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Challenges for the Global Agricultural Trade Regime after Doha

SERBIA'S FOOD TRADE COMPETITIVENESS AND PTAS IN THE EU INTEGRATION PROCESS[1]

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Abstract: The aim of the paper is to investigate Serbian food trade in the process of EU integration, particularly the effects of EU Preferential trade agreements (PTAs) and CEFTA integration on Serbian food exports. We analyse the developments in Serbian food trade flows from various aspects: the importance and growth of overall food exports and net-exports, intra-regional (with CEFTA) and extra-regional trade (with EU), as well as trade competiveness of Serbian food trade related to its most important foreign trade markets. In spite of the fact that total export from Serbia recorded decrease during the last decade, especially after the Great economic crisis, the Serbian food exports did not follow the same pattern. That points out the importance of the food trading, especially during the crisis. The food trading is the only sector that one country continuously can count on in the world trade, and the main reason for this conclusion we can find in the real nature of this sector – food sector produces goods for human diet as an existential need.

Keywords: food, trade, competitiveness, RCA, RTB, Serbia.

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INTRODUCTION

Serbian exports are characterized by steady growth of foreign trade since 2000. However, trade deficit is also present. For example, very high deficit was reached in 2004 and 2008. Reduction of the deficit occurred in 2009 due to a significant decrease of import with exports slightly declined. Value of Serbia's exports during the first decade of the new century was continuously increasing, except the year after the Great economic crisis in 2008. After that, exports have recovered with a tendency of continuous growth (Crnomarković, 2010).

As far as the agricultural products are concerned, Serbia's trade was constantly decreasing during the last decade of the 20th century. First signs of growth appeared in 2001. However, food export growth did not exceed import growth, and existence of foreign trade deficit was the main characteristic by the end of 2004. A constant foreign trade exchange surplus of agricultural products has been evident since 2005. After a long governance of agriculture trade deficit, period of surplus started due mainly to growing trade export volume with the EU countries. Additionally, Serbia is a member of the CEFTA and Serbian food trade is heavily influenced by a specific trade arrangement between countries in the region. However, the New Member States - NMS (Romania and Bulgaria, as well as Croatia recently) were also members of CEFTA agreement. Change in the political map of Europe brought important changes in the Serbian trade. Therefore, the analysis refers to explanation of Serbian food trade in the process of EU integration. Trade in food items is classified in accordance with UNCTAD methodology. Using several indicators (e.g. geographical concentration index, relative trade balance indicator, RCA indices), changes in geographical composition of Serbian food trade and its competitiveness, which could come along with changes in trade regimes (e.g. EU PTAs and CEFTA) in the process of the EU integration, are elaborated.

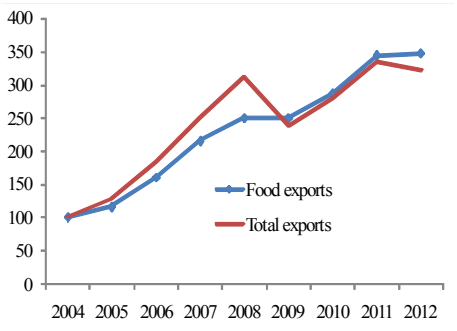
1. SERBIA'S FOOD TRADE – DYNAMICS AND RELATIVE IMPORTANCE

The data used in the analysis cover the period from 2004 to 2012. As mentioned above, the constant surplus in the Serbia's trade of agriculture products is evident from 2005. Several important reasons for the constant food trade surplus can be identified, and the most important are: (1) the growth of investments in the agricultural sector has led to the increase of agriculture exports surplus; (2) signing of the CEFTA 2006 Agreement has caused the increase of agriculture products' exports in CEFTA countries; (3) approving of Autonomous Trade Measures (ATMs) by the EU made Serbian food export more oriented toward the common market. The increase of agriculture products' exports and its trade surplus significantly contributes to the reducing of Serbia's overall trade deficit and consequently brings the agricultural sector in the focus as the sector which can contribute to overall Serbian economy competitiveness growth.

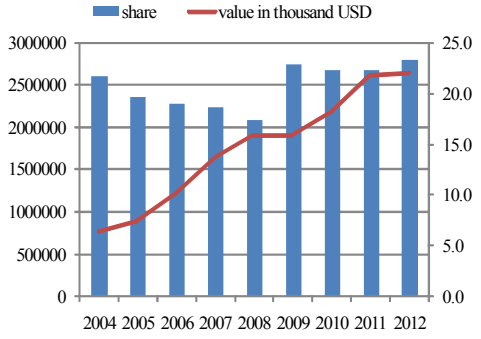
Agricultural products consist of two categories: the first - mainly presented as Food intended for human consumption, or Foodstuffs and the second, marked as Agricultural Raw Materials (Bjelić, 2011). However, there are some differences in the interpretation of their scope using the Standard International Trade Classification — SITC. For example, the Statistical Office of Serbia classifies only some products as agricultural products, from a few sections and divisions of the SITC. These are following: Sections 0 and 1, Divisions 21, 22, 29, 41, 42, 43 (Crnomarković, 2010). In this paper, we investigate Serbia's food trade by using a broader concept of the UNCTAD classification. It defines food by encompassing *All food items* as the sum of trade in the following sections and divisions of SITC: 0 - Food and live animals, 1 – Beverages and tobacco, 4 - Animal and vegetable oils, fats and waxes and division code 22 - Oil seeds and oleaginous fruits. Instead of "All food items" used in UNCTAD terminology, in the following text a shorter term - "Food" for the same category is used.

The dynamics of Serbian food exports in the period 2004-2012 is characterised by continuous increase more intensive than total Serbia's exports (Figure 1a). In the year after the economic crisis, when almost all sectors suffered a great fall of activities, food exports did not have any changes comparing with results in 2008. Due to the increase of agricultural world prices during the crisis, the value of Serbia's food exports predominantly characterized by high share of primary products has recorded significant growing dynamics (Figure 1b). Conversely, faster growth of total compared to food exports has occurred during the period of 2004-2008.

Figure 1: Serbia's food exports and total exports, 2004-2012



a. Serbia's food exports and total exports - indices, 2004=100



b. Serbia's food exports – value and % of total exports
Left scale: Food exports in thousand USD;
Right scale: Share in total Serbia's exports.

Source: Authors' calculation based on data of Statistical Office of Serbia

Comparing with total exports indices, it appears that this sector has not recorded any decrease of exports' value from the year of the global crisis onwards. This highlights the specific role of food, as the major source for satisfaction of basic human needs. Due to the nature, products used in the everyday diet cannot be easily diminished even in the crisis period, so the role of this sector in the international trade hasn`t been affected as others.

2. GEOGRAPHIC CONCENTRATION OF SERBIA'S FOOD TRADE

Since the focus of this paper is on Serbia's food trade in the process of EU integration, the following analysis of changes in its geographical composition is based both on intra-regional (with CEFTA) and extra-regional (with EU-27) trade developments, as well as on food trade competiveness in relation to Serbia's most important trading partners. Within these broad groups of countries, there are some differences concerning the importance of individual countries for Serbian exports. Therefore the group of EU-27 is divided in two subgroups - EU-15 and NMS.

The attitude of UNCTAD experts, concerning the time after the economic crisis, is that "the best performers were countries that could rely on their domestic or regional markets" (UNCTAD, 2010). Serbia is quite a good example of countries confirming correctness of this attitude. Dominant trading partners of Serbia are EU-27 and CEFTA countries. This is particularly important for the food items classified as raw materials or low processed food, as sensitive and perishable group of products. Due to geographic determination, the most important trading partner countries are located in the Serbian nearest neighbourhood.

The results on geographical concentration indicates that Serbia's food exports is oriented mainly toward EU -27 with more than 50% and toward CEFTA countries with more than 40% in the most of observed period (Table 1). The changes in importance of EU-15 group and NMS in Serbia's food exports are evident: NMS are becoming the main Serbian partners for food exports. As a result, the share of NMS in Serbian food exports in 2012 is 29.3%, while EU-15 achieved only 22.4%. The group of NMS has become more attractive for Serbian food exporters mostly after Romania`s and Bulgaria`s joining the EU in 2007. In 2008 and 2009, the share of Serbian food exports oriented toward NMS almost doubled comparing with the share in 2006 and 2007.

Table 1: Serbia's food exports by main trading partner groups, 2004-2012

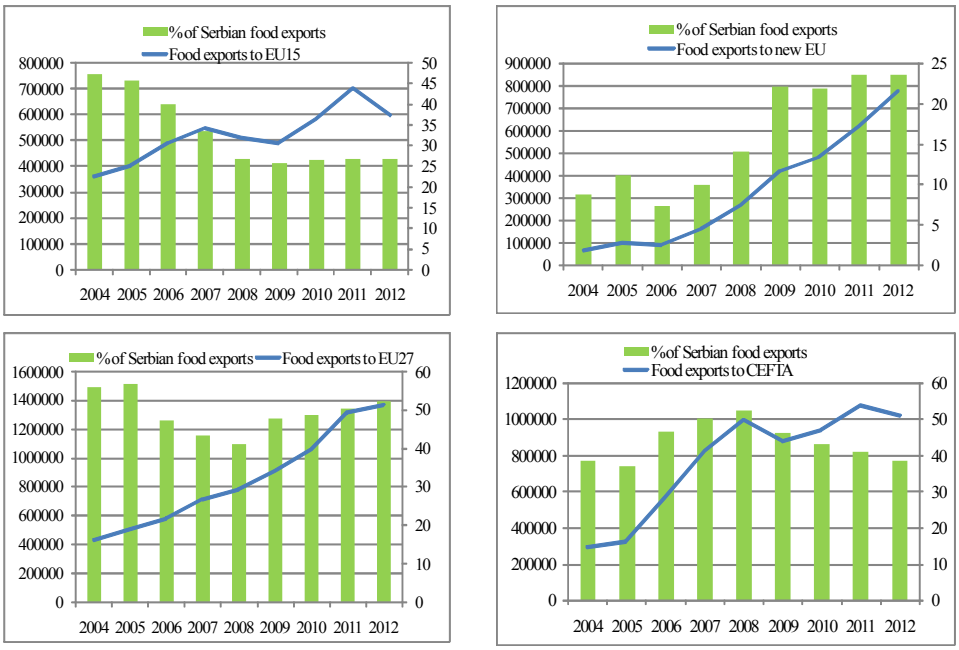
	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU-15									
% of Serbian food exports	47.1	45.5	39.9	33.4	26.8	25.6	26.5	26.6	22.4
% of total Serbian exports to EU15	25.6	21.9	18.6	16.3	13.0	16.9	16.5	16.8	15.4
% of total Serbian exports	10.2	9.0	7.6	6.2	4.7	5.8	5.9	5.9	5.2
EU-new									
% of Serbian food exports	8.8	11.2	7.3	9.9	14.1	22.2	21.9	23.7	29.3
% of total Serbian exports to new EU	11.5	12.5	8.4	10.4	13.2	26.5	22.9	23.6	28.4
% of total Serbian exports	1.9	2.2	1.4	1.8	2.5	5.1	4.9	5.3	6.8
CEFTA 2006									
% of Serbian food exports	38.5	36.8	46.4	50.1	52.3	46.0	43.0	40.9	38.4
% of total Serbian exports to CEFTA2006	28.1	26.5	29.0	28.9	27.4	33.3	33.4	33.4	35.5
% of total Serbian exports	8.4	7.3	8.8	9.3	9.1	10.5	9.6	9.1	9.0

Source: Authors' calculation based on data of Statistical Office of Serbia

Serbia was a user of ATMs, approved by the EU from 2003 until 2010 and the motivating effect for trade of that approval could be seen in great share of EU-15 in Serbian food exports, which reached even 47,1% in 2004. After the first few years, these effects were weakened and aided by economic crisis, causing decreasing share of EU-15 in Serbian food exports. Parallel to this, the importance of the NMS countries in Serbia's food exports continuously grows (Table 1). The main contribution to this dynamics is due to food exports increase to Romania and Bulgaria during last few years. Significant growing dynamics of Serbia's food exports toward the two countries (annually by 73% to Romania and 17% to Bulgaria in the period 2008-2012) caused the increase of share in Serbia's food exports to all EU-NMS, with Romania as the most important food importer from Serbia (Romanian share in Serbia's food exports to EU-NMS was 51% in 2009 and 67% in 2012).

Apart from its high share in the overall Serbia's exports, food is also important component of Serbia's exports to each mentioned group of countries (Figure 2). This component has a very high share especially concerning EU-new countries and CEFTA 2006. For instance, in 2012 the share of food exports in total Serbia's exports to EU-15 was only 15,4%, comparing to its share in total Serbia's exports to EU-new (28,4% in 2012) and especially to its share in total Serbia's exports to CEFTA countries (35,5% in 2012).

Figure 2: Serbian food exports by main trading partners – value and % of total food exports



Left scale: Exports in thousand USD; Right scale: share in total Serbian food exports.

Source: Authors' calculation based on data of Statistical Office of Serbia

Further diversification concerns the fact that Serbia had very intensive foreign trade cooperation with many Central European countries and other countries of the former Eastern Bloc of countries and that some traditional relations have reviled even today (Table 2).

*Table 2: The share of foreign markets in Serbia's food exports (in %)**

	2004	2005	2006	2007	2008	2009	2010	2011	2012
EU15	47.1	45.5	39.9	33.4	26.8	25.6	26.5	26.6	22.4
EU new	8.8	11.2	7.3	9.9	14.1	22.2	21.9	23.7	29.3
EU new_1	7.5	9.3	6.0	7.9	9.8	8.5	7.2	8.3	8.0
CEFTA	38.5	36.8	37.3	41.8	43.5	36.8	35.3	33.2	38.4
CEFTA_1	38.5	36.8	30.5	33.2	33.3	30.2	30.1	28.3	27.2
RoW	5.6	6.5	15.5	14.9	15.5	15.5	16.2	16.5	9.9

** EU new_1 - new EU members without Bulgaria and Romania; CEFTA_1 – without Montenegro (separate data for Serbian exports to Montenegro are not available for the period before 2006).*

Source: Authors' calculation based on data of Statistical Office of Serbia

As mentioned above, EU-15 and EU-new members participate with similar shares in the regional structure of Serbian food exports in the second half of the observed period, contrary to starting years when EU-15 were more represented in this structure and EU-new with almost negligible share. If we diversify results to multiple groups of EU-new countries and EU-new countries without some very important Serbian trade partners, such as Bulgaria and Romania (EU new_1; Table 2), we can conclude that the share of EU-new countries in Serbian food exports has been increasing due to foreign trade with these two countries. Judging to the results from Figure 2 and Table 2, the importance of CEFTA2006 region for Serbian food exports is obvious in the whole observed period, with the greatest positive effects of that integration in 2007 and 2008. Starting from 2008 there is slower growth of food exports value toward CEFTA, resulting in the declining trend of its share in Serbia's food exports. The contemporaneous reorientation of Serbia's food exports toward new EU members is evident. Also, the effects of agreements liberalizing trade relations between contracting parties are obvious and intensive, especially in the first years after the signing.

Previous data analysis of food exports indicates that Serbia is mostly oriented toward two regional integrations - EU-27 countries and CEFTA 2006 countries. The increasing trends in Serbia's food exports toward EU-27 and CEFTA also indicates the important effects of trade liberalization achieved after the signing of CEFTA 2006 and obtaining ATMs from the EU.

3. COMPETITIVENESS OF SERBIA'S FOOD TRADE

The intention in this part is to investigate changes in dynamics of Serbia's food trade competitiveness, appearing parallel with changes in trade regimes in the process of the EU integration. To encompass competitiveness in the observed export group, we have calculated two commonly used sectoral competitiveness indicators: the Relative Trade Balance (RTB) and Revealed Comparative Advantage (RCA). The RTB indicator for commodity j is defined as the ratio between net-exports, i.e. trade balance and total trade:

$$RTB_j = \frac{X_j - M_j}{X_j + M_j} \tag{1}$$

where X_j and M_j are country's values of exports and imports of commodity j, respectively. This indicator reflects not only external competitiveness but the difference between domestic and foreign demand, since trade balance depends on both of them. RTB is calculated based on Serbia's food trade with the rest of the world.

To calculate RCA, we use original Balassa's RCA indicator of the following form (Balassa, 1965)[2]:

$$RCA_{ij} = \frac{\frac{X_{ij}}{\sum_i X_{ij}}}{\frac{\sum_j X_{ij}}{\sum_i \sum_j X_{ij}}} \quad (2)$$

where *Xij* represents exports of commodity j from country *i*. The RCA index is measured as the ratio of the share of country's exports of commodity j in total world exports of commodity j, to the share of country's exports in total world exports. RCA value higher than 1 indicates that country *i* has comparative advantage in production of commodity *j*, and the greater this index is, then the stronger advantage is.[3]

Figure 3 presents Serbia's food net-exports value and food RTB indicator, along with total RTB. Food RTB as one of the simplest measures of competitiveness is obtained as a share of Serbia's food net-exports in its total value of food trade. Negative value of this index is registered only in 2004, while positive in all other years. This dynamic has also contributed to the reducing of the overall trade deficit and total RTB as well.

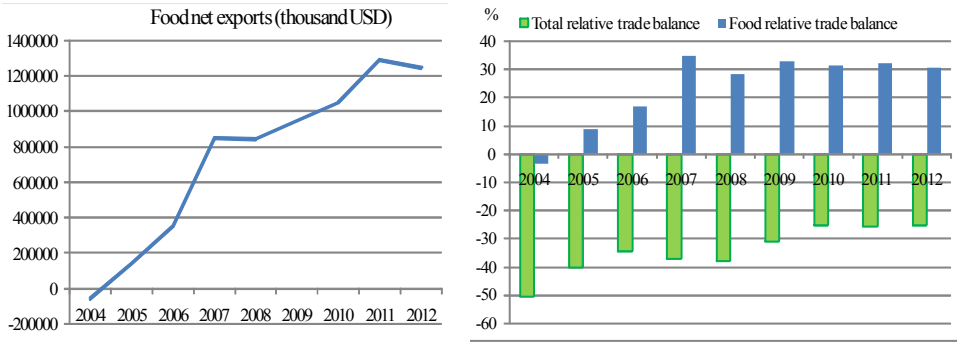
[2] This index as well as its alternative specifications are commonly used in the empirical literature to evaluate international competitiveness on sectoral level as is the case in this paper, but usually on lower levels of aggregation (e.g. Fertö and Hubbard, 2003). About modifications of Balassa RCA index and other trade measures of competitiveness see also in Latruffe, 2010.

[3]Additionally, we calculate RCA in its symmetric form, known as Revealed Symmetric Comparative Advantage (RSCA) (Laursen and Dreier, 1997, Pavličkova, 2013):

$$RSCA = \frac{RCA - 1}{RCA + 1}$$

with values varying from -1 to 1, and positive values indicating comparative advantage. This form of index is useful measure for the econometric modeling of trade competitiveness, which would be one of the goals of our future investigation. Since the conclusions based on RCA and RCSA are very similar, this paper we presented only results based on RCA index.

Figure 3: Net-exports and relative trade balance - all food items, 2004-2012



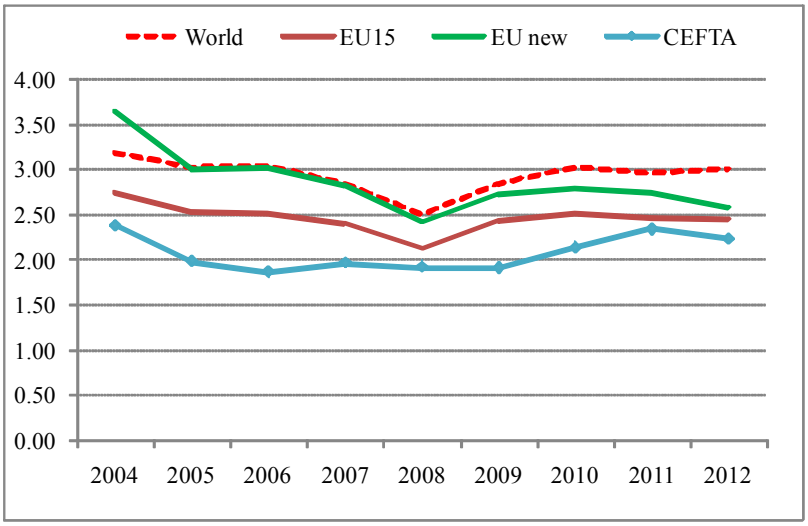
Source: Authors' calculation based on data of Statistical Office of Serbia

RCA index is calculated not only with respect to the world market, but also to the Serbia's main food trading partners: EU-15, new EU members and CEFTA 2006 signatories. This division should reflect changes in competitiveness during different trade regimes in the process of the EU integrations. RCA indices for Serbia's food group are presented on the Figure 4 and Table 3. Judging to calculated indices, it is obvious that Serbia has comparative advantage in exporting all food items to each observed group of countries as well as in relation to the whole world market (indices in all years are greater than 1).

Concerning differences in RCA across groups of countries, Serbia has recorded almost continuous increase of comparative advantages in relation to CEFTA countries, although the most of the countries in that integration have similar trade structure. Hence, it is a great challenge for Serbia to keep its comparative advantages, especially in the competitive environment. The RCA increase has appeared immediately after the signing of CEFTA 2006 Agreement, because the liberalization of the intra-regional trade was its main aim. And the second wave of the RCA increase came after the crisis.

In relation with EU-27, Serbia also has comparative advantage in food exports. Although RCA index was decreasing until the crisis, it did not provoke food exports decrease. On the contrary, Serbia's food exports oriented toward EU-27 was constantly increasing, as the example of positive effects of preferential trade. After the crisis, like many other exporters of food products, Serbia has improved its position at the international market and RCA index started growing dynamic.

Figure 4: Revealed comparative advantages of Serbian food exports, 2004-2012



Source: Authors' calculation based on data of Statistical Office of Serbia

According to changes in RCA of Serbia's food exports over time, the whole observed period could be divided into two sub-periods: years before and from the global crisis (Figure 4). Changes in RCA dynamic in the period 2004-2008 could be partially explained by overall fall of Serbian competitiveness at the international market during the last decade until the crisis. Serbia's food exports in that period were very important part of the Serbian overall export (always about 21%). As long as world food prices did not achieve a sharp increase, Serbia as food exporter did not have real opportunity at the international market. That has happened after the crisis has occurred, and Serbia's food exports RCA is continuously growing or remains at the same level.

Table 3: World prices of selected primary products, 2000-2011 (Annual percentage change and USD per barrel)

	2009	**2010**	**2011**	**2000-11**	**2005-11**
All commodities	-30	26	26	12	14
Metals	-19	48	14	15	18
Beverages (a)	**-15**	**11**	**20**	**8**	**11**
Food	**2**	**14**	**17**	**10**	**13**
Agriculture raw materials	**-17**	**33**	**23**	**5**	**9**
Energy	-37	26	32	15	15
Memo: Crude oil price in USD/barrel (b)	62	79	104	56	76

Notes: (a) Comprising coffee, cocoa, beans and tea. (b) Average of Brent, Dubai, and West Texas Intermediate.

Source: WTO (2012), p. 21.

Prices for all commodity groups, after the decline in 2008, have recovered very fast, remaining above their average during the last decade (UNCTAD, 2010). All primary products and food among them (Table 3) achieved the prices increase after the crisis. This explains improvement in terms of trade for many developing countries - exporters of commodities, in the period after the crisis. The prices of food grew more moderately comparing with more intensive growth of agricultural raw material, but only immediately after the crisis. From the next year, food and beverages prices started and continued with an upward trend. That partially explains RCA changes noticed in the observed period.

CONCLUSIONS

Since 2005, Serbia has been recording continuous food trade surplus. Specificities of this sector`s trade are obvious even in the Serbian case, as in many other countries in the world. After the economic crises, when all other sectors suffered a fall of activities, food sector did not realize that fall. A great number of reasons have contributed this situation. However, the preferential trade conditions are evidently very important source of surplus.

Serbia's food trade is also influenced by changing conditions and trading relations with its most important trading partners. As a user of the ATMs granted by the EU and as a signatory of CEFTA Agreement, Serbia has experienced significant benefits reflected in its food exports increase. Serbia's food exports are predominantly oriented toward these two regional integrations with more than 90% of total food exports. Particularly, some new EU countries have conquered special importance for Serbia's food exports, with the fastest increase of the share of food exports during years after the crisis. The common market is more open for Serbian food companies throughout NMS rather than old member states. It is also consequence of former trade relations within the CEFTA. The orientation of food exports to these two integrations is also shaped with the EU integration process. That intensity certainly would not be so obvious if the process of trade liberalization have not become important part of Serbian relations with the EU and CEFTA 2006. In this context, the most important for Serbia appears to be signing CEFTA 2006 Agreement and obtaining ATM and, of course, the continuation of the integration process through the Stabilization and Association Agreement with the EU.

Previous analysis confirmed that comparative advantages are important for each country exports increase, but they are not sufficient itself. The dynamic changes at the global market during only one decade, the Great economic crisis, growing role of countries-food exporters and primary products prices increase, along with changes in trade regimes within the EU integration process, all together had

positive influence on Serbia's food exports dynamics. However, the positive changes occurred in the last decade were certainly influenced by mutually intertwined factors. Identification of different factors influence on Serbian food exports requires the further research.

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