,0	–2,1	–1,0	–0,7	–1,5	–0,9	–0,5	–1,8	–1,3
Ireland	–2,0	–1,8	–1,2	–1,1	–1,2	–2,2	–1,9	–2,0	–0,5	0,8	1,0
Italy	–2,2	–2,1	–2,2	–2,0	–1,5	–2,0	–2,1	–1,9	–0,6	–0,4	–0,9
Latvia	–2,4	–3,2	–1,9	–2,5	–3,4	–3,5	–2,1	–2,7	–2,4	0,1	–1,7
Lithuania	0,4	0,4	0,0	0,2	–2,2	–2,4	–2,6	–2,8	–0,1	–0,2	–0,2
Luxemburg	0,1	0,1	0,0	0,0	–0,1	–0,2	–0,2	–0,3	–0,1	–0,1	0,3
Malta	4,1	1,1	N/A	2,0	–1,9	–0,3	0,8	0,2	–0,2	4,2	1,6
Netherlands	–1,6	–1,8	–2,1	–2,3	–2,9	–2,1	–2,3	–2,6	–3,8	–4,3	–3,9
Poland	–0,2	–0,8	–0,8	–0,9	–1,9	–3,2	–3,4	–3,0	–2,6	–4,2	–3,3
Portugal	–0,2	0,0	–0,3	–0,5	–0,5	–0,8	–0,6	–0,5	–3,2	–5,6	–4,2
Romania	0,9	1,1	0,0	1,8	1,5	1,0	1,1	0,9	0,3	1,6	0,8
Slovakia	2,1	1,7	2,0	0,0	0,7	1,8	1,1	1,5	1,9	1,6	2,1
Slovenia	2,4	1,1	1,1	3,4	1,9	1,9	2,2	1,5	1,5	1,8	2,6
Spain	–6,7	–5,9	–6,8	–7,8	–6,7	–7,3	–6,7	–6,0	–6,3	–8,1	–6,8
Sweden	–0,2	–0,1	–0,2	–0,5	–0,3	0,1	–0,2	–0,1	–0,1	0,3	–0,1
UK	0,0	–0,2	–0,2	0,0	0,0	–0,3	–0,3	–0,4	0,1	0,0	–0,3
ES15	–1,0	–1,0	–1,0	–1,2	–1,3	–1,3	–1,3	–1,4	–1,4	–1,9	–1,8
ES12	0,4	0,2	0,2	–0,4	–0,4	–0,5	–1,0	–0,5	–0,2	–1,0	–0,4

Source: UN Comtrade, own processing, 2012

trade with respect to individual partner countries – Member States of the European Union.

Tab. XII then shows data concerning the share of every exported item contained in Tab. XI in the total value of the agrarian export of the Czech Republic. By comparing both tables, it is possible to find out not only distribution of comparative advantages themselves but also the importance of individual partners as regards realized foreign trade transactions. Generally, it follows from the outcomes that despite the fact, having been already mentioned several times herein above, that the agrarian trade of the Czech Republic is not comparative as the whole, its individual segments are comparative. It is not only the character of exported goods but also their final destination that play an important role in this respect. It follows from the below stated Tab. XI that the Czech agrarian export maintains comparative advantages in a whole range of aggregations with respect to individual Member States of the EU. In 2010 alone, the agrarian export was able to find comparative advantages for it in the case of 190 (out of 390) monitored flows of export operations as regards individual studied EU countries.

The above stated data prove the fact that the Czech agrarian export realized on the bilateral level has been maintaining a whole range of comparative advantages for itself. Nevertheless, as regards a number of countries, the value of export flows realized within individual studied aggregations, although they are aggregations having a comparative advantage, represents a negligible quantity.

In this respect, it is vitally important for the Czech agrarian trade, as regards its territorial structure, to maintain its comparative advantages especially in relation to Germany and Slovakia and also to Austria, Poland and Italy because the participation of these countries in the Czech agrarian export achieves nearly 70%. In the case of the above mentioned countries, export operations realized within mere 19 commodity channels (the yellow-red colour) even represent as many as 51.3% of the value of the total Czech agrarian exports. Generally, it seems that the key to the successful growth of the value of the Czech agrarian export is exports realized within the following aggregations: milk and milk products, cereals, stimulants, feedstuff,

XI: *Outcomes of the LFI index related to individual items of the Czech agrarian trade exported to individual Member States of the EU in 2010*

CR LFI	S3-00	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-11	S3-12	S3-41	S3-42	S3-43	Number of competitive flows
Austria	7.94	–9.77	0.70	1.02	1.01	–8.30	5.06	–2.75	–2.10	–1.77	–1.18	–1.30	–0.51	11.44	0.52	7/15
Belgium	2.66	–6.20	–2.32	0.32	8.41	–6.89	0.36	4.48	–0.06	0.68	–0.02	0.16	–0.12	–1.21	–0.26	7/15
Bulgaria	0.60	–0.58	16.32	2.37	–8.40	–10.17	0.16	–0.79	0.37	3.54	–7.89	6.91	–0.15	–2.31	0.03	8/15
Cyprus	x	–0.98	9.12	0.25	9.54	–44.57	0.88	0.08	2.69	2.01	8.16	12.82	0.01	x	x	10/15
Denmark	–13.7	–6.12	1.17	–3.15	0.88	–0.47	0.61	6.58	5.00	–2.84	3.89	8.44	–0.03	–0.04	–0.21	7/15
ES12 2007	1.37	–1.95	–2.17	0.12	0.99	1.09	–0.84	–0.96	1.19	–0.47	1.05	–0.20	–0.03	0.78	0.03	8/15
ES15 1995	1.61	–6.13	3.80	0.02	5.29	–9.68	2.33	–0.59	–1.19	–0.84	0.23	4.61	–0.20	1.00	–0.27	8/15
Estonia	0.89	0.05	1.50	–39.18	6.53	4.93	2.36	1.42	2.85	7.55	11.02	x	x	0.08	0.01	12/15
Finland	0.00	–0.23	9.79	0.50	2.31	0.45	–1.40	–7.37	3.75	–3.77	–6.36	6.31	–2.85	x	–1.12	6/15
France	0.56	–3.41	3.47	1.76	1.41	–10.39	1.68	9.35	–0.55	2.99	–6.43	–0.29	–0.08	–0.21	0.14	8/15
Germany	1.22	–8.34	4.40	0.13	11.22	–3.65	0.55	–0.91	–2.32	–2.46	2.22	–1.03	–0.10	–0.62	–0.30	6/15
Greece	8.33	0.02	0.06	–0.12	–0.69	–17.38	0.83	1.31	1.65	2.27	5.39	–0.35	–0.01	–1.31	x	8/15
Hungary	2.99	–2.90	7.48	1.04	0.68	–4.04	–0.21	1.15	–3.31	1.96	–2.10	–2.51	–0.05	–0.57	0.40	7/15
Ireland	–0.02	–16.6	–0.64	–2.10	2.83	–0.27	2.52	–1.57	–1.91	–4.30	–8.25	26.33	–0.01	4.08	x	4/15
Italy	1.05	–2.31	9.01	–0.17	–6.46	–18.61	–0.20	–2.38	0.54	–0.94	–6.25	27.47	–0.55	–0.13	–0.07	4/15
Latvia	0.84	0.35	–0.19	–24.52	4.49	0.23	0.92	0.72	1.75	5.26	7.18	0.90	x	2.25	–0.18	11/15
Lithuania	3.22	–1.31	–11.35	–6.07	2.06	3.57	1.59	5.63	–0.33	–2.17	4.76	1.43	–0.06	–0.10	–0.88	7/15
Luxembourg	x	0.62	45.25	0.00	0.19	–44.31	–0.04	–0.18	0.02	–3.14	1.25	0.29	0.00	0.05	x	7/15
Malta	0.00	2.37	x	–0.77	0.32	–7.29	1.53	0.86	1.21	1.13	0.42	x	x	0.24	x	8/15
Netherlands	1.42	1.61	4.99	–0.30	0.70	–9.59	2.74	–1.55	–0.69	0.40	–0.38	0.68	–0.12	0.29	–0.19	8/15
Poland	1.92	–6.98	–4.98	–0.57	9.23	–2.06	0.40	–1.49	3.59	–0.34	1.73	–2.20	–0.09	1.74	0.09	7/15
Portugal	0.27	0.14	5.11	0.15	11.72	–0.57	0.00	0.91	0.32	2.64	–1.56	–19.11	x	0.00	0.00	8/15
Romania	3.27	–6.88	2.11	0.84	1.03	5.69	0.39	0.04	1.65	4.21	–1.27	–10.96	–0.20	0.20	–0.13	10/15
Slovakia	–0.14	3.10	–1.38	0.83	–3.28	3.02	–2.74	–0.15	1.12	–0.78	–0.48	1.89	0.02	–0.96	–0.05	6/15
Slovenia	2.91	–0.18	0.33	0.03	–0.05	–6.38	–3.44	–0.86	0.15	–1.82	–0.42	7.69	0.00	1.99	0.03	7/15
Spain	1.17	–2.59	1.47	–0.12	3.70	–10.43	1.39	–1.06	0.18	5.93	1.05	–0.02	–0.10	–0.56	–0.01	7/15
Sweden	0.25	–2.90	5.21	–1.27	–1.70	–3.75	1.27	6.95	0.22	–4.60	14.30	5.65	–0.14	–0.92	–18.55	7/15
UK	–0.44	–1.02	–0.66	–0.58	2.20	–3.13	14.06	–6.53	–3.35	–4.60	–5.49	9.82	–0.06	–0.06	–0.16	3/15
Number of competitive flows	18/27	8/27	18/27	12/27	20/27	6/27	19/27	13/27	17/27	13/27	12/27	15/27	2/27	10/27	7/27	

Source: UN Comtrade, own processing, 2012

XII: *The share of exports of individual aggregations to individual Member States of the EU in the total agrarian export of the Czech Republic in 2010*

CR Export in mil. USD	S3-00	S3-01	S3-02	S3-03	S3-04	S3-05	S3-06	S3-07	S3-08	S3-09	S3-11	S3-12	S3-41	S3-42	S3-43	Total
Austria	0.98%	0.19%	0.24%	0.13%	0.87%	0.18%	0.92%	0.16%	0.10%	0.41%	0.30%	0.01%	0.00%	1.50%	0.09%	6.07%
Belgium	0.11%	0.08%	0.09%	0.02%	0.54%	0.06%	0.05%	0.44%	0.08%	0.14%	0.02%	0.01%	0.00%	0.00%	0.01%	1.65%
Bulgaria	0.01%	0.01%	0.21%	0.03%	0.07%	0.03%	0.04%	0.00%	0.01%	0.05%	0.02%	0.12%	0.00%	0.00%	0.00%	0.61%
Cyprus	0.00%	0.00%	0.01%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.04%
Denmark	0.00%	0.03%	0.04%	0.02%	0.02%	0.00%	0.02%	0.16%	0.14%	0.02%	0.08%	0.16%	0.00%	0.00%	0.01%	0.70%
ES12 2007	1.77%	5.39%	4.89%	1.07%	6.40%	6.43%	1.77%	3.33%	2.69%	4.30%	4.53%	2.21%	0.06%	2.30%	0.17%	47.30%
ES15 1995	2.27%	1.26%	7.48%	0.70%	8.21%	1.19%	3.37%	3.45%	2.39%	2.72%	3.19%	5.82%	0.01%	1.79%	0.22%	44.08%
ES27 2007	4.04%	6.65%	12.38%	1.77%	14.61%	7.62%	5.14%	6.78%	5.08%	7.02%	7.72%	8.02%	0.07%	4.08%	0.39%	91.38%
Estonia	0.00%	0.00%	0.00%	0.00%	0.02%	0.01%	0.01%	0.00%	0.02%	0.02%	0.03%	0.00%	0.00%	0.00%	0.00%	0.11%
Finland	0.00%	0.00%	0.08%	0.00%	0.03%	0.01%	0.02%	0.00%	0.06%	0.01%	0.11%	0.05%	0.00%	0.00%	0.00%	0.37%
France	0.06%	0.05%	0.40%	0.13%	0.40%	0.04%	0.22%	0.72%	0.15%	0.32%	0.04%	0.00%	0.00%	0.00%	0.01%	2.56%
Germany	0.69%	0.62%	4.41%	0.28%	5.44%	0.68%	0.63%	1.18%	1.55%	0.41%	1.44%	0.31%	0.00%	0.10%	0.09%	17.84%
Greece	0.08%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.02%	0.02%	0.08%	0.02%	0.00%	0.01%	0.00%	0.26%
Hungary	0.30%	0.51%	0.77%	0.10%	0.39%	0.31%	0.31%	0.50%	0.08%	0.55%	0.36%	0.05%	0.00%	0.12%	0.04%	4.38%
Ireland	0.00%	0.01%	0.00%	0.01%	0.03%	0.00%	0.04%	0.00%	0.00%	0.01%	0.02%	0.28%	0.00%	0.04%	0.00%	0.44%
Italy	0.16%	0.02%	1.54%	0.05%	0.17%	0.12%	0.03%	0.04%	0.21%	0.49%	0.26%	4.02%	0.01%	0.09%	0.01%	7.22%
Latvia	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.00%	0.07%	0.03%	0.03%	0.00%	0.00%	0.01%	0.00%	0.19%
Lithuania	0.05%	0.01%	0.03%	0.01%	0.06%	0.05%	0.02%	0.09%	0.04%	0.08%	0.07%	0.03%	0.00%	0.01%	0.00%	0.55%
Luxembourg	0.00%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%
Malta	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%
Netherlands	0.13%	0.25%	0.37%	0.01%	0.08%	0.04%	0.21%	0.17%	0.04%	0.22%	0.03%	0.07%	0.00%	0.05%	0.00%	1.66%
Poland	0.45%	0.31%	0.76%	0.14%	2.99%	0.63%	0.33%	0.67%	1.06%	0.98%	0.75%	0.15%	0.00%	0.48%	0.05%	9.73%
Portugal	0.00%	0.00%	0.03%	0.00%	0.06%	0.00%	0.00%	0.01%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.12%
Romania	0.16%	0.03%	0.14%	0.04%	0.33%	0.41%	0.10%	0.05%	0.10%	0.27%	0.03%	0.08%	0.00%	0.01%	0.00%	1.77%
Slovakia	0.64%	4.50%	2.88%	0.75%	2.43%	4.98%	0.91%	2.00%	1.29%	2.28%	3.18%	1.44%	0.06%	1.58%	0.08%	28.99%
Slovenia	0.16%	0.01%	0.09%	0.00%	0.09%	0.01%	0.04%	0.00%	0.01%	0.04%	0.05%	0.32%	0.00%	0.09%	0.00%	0.91%
Spain	0.05%	0.01%	0.08%	0.02%	0.17%	0.04%	0.08%	0.01%	0.02%	0.28%	0.09%	0.00%	0.00%	0.00%	0.00%	0.85%
Sweden	0.01%	0.00%	0.13%	0.01%	0.04%	0.00%	0.04%	0.21%	0.01%	0.10%	0.41%	0.13%	0.00%	0.00%	0.00%	1.11%
UK	0.01%	0.01%	0.02%	0.02%	0.35%	0.02%	1.10%	0.31%	0.01%	0.27%	0.31%	0.76%	0.00%	0.00%	0.00%	3.19%
World	4.70%	6.97%	14.10%	1.80%	15.60%	8.46%	6.01%	7.32%	5.56%	7.80%	9.00%	8.12%	0.07%	4.09%	0.41%	100%

Source: UN Comtrade, own processing, 2012

alcoholic and non-alcoholic drinks and tobacco products.

The above specified data also prove that the Czech agrarian export is extremely concentrated which may represent a threat in the future as regards sustaining the current level of the trade balance. Even in relation to Slovakia and Germany, the high proportion of exports may be characterized as a weak point in case the Czech exports oriented to the markets of these countries get displaced with for example more competitive goods from Poland.

CONCLUSION

It follows from the results of the executed analysis that the Czech Republic has been becoming more dependent on agrarian trading with the EU27 countries. As regards third countries, the trend of stagnation of mutual commercial exchange has been more or less continuing. Although the value of the realized agrarian trade has been growing dynamically, we have to state that the negative balance of the agrarian trade has not been managed to be decreased over a long period of time because the growth rate of agrarian export is very close to the rate of growth of agrarian import. Over a long period of time, the most important trading partners of CR are Germany, Slovakia, Poland, Hungary, Austria, i.e. the countries that are immediate neighbours of CR. Generally, it may be stated that both the commodity and territorial structure of the Czech agrarian trade are very concentrated and not too much diversified. The ten most important aggregations of the Czech agrarian trade contribute more than one half to agrarian export and import.

The following may be stated about the main objective of the paper, i.e. to identify comparative advantages of the Czech agrarian trade in the area of the commodity and territorial structure. Although the Czech agrarian trade as the whole has no comparative advantages both with respect to the market of the EU27 countries and with respect to third countries (the global market), its individual aggregations are able to win through and gain comparative advantages, especially with respect to individual Member States of the EU. When we analyse the structure of the Czech export according to its readily available comparative advantages, we find out that both the commodity and territorial structure are much more concentrated than they may seem to be at first sight, which may entail a significant threat to the export position of CR in the case of any major fluctuations on the European and especially the global market and aggravation of the negative balance of agrarian trade. From the point of view of readily available comparative advantages, the Czech Republic is able to win through especially in Germany and Slovakia. Nevertheless, it has been achieving good results also with respect to a number of other countries (see Tab. XI). As regards the commodity structure, the Czech Republic has been maintaining comparative advantages in the following aggregations that are key to it: milk and milk products, livestock, cereals, drinks, tobacco products and to a limited extent also feedstuff, etc. – see the data for 2010. As regards individual monitored goods flows realized between CR and individual Member States of the EU in 2010, the Czech Republic managed, in general, to win comparative advantages in the case of 190 out of 390 monitored flows, which proves the fact that the position of Czech traders, especially in relation to the market of the EU countries, is not totally bad. Nevertheless, it must be emphasized that the realized commodity structure has certain deficiencies. They include especially a limited share of processed food products in the realized exports. Furthermore, there is a problem as regards generally lower prices per kilogram of the Czech export as compared to the prices per kilogram of the Czech agrarian import (a number of authors point out to the issue). The significant concentration of agrarian trade is also a problem, as it has already been emphasized herein several times and which is also confirmed by a whole range of other studies dealing with the topic. Last but not least, it is appropriate to state that although the value of the Czech agrarian export has been increasing over a long period of time, its situation in many cases is not influenced by the Czech food and agricultural element but rather by foreign investors in many cases (Coca-Cola, Pepsi-Cola, Philip Morris, Nestle, SAB-Muller etc.). It is the exports realized by foreign companies operating on the territory of the Czech Republic that are able to win through a comparative advantage which however is not provided to them by their backgrounds in the Czech Republic but rather the background provided to them by their strong multinational concerns pushing them to markets of more countries. In this respect, it is then important to state that not only has the commodity structure of export an ideal form as regards the value added of exported goods but it does not have an ideal form as regards representation of individual agrarian products either – see the high proportion of for example mineral waters and non-alcoholic drinks containing mineral water in the export (these items may hardly be classified as products of agrarian character) and furthermore there is a problem that for example the currently strongest item of the Czech agrarian export is the export of tobacco products, the relation of which to the Czech agricultural and food production is also more than questionable.

In conclusion, it may be stated that the Czech agrarian trade has maintained its position within the European market with agricultural and food production despite the crisis of 2009, which has led to prevention of any major growth of trade deficit. In this respect, it is important to mention that comparative advantages of the Czech agrarian export have been successfully maintained especially with respect to the most important trading partners and monitored exported aggregations.

SUMMARY

The Czech Republic is a small central European country. The Czech national economy is heavily dependant on foreign trade activities. The Czech Republic is one of the most opened economies around the world. Czech foreign trade structure is represented especially trade in manufactures. The trade in agricultural and food production represents the least important segment of the Czech commodity trade as regards realized values. In the long run, agrarian trade contributed about five per cent to the total value of the Czech foreign trade. The Czech agrarian trade represents a variable which has been developing in a very dynamic manner over time. In the time period of 2000–2010 alone, the value of its turnover grew up from about USD 2.7 billion to about USD 11.4 billion. In the course of time, the Czech agrarian foreign trade has gradually adjusted its territorial as well as commodity structure. As regards the importance of trading partners, Member States of the European Union have unequivocally come to the fore. The following may be stated about the main objective of the paper, i.e. to identify comparative advantages of the Czech agrarian trade in the area of the commodity and territorial structure. Although the Czech agrarian trade as the whole has no comparative advantages both with respect to the market of the EU27 countries and with respect to third countries (the global market), its individual aggregations are able to win through and gain comparative advantages, especially with respect to individual Member States of the EU. When we analyse the structure of the Czech export according to its readily available comparative advantages, we find out that both the commodity and territorial structure are much more concentrated than they may seem to be at first sight, which may entail a significant threat to the export position of CR in the case of any major fluctuations on the European and especially the global market and aggravation of the negative balance of agrarian trade. From the point of view of readily available comparative advantages, the Czech Republic is able to win through especially in Germany and Slovakia. Nevertheless, it has been achieving good results also with respect to a number of other countries (see Tab. XI). As regards the commodity structure, the Czech Republic has been maintaining comparative advantages in the following aggregations that are key to it: milk and milk products, livestock, cereals, drinks, tobacco products and to a limited extent also feedstuff, etc. – see the data for 2010. As regards individual monitored goods flows realized between CR and individual Member States of the EU in 2010, the Czech Republic managed, in general, to win comparative advantages in the case of 190 out of 390 monitored flows, which proves the fact that the position of Czech traders, especially in relation to the market of the EU countries, is not totally bad. Nevertheless, it must be emphasized that the realized commodity structure has certain deficiencies. They include especially a limited share of processed food products in the realized exports. Furthermore, there is a problem as regards generally lower prices per kilogram of the Czech export as compared to the prices per kilogram of the Czech agrarian import (a number of authors point out to the issue). The significant concentration of agrarian trade is also a problem, as it has already been emphasized herein several times and which is also confirmed by a whole range of other studies dealing with the topic.

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