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Economic and legal determinants of export competitiveness of the food industry of Serbia

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Summary: Most authors agree that countries try to specialize in international trade. Among most important factors, they mention: differences in production costs, demand, production factors mobility, interest rates, wages, trade balance, income, technological innovativeness and progress. Therefore, the subject of this research paper is the analysis of comparative advantage and export specialization of the food industry, using the Balassa index (RCA), Lafay index (LFI) and modified index of comparative advantage (Sm) and specialization in international trade using Grubel Lloyd's index (GL), in order to measure the comparative advantage and specialization and suggest economic and legal measures for the improvement of competitiveness and comparative advantage in international markets.

Key words: Balassa index, comparative advantage of export, competitiveness, food industry, international trade economic and legal measures

Rezime: Većina autora se slaže da zemlja nastoji da se specijalizuje u međunarodnoj trgovini. Kao najvažnije faktore međunarodne trgovine navode: razlike u proizvodnim troškovima, tražnju, mobilnost proizvodnih faktora, kamate, nadnice, trgovinski bilans, dohodak, tehnološku inovativnost i progres. Upravo iz ovog razloga predmet istraživanja ovog rada je analiza komparativne prednosti i specijalizacije izvoza prehrambene prerađivačke industrije primenom Balasa indeksa (RCA), Lafay (LFI) i modifikovanog indeksa komparativne prednosti (Sm) i specijalizacija u međunarodnoj trgovini primenom Grubel Lloyd-ovog indeksa (GL), sa ciljem da se izmeri komparativna prednost i specijalizacija i predlože ekonomske i pravne mere za unapređenje konkurentnosti i komparativne prednosti na međunarodnom tržištu.

Ključne reči: Balasa indeks, ekonomske i pravne mere, komparativna prednost izvoza, konkurentnost, međunarodna trgovina, prehrambena industrija

1. INTRODUCTION

Competition is the process in which market participants compete and the process which enables national economies to achieve sustainable growth and long-term prosperity [29]. Global competitiveness, measuring micro-economic and macro-economic indicators of national competitiveness, is defined as the aggregate of institutions, policies and factors which determine the degree of a country's economic prosperity [29]. Market competitiveness is the result of the most efficient method of resource management aiming at productivity increase. Competitiveness stimulates cultural, economic and management development and represents a unique contribution to the domestic product, life standard and employment [22]. According to Rutkauskas [27] competitiveness implies the process of identifying the producer, competitiveness factors and circumstances which will lead to reaching the necessary level of competitiveness. The process of determining competitiveness factor levels, financial resources and costs, as well as interactions among the anticipated results is a serious and demanding task. The improvement of competitiveness, according to Aguilera-Enriquez, Gonzalez-Adame and Rodriguez-Camacho [2] is possible to achieve through the modernization of management and production utilizing new technologies. While discussing the improvement of competitiveness and shortening the life cycle, Jovanović and associates [15] emphasize that business operations increasingly depend on intellectual property (Intellectual Property, IP). Economy based on knowledge and non-material goods, such as intellectual property, human capital and organizational skills play a key role in business administration and economic growth. We believe that education is an important factor for the improvement of competitiveness, as highly educated citizens can quickly and effectively acquire new knowledge and master new technologies [10]. By doing so, production processes will be able to compete in the future, increase their results and become more productive. As Savić and associates believe [28], a fast recovery from the world economic crisis is possible through the adoption and consistent implementation of a development strategy completely different from the current one, where the key role is played by the industry based (among other things) on the available agricultural resources. However, because of the lack of new technologies and production processes, industrial production performances (food processing industry included) are significantly reduced and lead to the potential danger of losing a competitive position and niche in the international market.

According to Raičević, competition should be understood as a legal and economic category which encompasses market structure, economic conditions, as well as number and behavior of market participants. Some people will refer to it as the most beneficial phenomenon in economy; others might refer to it as an important precondition for a democratic and political community system order, while others could call it the freedom of entrepreneurship which deserves constitutional value [25].

If we wish to create competitive products, we need creative management with specific skills and competencies and application of new technologies. Companies should continuously improve productivity levels of the existing sectors, while adding some desirable characteristics to them and developing production technology and increasing its efficiency. Big companies- predominantly oriented towards the production of food, tobacco and alcohol- use sophisticated marketing techniques to increase sales [6]. Technological structure represents a new class and new production factor and, as such, entails a number of managerial, technical, scientific, legal, engineering, accounting and marketing activities.

The increase in productivity is an exceptionally important determinant of economic development and countries can make a positive move by enacting a set of laws and regulations promoting investments and increased production efficiency. Doubts regarding the best grounded institutional rules are widely spread, but there is also general agreement that the improvement of productivity is possible through the opening of economy, development of efficient financial markets, as well as implementation of proprietary rights. Recent research papers by many authors emphasize the importance of public investment in infrastructure and human capital. The increase of productivity requires a transparent rule of law [33].

Among many research projects into competitiveness and comparative advantage there are different approaches: *classical,* which are focused on national economy as a whole, and *modern-* with companies in the very center of analysis. A conventional approach to sources of competitiveness puts the external factor control in the center of attention, including natural resources, work and capital. Thus, the competition is won by those who have the so-called comparative advantage, i.e. the cost advantage. Nevertheless, in information economies the focal part of competitiveness is shifted from external factors towards the internal ones (knowledge, information, strategies, business environment [23]. To sum up, sustainable competitiveness thus emphasizes the need for macro-economic competitiveness, rule of law, favorable investment conditions, increased efficiency levels in the work of public institutions and technological development.

2. AN OVERVIEW OF LEGAL DETERMINANTS OF COMPETITIVENESS

Law, given its nature, has to specifically define the economic competition relations and approaches of economic theory in this regard. Law theory thus defines its own concept of "competition", but so does the legislative body, as well, when passing a legislation act in this area. We cannot but mention that the principles of legal and legislative aspect are extremely significant, given the fact that they regulate competition protection in the market of the Republic of Serbia, aiming at economic development and prosperity of the society as a whole, and

especially targeted at customer satisfaction. This is also very important for the effects created by the food industry of Serbia.

The positive-legal aspect entails issues related to violation of competition, concentration of participants in the market, status of the Commission for competition protection (its position, jurisdiction, organs, statutory questions and financing issues), procedure before the Commission, as well as the judicial monitoring of all activities [34].

Given that the area of competition and comparative advantages of the business process and business sectors are considered a system in which all economic and legal entities act upon their own economic initiative, it is clear that among them we witness a peculiar economic competition which has to be seen and analyzed as a dichotomy i.e. together with both economic and legal aspects and viewpoints.

Competition Act is the basic principle which presents the grounds for free market economy and a predominant method in today's economic systems. We believe that Competition Act is impossible to achieve without the state intervention (state regulation) since every business has a naturally inclination towards a high degree of dominance, neglecting general public interest.

Given that Serbia is striving to become a rightful member of the EU and that the EU is a dominant partner in foreign trade, one of the important determinants of export competitiveness should be the development of real economic sector. As far as this development is concerned, special attention should be given to the food industry, which requires the knowledge of non-discrimination principles and main provisions of the EU legislation concerning competition protection, entailing four important factors [24].

- EU contracts

- Regulations and guidelines of the Council and EU Commission

- A number of rules and recommendations which are not binding but show how the European Commission sees and implements competition policy

- Decisions and verdicts of the European Court of Justice referring to cases between individual companies and states

In order to speed up the process of Serbia's integration into the EU, the government of Serbia adopted the National program for integration of the Republic of Serbia into the EU as of 9 October 2008. This official document specified the dynamics of EU law transposition into the national legislation of Serbia until 31 December 2012, when the national legislation should be in full conformity with that of the EU. In order to speed up the process of transposition, all EU regulations have been grouped into 35 chapters, corresponding each to the structure of one policy area dealt with in the negotiation process. The Ministry of Agriculture, Trade, Forestry and Water Management is responsible for chapters related to agriculture and rural development, as well as veterinary, phytosanitary and food safety policy.

Serbia needs to secure the position of EU candidate country and so eliminate part of the negative aspects of food export into the EU market. Export would bring a much bigger influx of foreign currency, decrease of the current account deficit, as well as financial resources from the EU pre-accession assistance funds.

In that regard it is necessary to join the World Trade Organization, to simplify the administrative procedures concerning licenses and certificates, to deregulate business operations by establishing the system for regulations management, to improve intellectual property protection which is at a very low level (although the relevant legislation has been adopted, the problem lies in its enforcement and implementation) and also introduce international quality standards. In short, it is necessary to improve business conditions. According to the World Bank, those conditions have been improved and positive reforms have been carried out in the area of granting loans, business startups and property registration. However, problems appeared with issuing licenses, tax payment and foreign trade [12]. There are substantial problems with foreign trade, in the sense that costs are high and export and import procedures are complicated. To remedy that, it is necessary to harmonize legislative measures across Serbia and then harmonize Serbian legislation with that of the EU, so that the legal system gets the role it deserves in overall social environment, helping investors bring decisions regarding investments in Serbia [26].

Competition is not possible without market recognition, since through price mechanisms it gets efficient allocation of goods and services. Limitations of loyal competition resulting from monopolistic and oligopolistic positions should be resolved with price agreements and government interventions.

Regulations on EU competitiveness allow for exceptions only in cases when goods and services are of special public interest. Our national legislature has instruments in the form of legislative authority of the Commission for protection of competition, but they have to be within the scope of competition policy entailing efficient prohibition of cartels, fusion control and control over state subventions.

3. HISTORICAL DEVELOPMENT OF THE COMPARATIVE ADVANTAGE CONCEPT

When thinking about competition between countries, we can conclude that it is not some kind of a sport contest, but competing in trade which is supposed to put a country into a much better position. Trade gives a possibility for one country to specialize in areas in which that country shows the best results, be that farming, sewing or building a house. If you trade goods with other people, you will be able to choose among a great variety of things or services at a much lower price. Just like families, countries also benefit from their ability to trade with other countries. Trade enables countries to specialize in what they do better

than other countries and to use more versatile ranges of goods and services [18].

In international trade some countries will specialize in the production of certain goods and/or services based on the absolute differences in production costs. Absolute advantage implies a more efficient production process, measured in the form of invested labor per one unit or a single product. The author believes that naturally given and acquired advantages of a country affect the process of achieving the absolute advantage. All economic activities of one country are definitely not cleverly engaged if they are focused on the production of something that can be bought for cheaper than it is produced [30]. According to Smith (1937), whenever a certain country has some advantages while another country is lacking them, it will always be more beneficial for the latter to buy those goods and/or services from the first one, rather than to produce them on its own [30]. Smith's theory of absolute advantages, according to which there are some advantageous participants in international trade, was later complemented by Ricardo who proposed the theory of relative advantages.

Absolute differences in production costs of exchangeable goods are not a precondition; it is enough to have relative or comparative differences. With his theory of relative advantages, Ricardo proved that even in circumstances when one country (of the observed two countries, comparing two products) produces both products more efficiently than the other country, there can be the economically justified trading and exchange of products (mentioned by [14]). Ricardo's theory shows that even the undeveloped countries participate in trade. In other words, they trade goods and services with developed countries, except when one country is absolutely more efficient in production than the other country.

Nevertheless, Mill complemented Ricardo's assumption of fixed offer and immovability of production factors with his analysis of the influence of demand on international exchange. According to Mill's theory, a country will have an unfavorable position in international trade if the intensity of demand for its products is smaller than the intensity of demand for the products of the other country [20].

Taussig concludes that the previously mentioned authors did not take into account the mobility of production factors. In his view, the key factors are production costs, interest rates and wages. A higher or lower interest rate are not independent factors/variables which exert influence on their own, but rather have influence in as much as they are included in one product to a greater degree than in the other [31]. Taussig tried in his works to show that workforce costs (wages) have influence on international trade and specialization to a greater degree than interest rates as production costs.

Ohlin (1933) tried to define the scope of one country's specialization in international trade. The author believes that foreign trade happens in the same way as internal trade and points to the existence of connection between offer and demand for factor-intensive products. A different degree of product factors is present in products and precisely that is what makes the difference among

countries. Ohlin concluded that in the process of international trade there are equalizations or balancing of the price of production factors. Due to the mobility of production factors between countries and regions there will not be a complete leveling of production factor prices. With time, foreign trade leads to the tendency of increasing the prices of production factors which are present in relative abundance, and also to the decrease in the prices of those production factors which are relatively scarce [21].

According to Kravis [16], a country imports those products for which the offer on the internal market is relatively less elastic i.e. in which the relative elasticity of foreign offer is bigger than it is the case with domestic production. According to Linder [17], the level of trade with secondary goods between countries is higher if the degree of similarities in the demand structure between the mentioned countries is higher. The scope of trade with secondary products between countries is higher if they have a more similar value of GDP per capita, due to greater similarities in spending, demand and customer behavior, in general. Therefore, the structure of domestic demand determines the exporting characteristics of a product. In countries with a greater diversification of export, there is a possibility of a greater scope of trade. Higher GDP is contingent upon technological innovations and progress. From this premise we can conclude that if the level of GDP is higher in two countries, the potential and actual scope of their trade is bigger (p.103).

The theory of comparative advantage was further developed by Balassa [4]. Wishing to define comparative advantage, Balassa started from export share and export-import ratio. The author defined the concept of export performances, using which we can compare the industrial export of a certain country relative to the global export of that product/product group. The original coefficient of the revealed comparative advantage (RCA - *revealed comparative advantage*) goes as follows:

$RCA_2 = (X_{ij}/X_{it}) / (X_{nj}/X_{nt})$, where:

X stands for export, *i*- exporting country, *j* - product, *t* – group of products, and *n* – group of countries.

The original/source model of comparative advantage did not take into account the influence of import, which is a problem in a situation when a country's size is not negligible. Precisely the influence of import or the possibility of simultaneous trade is what Greenaway and Milner [8] observed when measuring comparative advantage. The original RCA comparative advantage coefficient was then transformed into:

$RCA_3 = (X_{ij}-M_{ij}) / (X_{ij}+M_{ij})$, where:

X – stands for export, M – import, *i* stands for the country of export and *j* stands for the product.

The corrected version of the Balassa index of comparative advantage was presented by Vollrath [32].

RCA$_4$ = (X$_{ij}$ / X$_{ik}$) / (X$_{in}$ / X$_{nk}$) − (M$_{ij}$ / Mik) / (M$_{nj}$ / M$_{nk}$)

RCA$_5$ = ln (X$_{ij}$ / X$_{ik}$) / (X$_{nj}$ / X$_{nk}$),

RCA$_6$ = ln (M$_{ij}$ / M$_{ik}$) / (M$_{nj}$ / M$_{nk}$)

In the above formulas X$_{ij}$ and X$_{ik}$ represent the export of product *j* of the country *i* and total export of other products *k*; X$_{nj}$ and X$_{nk}$ represent the export of product *j* of the rest of the world *n* and total export of other products of the rest of the world. Positive values of RCA$_4$, RCA$_5$, and RCA$_6$ indexes point to the presence of a positive comparative advantage, while negative values point to the lack of comparative advantage in international trade.

The Balassa index is most frequently used and represents the logarithmic value of the coverage of imports by export in certain sectors or products, relative to the coverage ratio at the level of a country's economy. This index was created to determine comparative advantage of a product when export is bigger than import.

4. RESEARCH METHOD

The subject of our research is the analysis of comparative advantage and specialization of export of the food industry, with the aim to measure comparative advantage and specialization and suggest economic and legal measures for the improvement of competitiveness and comparative advantages in the international market. The data used in research was obtained from the Statistical Office of the Republic of Serbia and UN COMTRADE for the respective years. The research was based on qualitative- quantitative analysis, with the methodological framework built on the usage of scientific indicators of international trade and includes the indicators of comparative advantage: Balassa and Lafay indexes, a modified model of comparative advantage (Sm) and the indicator of specialization in intra-industrial exchange (GL).

The Balassa formula for calculating the revealed comparative advantage [5]:

$$RCA = \ln\left[\frac{X_i}{M_i}\right] \times \left(\frac{\sum_{i=1}^{n} X_i}{\sum_{i=1}^{n} M_i}\right) \times 100$$

Where:

RCA stands for revealed comparative advantage for the year *t,* X_i - export of the sector *i* of the country *j* for the year *t,* M_i - import of sector *i* of the country *j*

for the year *t*, $\sum_{i=1}^{n} X_i$ - total export of all sectors of the country *j* for the year *t* and

$\sum_{i=1}^{n} M_i$ - total import of all sectors of the country *j* for the year *t*.

In the given formula, X represents the value of export, while M stands for the value of import. Index *i* represents the specific sector of Serbian economy. When a country specialized in the production of those products which it produces cheaper than the rest of the world, the RCA values point to the comparative advantages in those sectors where the RCA indicator shows positive values. The higher the value of RCA index, the more revealed the comparative advantage of that country's sector is.

Recent theories of comparative advantages developed as the result of disproportion between a large number of economies and analyzed factors. It was impossible to divide and group a large number of existing countries in such a way that each country achieves absolute advantages in production based on the exploitation of only one or two main factors. A large number of countries which do not have any absolute advantages but still actively participate in international trade affirmed the concept of comparative advantage [7].

When calculating the comparative advantages of export for the different sectors of the food processing industry in Serbia, we used the modified **Sm** model, so that we calculated the export of the food processing industry sector relative to the total export of agricultural and food products of Serbia.

The obtained values in the modified S*m* model (Author's model) represent a specific model of comparative advantage of export of the food processing industry sector. The revealed comparative advantage using the S*m* model is calculated using the following formula:

$$Sm = \ln\left[\frac{X_{ip}}{M_{ip}}\right] \times \left(\frac{\sum_{i=1}^{n} X_{ip}}{\sum_{i=1}^{n} M_{ip}}\right) \times 100$$

Where:

Sm - stands for revealed comparative advantage of the food processing industry sector for the year *t*.

X_{ip} - export of the sector of the food processing industry *i* of the country *j* for the year *t*,

M_{ip} - import of the sector of the food processing industry *i* of the country *j* for the year *t*,

$\sum_{i=1}^{n} X_{ip}$ - total export of the sector of the food processing industry *i* of the country *j* for the year *t* and:

$\sum_{i=1}^{n} M_{ip}$ - total import of the sector of the food processing industry *i* of the country *j* for the year *t.*

For the analysis of the degree of specialization in intra-industrial exchange (export and import) we used the **Grubel Lloyd's index**. GL_i^t represents the value of Grubel Lloyd's index for the product group *i.* X_i^t represents the value of export, while M_i^t is the value of import. The index can be in the range between 0 and 1. Intra-industrial exchange is defined as simultaneous import and export of the same product groups within the same sector. Higher index values point to the higher degree of specialization in intra-industrial exchange, whereas lower GL index values point to the fact that foreign trade is closer to inter-industrial trade. The GL index is calculated using the following formula:

$$GL_i^t = ((\sum_{i=1}^{n} \left| X_i^t + M_i^t \right| - \sum_{i=1}^{n} \left| X_i^t - M_i^t \right|) / \sum_{i=1}^{n} \left| X_i^t + M_i^t \right|$$

Where:

GL_i^t - index of intra-industrial exchange of sector *i* in the year *t,*

X_i^t - export of product group *i* in the year *t,*

M_i^t - import of product group *i* in the year *t.*

For the analysis of comparative advantage we used the Lafay index (LFI). Lafay index is defined as follows [1]:

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

Where $x^i_{\ j}$ and $m^i_{\ j}$ are the export and import of the product *J* in the country *i*, to and from the rest of the world, and n is the number of items. Comparative advantage in the country *i* in the production of products *j* measures the divergence of product *J* from the total trade balance. Positive values of the Lafay index point to the existence of comparative advantage, whereas a higher value

points to the higher degree of specialization and negative values point to the exact opposite. The Lafay index, as opposed to the Balassa index, takes into account the difference between values of export and import and tries to overcome certain shortcomings of the Balassa index, taking into account internal trade flows and GDP.

5. COMPARATIVE ADVANTAGES OF THE FOOD INDUSTRY OF SERBIA

Competitiveness of the processing industry of Serbia in international context depends on using the technical- technological engineering and transfer of foreign and domestic technologies. Furthermore, utilization of technical-technological engineering made technology placement and placement of production machinery possible

Foreign trade of the Serbian processing industry was not accompanied by changes in the structure of production, modernization and increased employment figures. Nevertheless, in the total export of Serbia in 2009, the export of agricultural products has a share of 24.33%, and food has a share of 22.83%. In the total import, agricultural products have a share of 9.15%, and food 7.81% [11]. In the export structure of processing industry in 2009, products from four sectors account for 49.9% of export. These are: Food products and beverages (17.89%), Basic metals (15.28%), Chemicals and chemical products (8.08%), other machines and appliances (8.62%). Successful results of foreign trade in agricultural products were achieved thanks to the preferential status in the EU market and achieved liberalization in trade with the countries from the West Balkans. Positive foreign trade balance in trade with EU in the period after 2004 is the result of abolishing customs duty on agricultural and food products from Serbia. Agricultural products are exempt from payment of customs duty when being placed on the EU market. The biggest surplus in trade with EU countries is obtained in trade with: Hungary, Austria, Romania and France. Beside EU, the most significant business partner of Serbia in foreign trade with agricultural products is the whole market of the free trade region CEFTA. A large number of countries in the free trade region are characterized by a focus on agriculture and complementary products. From the perspective of competitiveness in the world market, cooperation with this group becomes increasingly important [13].

Our task in this paper was to dynamically analyze and observe comparative advantages of export for the food processing industry of Serbia and to provide a quantitative illustration of results for the period between 2005 and 2009.

In the period between 2005 and 2009, the processing industry export was increased by 80.7%. With the increase of total foreign trade and market opening,

export and import of the processing industry, food products, beverages and tobacco industry increased.

Table 1. Value of the comparative advantage index (RCA) of the processing and food industries for 2005 and 2009 in Serbia

	2005 - Value (millions of dollars)		2009 – Value (millions of dollars)		2005	2009
	Export	Import	Export	Import	RCA	RCA
Processing industry	4.179	8.333	7.551	10.453	-0.29	-0.17
Food products and beverages	728	417	1.351	553	0.24	0.46
Tobacco products	4	85	56	54	-1.31	0.02

Source: Author's calculation based on the foreign trade statistical data for years 2005 and 2009, Statistical Office of the Republic of Serbia, Belgrade

The conducted research into comparative advantage of the processing industry export revealed a negative value for the year 2005, which was also evident in 2009. The comparative advantage of the food and beverage industry improved in 2009 (compared to 2005), while the tobacco industry did not significantly change its position. In the export of food processing and beverage industry there is a potential which should be used in order to improve competitiveness in the world market.

The analysis of comparative advantage for different sectors of the food processing industry, showed the following values in Table 2.

Of the 37 analyzed sectors of the food processing industry, 21 sectors have positive comparative advantages for years 2005 and 2009.

The highest (positive) values of comparative advantage were obtained in the following sectors: Production of sugar (RCA^{2005} = 0.97, RCA^{2009} = 2.34); Production of mineral water (RCA^{2005} = 1.18, RCA^{2009} = 1.48); Production of beer (RCA^{2005} = 0.67, RCA^{2009} = 1.39);

Extreme negative values of comparative advantage were obtained in the following sectors: Production of ready-made pet feed (RCA^{2005} = -2.25, RCA^{2009} = -2.57); Processing of tea and coffee (RCA^{2005} = -1.47, RCA^{2009} = -1.79); Production of other non-distilled fermented beverages (RCA^{2005} = -0.61, RCA^{2009} = -2.20);

Products of the food processing industry with positive comparative advantage were differentiated and they are in demand in the international market. The mentioned sectors with comparative advantages in international trade bring a surplus.

Table 2. Value of the comparative advantage index (RCA) of the different food processing industry sectors for years 2005 and 2009 in Serbia

	2005	2009	2005	2009
Sectors of the food processing industry	**RCA**	**RCA**	**LFI**	**LFI**
PRODUCTION, PROCESSING, COOLING AND FREEZING OF ANIMAL MEAT	0.41	0.40	0.14	0.16
PRODUCTION, PROCESSING, COOLING AND FREEZING OF POULTRY AND RABBIT MEAT	0.21	0.66	0.00	0.02
PROCESSING OF ANIMAL MEAT AND POULTRY	0.26	0.07	0.14	0.11
PROCESSING AND CANNING OF FISH AND FISH PRODUCTS	-1.20	-1.45	-0.11	-0.23
PROCESSING AND CANNING OF POTATO	1.00	0.48	0.03	0.06
PRODUCTION OF FRUIT AND VEGETABLE JUICES	0.41	0.06	0.25	0.06
PROCESSING AND CANNING OF FRUIT AND VEGETABLES	0.39	0.73	1.56	1.64
PRODUCTION OF CRUDE OILS AND FATS	-0.13	0.73	0.08	0.44
PRODUCTION OF REFINED OILS AND FATS	0.67	0.14	0.13	0.15
PRODUCTION OF MARGARINE AND SIMILAR EDIBLE FATS	0.92	0.01	0.03	0.02
PRODUCTION OF DAIRY PRODUCTS	0.02	0.46	0.05	0.22
PRODUCTION OF ICE-CREAM AND OTHER FROZEN PRODUCTS	0.17	1.11	0.01	0.05
PRODUCTION OF GRAIN MILL PRODUCTS	0.06	0.57	0.08	0.30
PRODUCTION OF STARCH AND STARCH PRODUCTS	-0.77	-1.19	-0.03	-0.02
PRODUCTION OF READY-MADE LIVESTOCK FEED	0.84	0.06	0.04	0.07
PRODUCTION OF READY-MADE PET FEED	-2.25	-2.57	-0.02	-0.04
PRODUCTION OF BREAD AND BAKERY PRODUCTS	0.36	0.32	0.22	0.11
PRODUCTION OF BISCUITS	0.43	0.83	0.11	0.25
PRODUCTION OF TOAST, CANNED PASTRY, CAKES AND OTHER CANNED PASTRY PRODUCTS	-0.65	-0.45	0.00	0.00
PRODUCTION OF SUGAR	0.97	2.34	1.50	0.88
PRODUCTION OF COCOA, CHOCOLATE AND CHOCOLATE PRODUCTS	-0.45	-0.11	-0.03	0.13
PRODUCTION OF CANDY AND OTHER CONFECTIONERY PRODUCTS	-0.23	-0.30	0.02	0.00
PRODUCTION OF SPAGHETTI OND OTHER PASTA PRODUCTS	0.10	0.46	0.01	0.03
PROCESSING OF TEA AND COFFEE	-1.47	-1.79	-0.24	-0.24
PRODUCTION OF SPICES AND OTHER CONDIMENTS	0.25	0.40	0.10	0.17
PRODUCTION OF HOMOGENIZED NUTRITIONAL PRODUCTS AND DIETARY SUPPLEMENTS	-0.79	-0.76	-0.01	-0.01
PRODUCTION OF OTHER FOOD PRODUCTS	-0.42	-0.50	-0.03	-0.07
PRODUCTION OF DISTILLED ALCOHOLIC BEVERAGES	-0.67	-0.60	-0.02	-0.03
PRODUCTION OF WINE FROM FRESH GRAPES	-0.06	-0.53	0.04	-0.03
PRODUCTION OF APPLE WINE AND WINE FROM OTHER FRUITS	/	-0.49	0.00	0.00
PRODUCTION OF OTHER NON-DISTILLED FERMENTED BEVERAGES	-0.61	-2.20	/	0.00
PRODUCTION OF BEER	0.67	1.39	0.24	0.39
PRODUCTION OF MALT	0.24	-1.74	0.01	-0.01
PRODUCTION OF MINERAL WATER	1.18	1.48	0.05	0.09
PRODUCTION OF NON-ALCOHOLIC REFRESHING BEVERAGES	0.13	1.10	0.03	0.39

Source: Author's calculation based on the foreign trade statistical data for years 2005 and 2009, Statistical Office of the Republic of Serbia, Belgrade

Table 3. Change in value of the comparative advantage index of the food processing industry for the period between 2005 and 2009 in Serbia

| Sectors of the food processing industry	Δ of the RCA index
PRODUCTION, PROCESSING, COOLING AND FREEZING OF ANIMAL MEAT	-0.01
PRODUCTION, PROCESSING, COOLING AND FREEZING OF POULTRY AND RABBIT MEAT	0.45
PROCESSING OF ANIMAL MEAT AND POULTRY	-0.19
PROCESSING AND CANNING OF FISH AND FISH PRODUCTS	-0.25
PROCESSING AND CANNING OF POTATO	-0.52
PRODUCTION OF FRUIT AND VEGETABLE JUICES	-0.35
PROCESSING AND CANNING OF FRUIT AND VEGETABLES	0.34
PRODUCTION OF CRUDE OILS AND FATS	0.86
PRODUCTION OF REFINED OILS AND FATS	-0.53
PRODUCTION OF MARGARINE AND SIMILAR EDIBLE FATS	-0.91
PRODUCTION OF DAIRY PRODUCTS	0.44
PRODUCTION OF ICE-CREAM AND OTHER FROZEN PRODUCTS	0.94
PRODUCTION OF GRAIN MILL PRODUCTS	0.51
PRODUCTION OF STARCH AND STARCH PRODUCTS	-0.42
PRODUCTION OF READY-MADE LIVESTOCK FEED	-0.78
PRODUCTION OF READY-MADE PET FEED	-0.32
PRODUCTION OF BREAD AND BAKERY PRODUCTS	-0.04
PRODUCTION OF BISCUITS	0.40
PRODUCTION OF TOAST, CANNED PASTRY, CAKES AND OTHER CANNED PASTRY PRODUCTS	0.20
PRODUCTION OF SUGAR	1.37
PRODUCTION OF COCOA, CHOCOLATE AND CHOCOLATE PRODUCTS	0.34
PRODUCTION OF CANDY AND OTHER CONFECTIONERY PRODUCTS	-0.07
PRODUCTION OF SPAGHETTI OND OTHER PASTA PRODUCTS	0.36
PROCESSING OF TEA AND COFFEE	-0.32
PRODUCTION OF SPICES AND OTHER CONDIMENTS	0.15
PRODUCTION OF HOMOGENIZED NUTRITIONAL PRODUCTS AND DIETARY SUPPLEMENTS	0.03
PRODUCTION OF OTHER FOOD PRODUCTS	-0.08
PRODUCTION OF DISTILLED ALCOHOLIC BEVERAGES	0.07
PRODUCTION OF WINE FROM FRESH GRAPES	-0.47
PRODUCTION OF OTHER NON-DISTILLED FERMENTED BEVERAGES	-1.59
PRODUCTION OF BEER	0.72
PRODUCTION OF MALT	-1.98
PRODUCTION OF MINERAL WATER	0.30
PRODUCTION OF NON-ALCOHOLIC REFRESHING BEVERAGES	0.97

Source: Author's calculation based on the foreign trade statistical data for years 2005 and 2009, Statistical Office of the Republic of Serbia, Belgrade

There is a significant increase of the comparative advantage index for export in the following industries: production of sugar, mineral water, refreshing non-

alcoholic beverages, ice-cream, crude oils and fats, grain mill products, biscuits and beer.

Our research shows the increased comparative advantage in the export of sugar. Sugar is an important exporting agricultural and food product, with a high value of comparative advantage index (RCA= 2.34). Significant export and comparative advantage is explained by the obtained preferential positions on the EU market. Wishing to achieve price competitiveness in the international market, it is necessary to increase productivity in the production of sugar cane and decrease processing costs. Wheat flour and other grain mill products have a high value of comparative advantage index. In the analyzed period, there was a significant increase of export and obtained exporting price, which gave positive results in the changes of comparative advantage index. The comparative advantage of crude oil in 2009 increased compared to 2005, due to increased export in quality products of this sector of food processing industry. In the export of meat- cooled, frozen, as well as meat products in the analyzed period, the comparative advantage index maintained approximately the same value. In the ten-year period (2000-2009) there was a decrease in the export of beef, and the export quota was not filled. Serbia lost the status of an important exporter of beef and became the importer of pork meat as a result of the continuous decrease in the number of livestock. Beer and confectionery were in the said period present in export and competitiveness improved, which is also signaled by the increase in the value of comparative advantage index. Mineral and carbonated water with and without sugar show a positive value of comparative advantage index and thus have a favorable competitive position. An increase in competitive advantage came as a result of a significant increase in the value of export.

In the production of fish in Serbia, there is potential which has not been fully used. Agro-ecological conditions, market needs and export possibilities show that the focus of attention should be on investments into building new fisheries, using the existing ones, increasing fish supplies in rivers, lakes, and accumulations, as well as implementation of new production systems, development of processing methodology and final range of products, professional development and employees' education [3]. Within the overall strategy of agricultural development, we need to define measures for the development of fishing, to introduce quality standards, expand product assortments with the offer of fresh, frozen, canned and smoked fish. By doing so, it would be possible to correct the extremely negative coefficient of comparative advantage and Serbia would achieve a competitive position in the domestic and international market.
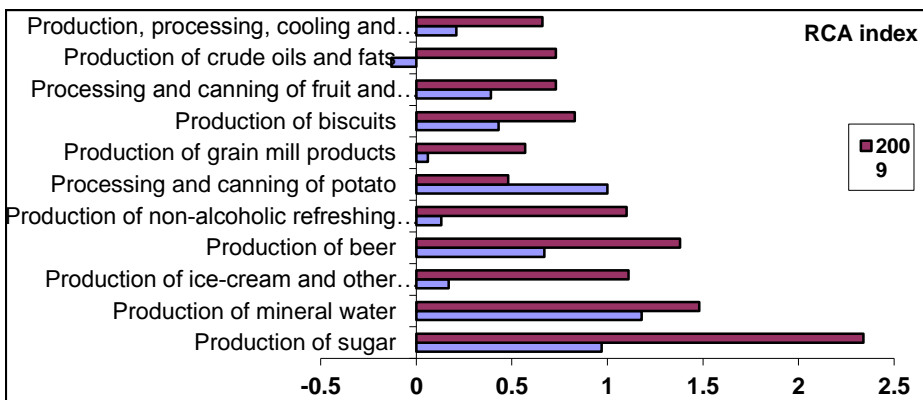
Source: Author's calculation based on the foreign trade statistical data for years 2005 and 2009, Statistical Office of the Republic of Serbia, Belgrade

Graph 1. Revealed comparative advantage index for the food industry of Serbia in the period between 2005 and 2009
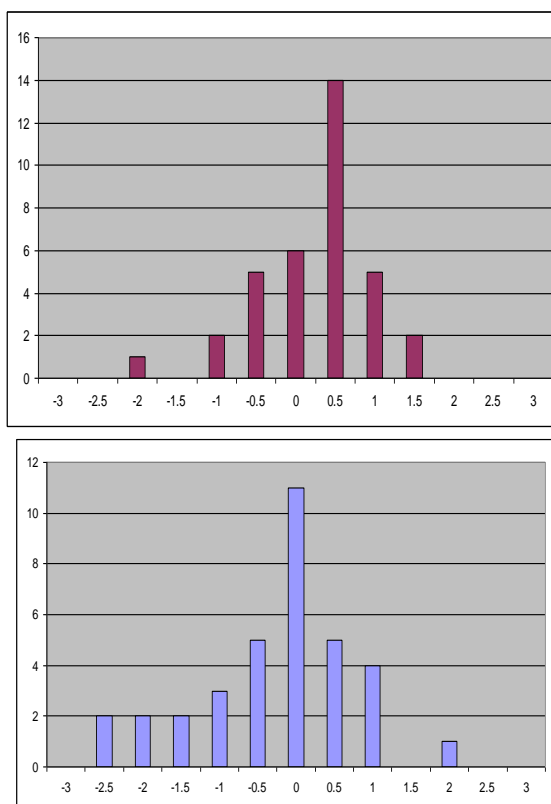
Source: Author's calculation

Graph 2: Bar Chart. Distribution of RCA index values for different sectors of the food processing industry of Serbia in 2005 and 2009
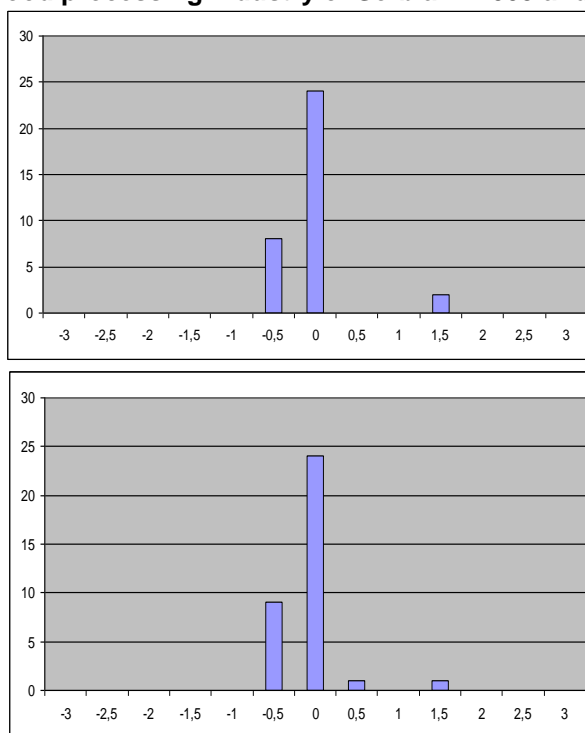
Graph 2 represents the relationship between the number of sectors of the food processing industry and the value of RCA indicator. The x- axis represents the values of RCA indicator, while the y- axis represents the number of sectors with the corresponding value of the RCA indicator. After having analyzed comparative advantages, we can conclude that in the years 2005 and 2009 the largest number of sectors had a positive value of RCA indicator in the range between 0.01 and 1.50.

Comparative advantages measured using the Lafay index have the following values:

High positive values are present in the following sectors: Production and canning of fruit and vegetables (LFI ^{2005} = 1.56, LFI ^{2009} = 1.64); Production of sugar (LFI^{2005} = 1.50, LFI ^{2009} = 0.88); Production of crude oils and fats (LFI ^{2005} = 0.08, LFI ^{2009} = 0.44);

Significant negative values of comparative advantage were obtained for the following sectors: Processing and canning of fish and fish products (LFI ^{2005} = -0.11, LFI ^{2009} = -0.23); Processing of tea and coffee (LFI ^{2005} = -0.247, LFI ^{2009} = -0.24); Production of ready-made pet feed (LFI ^{2005} = -0.02, LFI ^{2009} = -0.04)

Graph 3: Bar Chart. Distribution of LFI index values for different sectors of the food processing industry of Serbia in 2005 and 2009

Source: Author's calculation

Graph 3 represents the relationship between the number of sectors of the food processing industry and the values of LFI indicator. The x- axis represents the values of LFI indicator; whereas the y- axis represents the number of sectors having the respective LFI values. When analyzing the comparative advantages we can conclude that in the years 2005 and 2009 the largest number of sectors were those with the comparative advantage value in the range between 0.01 and 0.50.

Strategy for the increase of export of agricultural and food products, beside the stable and sustainable growth of production and quality of products, also entails the adjustment of exporting structure to the requests of importing demand. Flour products are present in import. Serbia imports pasta, biscuits, cookies, toast, croissants and other pastry. With the more versatile assortment of processed wheat, corn and flour, as well as by using various new production technologies, Serbia could satisfy the domestic demand and provide quantities sufficient for export. Thanks to the reached quantity in the production of fruit, Serbia achieved a high quality in the production of frozen fruits, which is the key exporting product, especially frozen raspberries. Wishing to get high quality exporting fruit products, we need to first have high quality raw fruit and further work on selection and development of new fruit sorts, while modernizing processing capacities, increasing the exploitation of equipment and the degree of product finalization. With an increase in vegetable production, expansion of product assortments (e.g. especially dehydrated and frozen vegetables), as well as introduction of packing and packages in accordance with the European standards, Serbia would significantly increase the domestic supplies and increase export.

Serbia is also characterized by the balance deficit in livestock products, low usage per capita and decreased export. Using certain stimulating measures in livestock breeding and raising, changing the production structure and improvement of quality and safety and sanitary standards of animal meat and meat products, we could use Serbia's farming potentials both for the supply of domestic market and export.

Specific quality characteristics, especially in the production of certain agricultural and food products have to become a matter of protection, using the indication of geographical origin. Organic products and home-made products bearing the indication of geographical origin will become a unique guarantee of quality and authenticity of products, their safety and compliance with quality related standards. The analysis of current situation shows that the image of an authentic Serbian product has remained completely without adequate valorization. The biggest loss for Serbia is not the neglect of certain production technologies, but the loss of adequate species and breeds (e.g. livestock breeds) with authentically Serbian origins [25].

Low exploitation of capacities is contingent upon the existence of quality raw materials/resources. Food production capacities are unequally equipped. The goal is to use the existing and new knowledge, introduce innovations, develop new bio-technologies and create versatile and certified product assortments, while improving business management and marketing and fully use comparative

advantages of ecological resources to achieve comparative advantages of final products in the international market. In modern market environments, our competitors are oriented towards product brand names and logos. These market trends affect economic, social and cultural changes, while the decisive factor is the added value generated through service and experiences related to products, rather than those generated through the physical process of production [19].

There are many claims that the developing countries are not able to meet the required food safety and quality standards of the European market [9]. In smaller countries and developing countries the provision of quality standards, especially in the production of agricultural products, requires substantial financial resources. In order to improve the existing conditions and protect the interests of small private enterprises, certain authors point to the importance of private standards as catalysts for the improvement of competitiveness and placement on the international market.

Despite the opinion that the protection of domestic production contributes to the increase of competitiveness, Serbian companies have not used the possibility of placement with new products, while at the same time satisfying domestic demand and winning foreign markets. This confirms the theory of international trade saying that closed markets trigger the decrease in competitiveness for companies and the whole economy.

6. SPECIALIZATION IN INTRA-INDUSTRIAL EXCHANGE OF THE SERBIAN FOOD INDUSTRY

Research results analyzing specialization in international trade using Grubel-Lloyd's index show that intra-industrial specialization prevails and that it is more significant in the production of fruit and vegetable juices, margarine, ready-made livestock feed, cocoa and chocolate. Research results lead us to conclude that there is a correlation between comparative advantage and intra-industrial specialization in foreign trade.

Intra- industrial exchange with products of the food processing industry shows that there is simultaneous export and import and indicates that there is the openness of industry towards foreign trade. We can observe the export and import of different differentiated products, which are not complete substitutes. A high value of the intra-industrial exchange index points to the specialization in international trade.

The analysis of intra-industrial exchange (GL) for 2009, at the level of different sectors of the food processing industry indicates the following facts:

- Intra-industrial exchange is present in the following sectors (the presence of export and import: Production of animal and chicken meat, fruit and vegetable juices, margarine, refined oils and fats, ready-made

livestock feed, cocoa and chocolate, spices and other condiments, candies and other confectionery, bread and bakery products, dairy products, as well as Production, processing and cooling of animal meat

- Inter-industrial exchange is present in the following sectors (the presence of export or import): Production of fish and fish products, canning of fruit and vegetables, crude oils and fats, ice-cream, starch, ready-made pet feed, biscuits, sugar, tea and coffee, non-distilled fermented beverages, beer, malt, mineral water and non-alcoholic refreshing beverages.
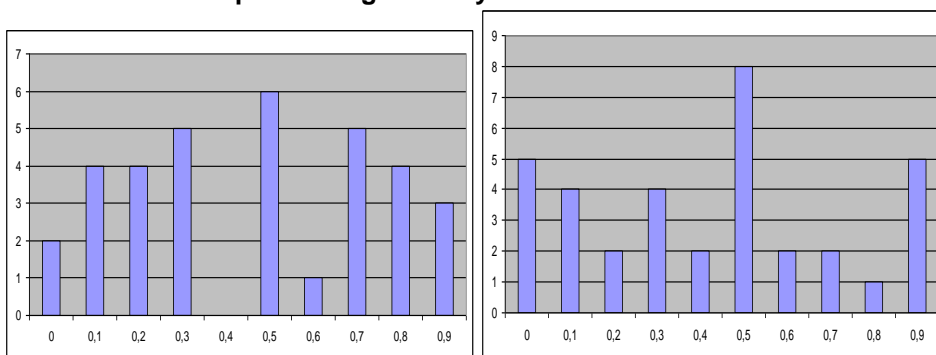
Table 4. GL indicator for the food processing industry of Serbia for years 2005 and 2009

	2005	2009
Sectors of the food processing industry	**GL**	**GL**
PRODUCTION, PROCESSING, COOLING AND FREEZING OF ANIMAL MEAT	0.55	0.64
PRODUCTION, PROCESSING, COOLING AND FREEZING OF POULTRY AND RABBIT MEAT	0.76	0.44
PROCESSING OF ANIMAL MEAT AND POULTRY	0.71	0.93
PROCESSING AND CANNING OF FISH AND FISH PRODUCTS	0.12	0.12
PROCESSING AND CANNING OF POTATO	0.18	0.57
PRODUCTION OF FRUIT AND VEGETABLE JUICES	0.56	0.94
PROCESSING AND CANNING OF FRUIT AND VEGETABLES	0.58	0.39
PRODUCTION OF CRUDE OILS AND FATS	0.85	0.39
PRODUCTION OF REFINED OILS AND FATS	0.35	0.87
PRODUCTION OF MARGARINE AND SIMILAR EDIBLE FATS	0.21	0.99
PRODUCTION OF DAIRY PRODUCTS	0.98	0.59
PRODUCTION OF ICE-CREAM AND OTHER FROZEN PRODUCTS	0.81	0.21
PRODUCTION OF GRAIN MILL PRODUCTS	0.93	0.50
PRODUCTION OF STARCH AND STARCH PRODUCTS	0.28	0.18
PRODUCTION OF READY-MADE LIVESTOCK FEED	0.25	0.94
PRODUCTION OF READY-MADE PET FEED	0.01	0.01
PRODUCTION OF BREAD AND BAKERY PRODUCTS	0.60	0.70
PRODUCTION OF BISCUITS	0.54	0.34
PRODUCTION OF TOAST, CANNED PASTRY, CAKES AND OTHER CANNED PASTRY PRODUCTS	0.36	0.59
PRODUCTION OF SUGAR	0.19	0.02
PRODUCTION OF COCOA, CHOCOLATE AND CHOCOLATE PRODUCTS	0.52	0.90
PRODUCTION OF CANDY AND OTHER CONFECTIONERY PRODUCTS	0.73	0.72
PRODUCTION OF SPAGHETTI OND OTHER PASTA PRODUCTS	0.89	0.58
PROCESSING OF TEA AND COFFEE	0.06	0.06
PRODUCTION OF SPICES AND OTHER CONDIMENTS	0.72	0.63
PRODUCTION OF HOMOGENIZED NUTRITIONAL PRODUCTS AND DIETARY SUPPLEMENTS	0.27	0.38
PRODUCTION OF OTHER FOOD PRODUCTS	0.55	0.55
PRODUCTION OF DISTILLED ALCOHOLIC BEVERAGES	0.34	0.48
PRODUCTION OF WINE FROM FRESH GRAPES	0.92	0.53
PRODUCTION OF APPLE WINE AND WINE FROM OTHER FRUITS	0.39	0.56
PRODUCTION OF OTHER NON-DISTILLED FERMENTED BEVERAGES	/	0.03
PRODUCTION OF BEER	0.35	0.13
PRODUCTION OF MALT	0.73	0.07
PRODUCTION OF MINERAL WATER	0.12	0.11
PRODUCTION OF NON-ALCOHOLIC REFRESHING BEVERAGES	0.85	0.22

Source: Author's calculation based on the foreign trade statistical data for years 2005 and 2009, Statistical Office of the Republic of Serbia, Belgrade

Results of the analysis of foreign trade with products of the food processing industry using the Grubel- Lloyd's index show that of the total number of 37 analyzed sectors 11 have intra-industrial character, whereas 14 have inter-industrial character. A high value of the Grubel Lloyd's index (0.98 and 0.99) indicates that import and export are conducted to approximately the same degree.

Graph 4: Bar Chart. Distribution of GL index values for different sectors of the food processing industry of Serbia in 2005 and 2009

Source: Author's calculation

Graph 4 represents the relationship between the number of different sectors of the food processing industry and the values of GL indicator. The x- axis represents the values of GL indicator, while the y- axes represents the number of sectors with the corresponding value of the GL indicator. After having analyzed the specialization in intra-industrial exchange, we can conclude that in the year 2005 the largest number of sectors had the value of intra-industrial exchange index in the range between 0.50 and 0.90. Significant is the participation of sectors with inter-industrial character which is characterized by a more significant export than import. In 2009 the situation did not change much; we could only observe the high participation of extremely inter-industrial and intra-industrial sectors.

7. COMPARATIVE ADVANTAGES OF THE FOOD INDUSTRY USING THE MODIFIED Sm MODEL

Research into the comparative advantages of the different sectors of food processing industry was also carried out using the modified S*m* model. In accordance with the research aim and using the Balassa index as a model, the author developed another model of comparative advantages. Considering the significant share of agricultural and food products export in the total export of Serbia, the author performed a qualitative and quantitative assessment of

certain sectors of the food processing industry of Serbia, comparing it to the total export of agricultural and food products.

Table 5. Comparative advantage model for different sectors of the food processing industry using the Sm model for years 2005 and 2009 (author's comparative advantage model)

Sectors of the food processing industry	2005 Sm	2009 Sm
PRODUCTION, PROCESSING, COOLING AND FREEZING OF ANIMAL MEAT	1.15	1.13
PRODUCTION, PROCESSING, COOLING AND FREEZING OF POULTRY AND RABBIT MEAT	0.58	1.88
PROCESSING OF ANIMAL MEAT AND POULTRY	0.72	0.20
PROCESSING AND CANNING OF FISH AND FISH PRODUCTS	-3.34	-4.13
PROCESSING AND CANNING OF POTATO	2.80	1.37
PRODUCTION OF FRUIT AND VEGETABLE JUICES	1.14	0.19
PROCESSING AND CANNING OF FRUIT AND VEGETABLES	1.08	2.09
PRODUCTION OF CRUDE OILS AND FATS	-0.36	2.08
PRODUCTION OF REFINED OILS AND FATS	1.87	0.39
PRODUCTION OF MARGARINE AND SIMILAR EDIBLE FATS	2.57	0.04
PRODUCTION OF DAIRY PRODUCTS	0.05	1.30
PRODUCTION OF ICE-CREAM AND OTHER FROZEN PRODUCTS	0.47	3.16
PRODUCTION OF GRAIN MILL PRODUCTS	0.18	1.62
PRODUCTION OF STARCH AND STARCH PRODUCTS	-2.15	-3.39
PRODUCTION OF READY-MADE LIVESTOCK FEED	2.33	0.17
PRODUCTION OF READY-MADE PET FEED	-6.28	-7.32
PRODUCTION OF BREAD AND BAKERY PRODUCTS	1.00	0.91
PRODUCTION OF BISCUITS	1.19	2.36
PRODUCTION OF TOAST, CANNED PASTRY, CAKES AND OTHER CANNED PASTRY PRODUCTS	-1.82	-1.30
PRODUCTION OF SUGAR	2.69	6.66
PRODUCTION OF COCOA, CHOCOLATE AND CHOCOLATE PRODUCTS	-1.26	-0.31
PRODUCTION OF CANDY AND OTHER CONFECTIONERY PRODUCTS	-0.65	-0.87
PRODUCTION OF SPAGHETTI OND OTHER PASTA PRODUCTS	0.27	1.32
PROCESSING OF TEA AND COFFEE	-4.10	-5.11
PRODUCTION OF SPICES AND OTHER CONDIMENTS	0.69	1.14
PRODUCTION OF HOMOGENIZED NUTRITIONAL PRODUCTS AND DIETARY SUPPLEMENTS	-2.21	-2.16
PRODUCTION OF OTHER FOOD PRODUCTS	-1.10	-1.43
PRODUCTION OF DISTILLED ALCOHOLIC BEVERAGES	-1.88	-1.70
PRODUCTION OF WINE FROM FRESH GRAPES	-0.18	-1.50
PRODUCTION OF APPLE WINE AND WINE FROM OTHER FRUITS	-1.69	-1.39
PRODUCTION OF OTHER NON-DISTILLED FERMENTED BEVERAGES	/	-6.28
PRODUCTION OF BEER	1.86	3.97
PRODUCTION OF MALT	0.67	-4.95
PRODUCTION OF MINERAL WATER	3.28	4.21
PRODUCTION OF NON-ALCOHOLIC REFRESHING BEVERAGES	0.35	3.13

Source: Author's calculation based on the foreign trade statistical data for years 2005 and 2009, Statistical Office of the Republic of Serbia, Belgrade

The analysis of comparative advantage using the modified author's model confirms the presence of high comparative advantage for the analyzed sectors of the food processing industry. The represented values of the modified comparative advantage have higher values, but the ranking of products remained unchanged. A high value of the comparative advantage index is a result of the significant export from the analyzed sectors in the total foreign trade with agricultural and food products.

8. CONCIUSION

Our research showed that Serbian food processing industry in the analyzed period was partially integrated in the foreign market. Comparative analysis of comparative advantages of Serbia revealed that a high value of comparative advantage is present in industries with products that prevail in export.

Sectors with a high comparative advantage index have a more significant export than import and these are the following: Production of sugar, mineral water, beer, ice-cream and other frozen products, non-alcoholic refreshing beverages, biscuits, production and canning of fruit and vegetables, crude oils and fats, production, processing, cooling and freezing of animal and rabbit meat.

Negative comparative advantage is the result of lagging in investments, developing product assortments of the food processing industry and lack of international market research. This is evident in the following industry sectors: production of ready-made pet feed, processing of tea and coffee, production of other non-distilled fermented beverages, malt, processing and canning of fish and fish products, distilled alcoholic drinks and wine from fresh fruits.

Comparative advantage (LFI) shows advantages in the following sectors: production and canning of fruit and vegetables, sugar, crude oils and fats, non-alcoholic refreshing beverages, beer, grain mill products, dairy products, spices and other condiments. In other words, these are the sectors which showed positive comparative advantage using the Balassa method as well.

Comparative advantage of the different sectors of Serbian food processing industry using the author's modified model *(Sm)* confirms the presence of high comparative advantage of the analyzed sectors. The presented values of the comparative advantage index have higher values, but the ranking of products remained unchanged.

Specialization in international trade (GL) points to the existence of correlation between comparative advantage and intra-industrial specialization in foreign trade. We can conclude that the decrease of comparative advantage in a sector of food processing industry is accompanied by the inter-industrial character of exchange, which is the result of increased economic openness, food market liberalization and increased import.

Low usage of processing capacities, overly big and outdated processing capacities represent limiting factors for the improvement of competitiveness of the food processing industry. Lack of investments, neglected research into better exploitation of raw materials and production capacities, absence of implementation of the so-far achievements and innovations in the area of processing, fluctuation in product quality due to inadequate implementation of quality standards and slow pace of adaptation to market criteria- all these have an unfavorable effect on competitiveness and product placement in export. In the coming period, Serbia needs to improve its production processes, cost-effectiveness and profitability of production, as well as to maximize the production of final products. Introducing the indication of geographical origin to agricultural products would result in multiple positive effects. In other words, it would create favorable conditions for production, employment and income distribution. Product differentiation, as opposed to traditional production process, would lead to market penetration and development of the economy of scale.

In that regard, we need to create a stimulating business environment and improve business conditions. Competitive environment is extremely important, as well as free market trade, which was impaired in Serbia due to the presence of monopolies and oligopolies. It is necessary to finish the started reform of legislations, especially in the area of harmonization with international rules and regulations. In foreign trade it is necessary to make a unique register of exporting companies, to simplify the procedures for obtaining licenses and to decrease the respective costs. Domestic production should be promoted through organization of economic seminars, conferences, exhibitions and specialized fairs. By favorable loan plans and tax policy Serbia needs to stimulate investments in building new and renewal of existing production capacities. Companies oriented towards export have to be additionally stimulated by special financial incentives for the renewal of production processes and introduction of quality standards.

The improvement of competitiveness of the food processing industry of Serbia presents the basis for the increase of export and import revenues, which will subsequently bring the necessary financial resources for the import of new technology and equipment.

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