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## ECONOMIC ASPECTS OF SERBIAN COMPARATIVE ADVANTAGES IN EXPORTS OF VEGETABLE MATTER

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### Abstract

*Increase of exports of goods and services is needed in domestic economy in order to reduce foreign trade deficit. Reduction of the negative balance directly affects the level of funds needed to pay for imports and service external debt.*

*The paper points out the tendency of foreign trade and macroeconomic aspects of exports. The paper seeks to quantify the degree of comparative advantage of Serbia's exports of medicinal, aromatic and spice herbs and other raw plant materials.*

**Key words:** *competitiveness, medicinal herbs, export, import.*

### Introduction

The competitiveness of Serbian economy is conditioned by modernization and structural changes in production, program organization, increasing productivity and efficiency in production and an encouraging and developmental economic policy.

Serbia has a high deficit in foreign trade. High external deficit is characteristic of the transition process because it occurs due to structural changes, significant capital inflow and convergence towards the developed countries of the European Union. However, the deficit is also the result of unfavorable economic activities, inadequate production structure, product quality, lack of competitiveness, insufficient economic incentives, customs and economic policy.

Increase of exports of goods and services is needed in domestic economy in order to reduce foreign trade deficit. Reduction of negative balance directly affects the level of funds needed to pay for imports and foreign debt servicing.

In order to observe the fundamental economic factors that shape the market structure,

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production structure, trade balances and products should be considered. Specialization in the production of certain product groups defines the form of trade structures. Favorable export performance of agriculture and processing industry of Serbia in recent years reflect the interdependence of processes at the international and domestic markets. The paper analyzes the status and prospects of export of medicinal and aromatic herbs and other raw plant material. The research is based on quantitative analysis; a methodological framework is based on the application of scientifically relevant indicators of international trade, which includes indicators of comparative advantage and specialization in international trade. The coverage of imports by exports of selected products was analyzed as well.

### Comparison of the export-import parameters

**By comparing the achieved scope and value of exports it is possible to analyze changes that occur in the time period.** The results obtained are used for market segmentation, definition of export policy and the development of competitiveness. [3] In the research of economic factors that define market structure special attention should be devoted to production potentials, balance of trade and specialization in the production of certain product groups.

*Table 1. Exports and imports of selected product groups: spices and raw plant materials from Serbia in 2008 (in thousands of USD)*

PRODUCTS	EXPORTS	IMPORTS
Pepper of the genus "capsicum" or pimento	8,980.00	1,378.00
Fennel seeds and juniper	805.00	79.00
Vegetable wicker materials	502.00	53.00
Chamomile	580.00	124.00
Mint	990.00	199.00
Other herbs for perfumery	3,742.00	1,673.00
Alfalfa	974.00	385.00
Fruit trees, grafted or not	12,894.00	7,154.00
Roses, grafted or not	1,720.00	78.00
Plant materials for the production of brooms and brushes	1,112.00	4.00

*Source: Statistical Office for the respective year*

*Table 2 Exports and imports of selected product groups: spices and raw plant materials from Serbia in 2005 (in thousands of USD)*

PRODUCTS	EXPORTS	IMPORTS
Pepper of the genus "capsicum" or pimento, dried	5,391.00	372.00
Fennel seeds and juniper	378.00	3.00
Vegetable wicker materials	338.00	24.00
Chamomile	501.00	46.00
Mint	793.00	28.00
Other herbs for perfumery	2,102.00	851.00
Alfalfa	344.00	706.00
Fruit trees, grafted or not	7,098.00	643.00
Roses, grafted or not	875.00	44.00
Plant materials for the production of brooms and brushes	790.00	98.00

*Source: Statistical Office for the respective year*

Surplus in foreign trade in medicinal and aromatic plants has increased at a rate of 15.17% per year. **Increase in surplus** is the result of higher export prices. Export prices of this product group increased at a rate of 12.13% per year.

**The rate of increase of export in sectors was analyzed: coffee, tea, cocoa, spices and animal and plant raw materials and product groups spices and plant raw materials, aggregated to the level of products.** [5]

**Export in the sectors of coffee, tea, cocoa and spices increased at a rate of 24.09% and in the sector of animal and plant raw materials it increased at the rate of 15.53% per year.** Export of product groups of spices and plant raw materials increased at a rate of 19.20% and 15.68% per year. **The highest rates** of export increase have the following products: fennel seeds and juniper ( $r_g = 28.66\%$ ), alfalfa seed ( $r_g = 41.47\%$ ) and fruit trees, grafted and not grafted ( $r_g = 25.27\%$ ).

### Export-import ratio

**Sectors of coffee, tea, cocoa and spices** in 2008 had a negative export-import ratio ( $r_{ij} = 37.59\%$ ), i.e. recorded a deficit in foreign trade. Within that sector, **product group of spices** ( $r_{ij} = 225.18\%$ ) had a very high export-import ratio and all analyzed products recorded positive coverage ratio.

At the level of **the sector of animal and plant raw materials** in 2008 Serbia had a negative export-import ratio ( $r_{ij} = 49.79\%$ ) and the commodity group of plant raw

materials had a negative export-import ratio ( $r_{ij} = 47.25\%$ ). All analyzed products have a positive export-import ratio.

Export-import ratio for products in groups SITC 075 and 292 rev.3. in 2008 was reduced compared to 2005 (except for products: alfalfa seed, roses, grafted or not, and plant materials for the production of brooms and brushes).

### Relative export-import ratio (RPU)

**The high value of RPU of sectors of food and live animals** tells about a favorable balance of export and import and can be considered the holder of export expansion in Serbia. **RPU of the sector of raw materials, excluding fuel** was low, but positive.

**RPU of the sector of coffee, tea, cocoa and spices** is negative both in 2005 and 2008, i.e. a deficit in trade of these products was recorded ( $RPU^{2005} = 28.22\%$ ;  $RPU^{2008} = 28.05\%$ ). Relative export-import ratio of **commodity group of spices** is high ( $RPU^{2005} = 856.12\%$ ,  $RPU^{2008} = 592.59\%$ ).

**RPU of the sector of animal and plant raw materials** in 2005 was positive ( $RPU^{2005} = 153.10\%$ ), while in 2008 there was a trade deficit ( $RPU^{2008} = 97.63\%$ ). **Commodity group of plant raw materials** had a deficit in foreign trade in both years ( $RPU^{2005} = 96.17\%$ ,  $RPU^{2008} = 94.49\%$ ).

**Most favorable ratio of relative coverage of imports by exports in 2005 had the products: fennel seeds and juniper** ( $RPU^{2005} = 3974.76\%$ ), vegetable wicker materials, other ( $RPU^{2005} = 2271.51\%$ ), chamomile ( $RPU^{2005} = 1756.66\%$ ), mint ( $RPU^{2005} = 4567.97\%$ ), fruit trees, grafted or not ( $RPU^{2005} = 1780.46\%$ ), roses, grafted or not, ( $RPU^{2005} = 3207.48\%$ ) and plant materials for the production of brooms and brushes ( $RPU^{2005} = 1300.20\%$ ).

**In 2008, RPU coefficient of most products was reduced, and better ratio of relative coverage of imports by exports had the products: other herbs for perfumery** ( $RPU^{2008} = 475.89\%$ ), alfalfa seed ( $RPU^{2008} = 538.27\%$ ), roses, grafted or not ( $RPU^{2008} = 4691.76\%$ ) and plant materials for the production of brooms and brushes ( $RPU^{2008} = 59148.94\%$ ). **Products with reduced RPU coefficient in 2008** can compete in world merchandise trade of Serbia (presented data  $RPU > 100\%$ ) [1].

### Grubel-Lloyd index (GL)

**The value of GL index for the two analyzed sections in 2005 and 2008 had the following values: both sections in 2005** had intra-industrial character. **Sectors of coffee, tea, spices** had the same level of intra and inter-industrial exchange **in 2008**, and the sector of animal and plant raw material had lower level of intra-industrial trade. To obtain a complete picture of the level of specialization, analysis of the value of GL index at the lower level of data aggregation was performed. **Export of products with prominent inter-industrial character in 2008 was the following:** plant materials for

the production of brooms and brushes (GL = 0.01), roses, grafted or not (GL = 0.09), fennel seeds and juniper (GL = 0.18) and vegetable wicker materials (GL = 0.19). Intra-industrial trade characteristics are found in the following products: fruit trees, grafted or not (GL = 0.71), plants for perfumery (GL = 0.62) and alfalfa seeds, which is closer to the middle, i.e. **inter- and intra-industrial trade** (GL = 0.57).

### **RCA index of comparative advantage**

Products can be classified according to the level of index of comparative advantage. **Products with satisfactory comparative advantage have RCA index values from 0 to 0.50, with significant advantages have RCA index values of 0.50 to 1.00, and with exceptional comparative advantages have RCA values over 1.00. In the foreign trade sectors of coffee, tea, as well as spices and animal and plant raw materials Serbia has no comparative advantages. [2]**

**Commodity group of spices has significant and product group of plant raw materials has no comparative advantages. Also, the comparative advantage of commodity groups decreased in 2008 compared to 2005.**

**The highest value of RCA index, i.e. an exceptional comparative advantage have plant materials for the production of brooms and brushes ( $RCA^{2008} = 2.70$ ), roses, grafted or not ( $RCA^{2008} = 1.48$ ), fennel seeds and juniper ( $RCA^{2008} = 1.11$ ) and plant materials for wickerwork ( $RCA^{2008} = 1.08$ ). Other products have a positive RCA index. The presented results show the presence of comparative advantages in foreign trade, at the level of raw materials.**

Comparative advantage indices of finished products in 2008 have low value. The exception is for products: brooms and brushes of vegetable material. The value of RCA index of fennel seeds and juniper belongs to the category of outstanding comparative advantages, and juniper brandy ( $RCA^{2008} = -1.03$ ) and essential oils (e.g., juniper  $RCA^{2008} = 0.23$ ) to negative comparative advantages.

Foreign trade of medicinal, spice and aromatic herbs is based on exports of raw materials and export of products at higher stages of processing (extracts of essential oils). According to the data, processing industry is falling behind.

### **Conclusion**

**The foregoing analysis points to the fact that the economy of the Republic of Serbia in the period between 2005 and 2008 was integrated into international trade flows. Of the ten analyzed products, most belong to raw materials of agricultural origin and a part of it are final products. Raw materials of agricultural origin present comparative advantages.**

Research shows that the analyzed products show a positive export-import ratio. **Grubel-Lloyd index (GL) shows that there is inter-industrial exchange at the product level.** The index of comparative advantage (RCA) shows that there is a decline

in comparative advantage mainly for all products. The index of comparative advantage (RCA) of the final product shows a negative value or very low comparative advantage in some products.

The presented results give the assessment of export potential of the country and assessment of comparative advantages in the future.

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