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SERBIAN TEXTILE AND APPAREL INDUSTRY AT THE INTERNATIONAL MARKET: COMPARATIVE ADVANTAGE ANALYSIS

This research paper deals with the analysis of the level of specialization and comparative advantage of textile and apparel industry of Serbia, as regards export into international markets, with the aim to improve the position of the country at the international market. The structure of export and comparative advantage of Serbian textile and apparel industry has been dynamically analyzed, and its competitiveness has been evaluated on an international level for the period 2004-2009. We have discovered a negative value of comparative advantage of Serbian textile and apparel industry and the rise in specialization in intra-industry exchange on the level of industry, whereas there is a satisfactory level of comparative advantage of export and intra-industry exchange for specific groups of market goods.

Keywords: *textile industry; comparative advantage; intra-industry exchange; specialization in international trade.*

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СЕРБСЬКА ЛЕГКА ПРОМИСЛОВІСТЬ НА МІЖНАРОДНОМУ РИНКУ: АНАЛІЗ ПОРІВНЯЛЬНИХ ПЕРЕВАГ

У статті проведено аналіз рівня спеціалізації та порівняльних переваг легкої промисловості Сербії відносно експорту на міжнародні ринки з метою покращення становища країни на світовому ринку. Проаналізовано динаміку структури експорту та порівняльні переваги сербської легкої промисловості та оцінено її конкурентоспроможність на міжнародному рівні за період 2004-2009 років. Виявлено негативне значення порівняльних переваг сербської легкої промисловості та зростання спеціалізації в межах внутрішньогалузевого обміну, одночасно задовільним є рівень порівняльних переваг експорту та внутрішньогалузевого обміну для певних груп товарів.

Ключові слова: *текстильна промисловість; порівняльна перевага; внутрішньогалузевий обмін; спеціалізація у міжнародній торгівлі.*

Форм. 4. Табл. 3. Літ. 14.

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СЕРБСКАЯ ЛЕГКАЯ ПРОМЫШЛЕННОСТЬ НА МЕЖДУНАРОДНОМ РЫНКЕ: АНАЛИЗ СРАВНИТЕЛЬНЫХ ПРЕИМУЩЕСТВ

В статье проведен анализ уровня специализации и сравнительных преимуществ легкой промышленности Сербии относительно экспорта на международные рынки с целью улучшения положения страны на мировом рынке. Проанализирована динамика структуры экспорта и сравнительные преимущества сербской легкой промышленности и оценена ее конкурентоспособность на международном уровне за период 2004-2009 годов. Обнаружено негативное значение сравнительных преимуществ сербской легкой

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промышленности и роста специализации внутриотраслевого обмена, в то же время удовлетворительным является уровень сравнительных преимуществ экспорта и внутриотраслевого обмена для определенных групп товаров.

Ключевые слова: *текстильная промышленность; сравнительное преимущество; внутриотраслевой обмен; специализация в международной торговле.*

Introduction. The breakdown of former Yugoslavia, the liberalization of domestic market, together with "the fragmentation of production, relatively lagging behind competitors, rising tendencies in the cost of work, inadequate protection of domestic production, expansion of import and economic blockade brought the textile industry to a collapse" (Buturac, 2007).

The lack of financial resources in textile and apparel industry, together with the increased competitiveness of neighboring countries (Bulgaria, Romania and Bosnia and Herzegovina), "uncontrolled import of textile and thus the presence of disloyal competitors in the textile market (illegal import from Turkey and China)" (Urosevic et al., 2009) contributed to the fall in comparative advantage and competitiveness at the international market. Producers of textile and leather products at the domestic market rely on cheap workforce and offer services to foreign brand owners (loan jobs/ loan business arrangements). Since loan jobs in textile and apparel industry account for 80% of total business, it is believed that comparative advantage of export of these products is merely with "temporary and short-lasting effect" and that "in the near future export will be under the strong influence of competition from the eastern markets, given the larger amount of available resources and cheaper workforce" (Buturac, 2007). Although the costs of workforce in this industry are lower, producers offer services rather than export products under their own label. By means of export organized by specialized companies, a part of the added value goes over to foreign countries and thus generates a weaker financial effect. According to Urosevic (2009), the domestic market is characterized by grey economy in trade and production, and a large number of unregistered business enterprises dealing with production and trade. Additional problems for textile and apparel industry producers are high costs of introducing new quality standards and environmental regulations, insufficient numbers of specialized and creative professionals, poor organization, i.e., weak links between companies and research/educational institutions. Factors that could have a positive effect on the level of price competitiveness are higher educational attainment levels and levels of expertise, compared to the countries from the region.

Furthermore, the paper analyzes the current position and development prospects of Serbian textile and apparel industry in international trade. The subject of our research is the analysis of the level of specialization and comparative export advantage of textile and apparel industry of Serbia at the international market. The aim of this analysis is to identify and define those groups of products which exhibit positive comparative advantage and to suggest economic solutions which could expand and improve the export of these products.

Literature review. Textile and apparel industry plays a key role in the economic development of many developing countries. It has been estimated that about 130 developing countries depend on this industry, and a growing number of people work in its production and export. "The principle of comparative advantage could still bring

net benefits in areas in which the countries have industry or occupation specific advantage. In textiles, for example, the United States has developed competitive advantage in specialty and industrial fabrics (such as stain-resistant fabric) using nano-technology. Specialization within industries is expected to generate global demand for certain narrow categories of products/services that require high skills in advanced countries" (Seyoum, 2010).

Leseure (2009) emphasizes that textile industry is very important for developing countries, as it positively affects the employment level with relatively small investments. Compared to developed economies, where textile industry loses its importance, "textile manufacturing is significant in developing countries and contributes as much as one-half to the manufacturing output of some of them. Currently the largest textile producing countries are in East and South Asia. They include China, India, Pakistan, Bangladesh, Korea, Taiwan and Vietnam. Very little textile production remains in developed countries of the West, except for the USA where the surviving companies have started producing for specialized markets" (Leseure et al., 2009).

"As a result of tremendous differences in production costs, the demand for clothing textiles shifted globally towards places with low-cost clothing production. The outward processing from industrialized countries established a very efficient, well-organized global production network in low-wage countries, enabling new potential for economic development. The analysis shows that the future of textile and clothing companies is not in producing but in the management of markets, organizing a global supply chain of subcontractors and in retailing" (Adler, 2004).

Dynamic changes result in redistribution of capital and stress the need to intensively implement design, marketing, product origins and services (Ha-Brookshire, Dyer, 2008). Textile and apparel industry development emphasizes the need to intensify competition, leading to numerous innovations, especially in the leading companies, as regards products, processes, marketing and organizational structure (Wijayasiri and Dissanayake, 2008).

In order to improve competitiveness of textile and apparel industry, the need for restructuring through modernization and replacement is highly emphasized. In more precise terms, this implies "the process of replacement of obsolete machinery and importing the latest equipment from the top to the middle range, through which the industry may produce first class products" (Memon, 2005). Although the world's textile production has been stagnating in the recent years, Memon stresses an extremely important role of textile and apparel industry "in terms of GDP, exports, employment, foreign exchange earnings, investment and revenue generation altogether placed the textile industry as determinant of the economic growth of the country" (Memon, 2005).

According to Chen Chiu (2009), the process of stimulating industrialization and intensifying the growth of textile and apparel industry has to be encouraged by macroeconomic measures "on international trade, foreign exchange and tax incentives, and infrastructure development". In some countries positive results were obtained by "adopting various protective duties, pricing controls for raw materials, providing export duty refunds, and by provision of investment tax exemption to encourage local investment in weaving and textile factories" (Chen Chiu, 2009).

Yongzheng and Montfort (2007) point out that important factors for the influx of foreign direct investments into textile and apparel industry are political stability, political predictability and also good infrastructure. Besides low labor costs, the development level of infrastructure is extremely important. Working conditions and especially corruption, bureaucracy and complicated custom procedures are the main obstacles to foreign investments and improvement of foreign trading in textile and apparel industry.

Textile and apparel industry in most of developing countries depends on the import of materials and additional equipment. Given that local textile industries do not have sufficient capacities for supplying textile, there is a great dependency on import "accounting for almost a half of the total industrial export. At the moment, the textile and apparel industry solves the problem of great demand for materials by importing them from abroad. Hence, the lack of business activities from the opposite direction was identified as the biggest weakness of the industry (Wijayasiri and Dissanayake, 2008).

Methods. This research is based on a qualitative-quantitative analysis, with the methodology based on application of scientifically relevant parameters for international trade, including the indicator of comparative advantage, using the Balass and Lafay indices, the indicator of specialization in intra-industry exchange (GL) and indicators of horizontal and vertical specializations in international trade (RUV).

By using the Balassa method in this research, we have realistically observed and analyzed the comparative advantage of textile and apparel industry and have defined their competitiveness at the international market. What follows is the Balassa formula for calculating competitive advantage (Balassa, B. 1965):

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

where:

RCA – revealed comparative advantage in the year t;

X_i – txport of product group i of the country j in the year t;

M_i – import of product group i of the country j in the year t;

$\sum_{i=1}^{n} X_i$ – total export of all sectors of the country j in the year t;

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

In the previously listed formula, X represents the export value, whereas M is the import value. Index i symbolizes the specific product group of Serbian economy. The positive value of RCA index shows comparative advantage and the bigger the value of RCA is, the bigger is the revealed comparative advantage of certain products.

For the analysis of the specialization level in intra-industry exchange (export and import) we use the Grubel Lloyd's index. GL^t_i is the value of Grubel Lloyd's index for a group of products i. X^t_i represents the export value, whereas M^t_i is the import value. The index ranges from 0 to 1. Intra-industry exchange is defined as the simultaneous export and import of the same product groups within the same sector. The higher the

index value is, the greater is the level of specialization in intra-industry exchanges. Lower values of GL index indicate that foreign trade is closer to inter-industry exchange. GL index is calculated using the following formula (Grubel, H., Lloyd, P., 1975):

$$GL_i^t = ((\sum_{i=1}^{n}(X_i^t + M_i^t) - \sum_{i=1}^{n}|X_i^t - M_i^t|) / \sum_{i=1}^{n}(X_i^t + M_i^t) \quad (2)$$

where:

GL^t_i – index of intra-industry trade of the "*i*" sector in the year "*t*";

X^t_i – export of product group "*i*" in the year "*t*";

M^t_i – import of product group "*i*" in the year "*t*".

For the analysis of comparative advantage we use the Lafay index (LFI) which is defined in the following way (Affortunato et al., 2010):

$$LFI^i{}_j = 100\left(\frac{x^i{}_j - m^i{}_j}{x^i{}_j + m^i{}_j} - \frac{\sum_{j=1}^{N}(x^i{}_j - m^i{}_j)}{\sum_{j=1}^{N}(x^i{}_j + m^i{}_j)}\right)\frac{x^i{}_j + m^i{}_j}{\sum_{j=1}^{N}(x^i{}_j + m^i{}_j)}, \quad (3)$$

where x^i_j and m^i_j are respectively exports and imports of product *j* for country *i*, towards and from the rest of the world, and where *N* is the number of products. The comparative advantage of country *i* in the production of product *j* measures the deviation of product *j* from the total trade balance. Positive values of the Lafay index indicate the existence of comparative advantage, with a higher value indicating a higher degree of specialization and a negative value indicating the opposite. Lafay index, as opposed to Balassa index, takes into account the difference between values of import and export and tries to overcome certain weaknesses of the Balassa index, taking into account the internal trade flows and GDP.

RUV indicator is used for the analysis of horizontal and vertical specialization in intra-industry exchange. It represents the ratio between the export price per unit and the import price per unit, and is calculated using the following formula (Buturac 2007, p. 114):

$$1-\alpha \le \frac{UVX_i}{UVM_i} \le 1+\alpha,$$

where: UVX is the price of export per unit of the product group *i*, and UVM is the price of import per unit of the product group *i*. The parameter α is the coefficient of dispersion and can have arbitrary values. It is usually fixed at 0.15 in researches. If the value of the indicator is within the range 0.85-1.15, we can speak of horizontal specialization, whereas values beyond the mentioned range point at vertical specialization.

Results. In the analyzed years, the most significant exporting products of the textile and apparel industry were: men's and women's jackets, cotton fabrics, footwear and clothes/clothing garments. In the structure of export of the textile and apparel industry in 2009, the products in 5 product groups accounted for 84% of export, while this share in 2004 was 69.31%. Those product groups were:

- Clothes, with a share of 24.32%;
- Clothing accessories, made of textile, with a share of 23.27%;
- Footwear, with a share of 23.37%;
- Men's coats, with a share of 6.66%;
- Women's coats and gowns, with a share of 6.34%.

In the structure of import in 2009, the most common were footwear, clothing accessories made of textile, yarn made of textile fibers and clothes. In 2004 the most common importing product groups were: cotton fabrics, footwear, leather, fabrics made of synthetic and artificial materials, special knitted and woven fabrics, men's coats and clothes.

Table 1. **Values of RCA i GL indices for the processing industry and textile and apparel industry in the analyzed year**

	RCA					
	2004	2005	2006	2007	2008	2009
Processing industry	-0,32	-0,29	-0,27	-0,20	-0,26	-0,17
Textile and apparel industry	-0,28	-0,17	-0,19	-0,15	-0,14	-0,06
	GL					
Processing industry	0,54	0,67	0,73	0,79	0,82	0,84
Textile and apparel industry	0,59	0,80	0,81	0,85	0,85	0,94

Source: Author's calculations.

The analysis of comparative advantage (RCA) reveals negative comparative advantage of the processing industry and textile and apparel industry in all of the analyzed years. This leads us to the conclusion that the deficit in foreign trade of the textile and apparel industry is the consequence of dependence on the import of resources for processing and production.

The analysis of specialization in intra-industry exchange (GL) shows constant increase in the index value for textile and apparel industry. We can observe higher values of GL index for textile and apparel industry, as a result of greater openness in the trade and larger scope in foreign trade and exchange. Foreign trade was conducted in both directions. In other words, there is a correlation between the specialization level of intra-industry exchange and comparative advantage of industrial export.

The analysis of comparative advantage of textile and apparel industry. The central part of the analysis is to observe the revealed comparative advantage in foreign trade with respect to product groups, using the Balassa and Lafay indices. We have analyzed the status of product groups in foreign trade in the period between 2004 and 2009. The analysis was performed at three-digit level- SITC[4] rev.3.

The comparative analysis of product groups export (RCA) revealed that the products with foreign trade surplus have a positive value of the comparative advantage index. In other words, product groups with high comparative advantage are of intra-industry character and trade is conducted in both directions within that group.

The analysis of revealed comparative advantage index shows that in 2009 product groups had a lower level of comparative advantage compared to 2004. The analysis of

[4] SITC – standardized international trade classification.

RCA for 27 product groups SITC, with textile and apparel industry products, reveals a positive, satisfactory comparative advantage for only 5 product groups, which are:

- footwear, clothes, women's coats, clothing accessories made of textile, tanned and processed furs.

Table 2. **RCA indicator for the textile and apparel industry with respect to production groups- SITC, years 2004 and 2009**

	RCA 2004	RCA 2009	LFI 2004	LFI 2009
Artificial and synthetic fibers	0.20	-3.45	0.15	-0.04
Cotton	-1.02	-2.88	-0.02	-0.01
Synthetic fibers for knitting/weaving	-1.22	-2.01	-0.02	-0.02
Cotton fabrics	-1.19	-1.76	-0.21	-0.13
Plant fibers (except cotton and jute)	-1.73	-1.54	0.00	0.00
Knitted and woven materials	-1.13	-1.53	-0.11	-0.13
Used/second-hand clothes and rags	-1.15	-1.32	-0.01	0.00
Yarn made of textile fibers	-0.56	-1.19	-0.08	-0.22
Synthetic and artificial fabrics	-0.75	-1.14	-0.13	-0.12
Jute and other jute-like fibers	-1.04	-1.08	0.00	0.00
Leather	-0.86	-1.03	-0.17	-0.17
Leather products- natural and artificial leather	-0.16	-0.90	0.00	-0.01
Special yarn and fabrics	-0.60	-0.84	-0.08	-0.12
Apparel and clothing accessories, except textile ones	-0.41	-0.83	0.00	-0.03
Textile products, knitted/woven	-0.96	-0.54	-0.06	-0.02
Tulle, lace, embroidery, bands etc.	-1.09	-0.44	-0.03	-0.01
Wool, other animal fibers	-0.31	-0.41	0.00	0.00
Finished products made of textile	-0.36	-0.23	0.00	0.02
Women's coats, gowns/overcoats and the alike	-0.16	-0.16	0.11	0.08
Men's coats, jackets and the alike	-0.10	-0.09	0.20	0.11
Men's coats and similar garments- knitted/woven	-0.20	-0.07	0.01	0.01
Floor coverings	0.10	-0.03	0.11	0.04
Footwear	-0.15	0.01	0.37	0.50
Women's coats and similar garments- knitted/woven	0.30	0.07	0.13	0.06
Clothes	-0.03	0.32	0.28	0.77
Accessories made of textile	0.08	0.41	0.25	0.78
Tanned and processed furs	0.22	0.42	0.00	0.00
Silk	/	/	/	/
TOTAL	-0.28	-0.14	0.71	1.34

Source: SORS (Statistical Office of the Republic of Serbia) and author's calculation.

It has been observed that in most product groups (22) of this industry in the analyzed period, there was a serious decrease of comparative advantage and impairment of competitiveness of Serbian textile and apparel industry, which is more pronounced in basic production. The decrease of comparative advantage is the result of uncontrolled import and disloyal competition in finished products from abroad.

The analysis of comparative advantage (LFI) shows an increase compared to 2004 in the following product groups: clothes, clothing accessories made of textile and footwear.

Product groups of textile and apparel industry which have a positive value of comparative advantage and a higher level of specialization in foreign trade, measured using the Lafay index in 2009 are: finished products made of textile, floor coverings, men's coats and jackets and other presented in Table 2.

Product groups of textile and apparel industry which have a negative value of comparative advantage and a lower level of specialization in foreign trade, measured using the Lafay index in 2009 are: cotton, synthetic fibers for knitting/weaving, artificial and synthetic fibers and other presented in Table 2.

In the production of footwear, clothes, women's coats and clothing accessories made of textile there is a potential which should be used to improve competitiveness at the world market. Perspectives of the mentioned product group result from the increase in the world trade and demand at international markets.

Specialization in intra-industry exchange of texstile and apparel products. In order to get a clearer picture of specialization level in foreign trade, it was important to analyze the value of intra-industry exchange index at the lower level of data aggregation. We perform the analysis of data aggregated to the three-digit level- SITC rev.3.

Table 3. **GL and RUV indicators of textile and apparel industry, with respect to product groups SITC, 2004 and 2009**

	GL 2004	GL 2009	RUV 2004	RUV 2009
Silk	/	/	/	/
Artificial and synthetic fibers	0.70	0.00	0.39	4.16
Cotton	0.09	0.01	1.01	1.42
Synthetic knitting/weaving fibers	0.05	0.05	0.91	0.66
Cotton fabrics	0.05	0.07	2.90	0.74
Plant fibers (except cotton and jute)	0.01	0.11	2.09	0.52
Knitted and woven materials	0.06	0.11	0.95	0.98
Used/second-hand clothes and rags	0.06	0.16	0.83	1.76
Yarn made of textile fibers	0.31	0.20	1.42	0.90
Synthetic and artificial fabrics	0.18	0.21	0.74	1.47
Jute and other jute-like fibers	0.08	0.24	/	/
Leather	0.14	0.25	0.47	4.25
Leather products- natural and artificial leather	0.76	0.31	0.94	1.42
Special yarn and fabrics	0.28	0.34	0.76	1.55
Apparel and clothing accessories, except textile ones	0.45	0.35	3.20	0.32
Textile products, knitted/woven	0.10	0.53	0.42	0.88
Tulle, lace, embroidery, bands etc.	0.07	0.61	0.74	0.59
Tanned, processed fur	0.68	0.63	1.46	1.71
Wool, other animal fibers	0.56	0.63	0.12	4.26
Accessories made of textile	0.88	0.64	1.39	0.92
Apparel	0.96	0.71	4.12	0.34
Finished products made of textile	0.50	0.79	0.70	1.81
Women's coats, gowns/overcoats and the alike	0.76	0.85	3.33	0.37
Men's coats, jackets and the alike	0.85	0.92	1.45	0.54
Men's coats and similar garments- knitted/woven	0.70	0.93	3.13	0.87
Women's coats and similar garments- knitted/woven	0.57	0.93	4.30	0.88
Floor coverings	0.85	0.97	0.72	1.20
Footwear	0.78	0.99	1.49	0.61
TOTAL	0.49	0.87	1.33	0.55

Source: SORS and author's calculation.

The results of the specialization analysis in foreign trade using the Grubel-Lloyd's index point at the prevalence of intra-industry specialization which is more significant in the production of clothing garments. The results of this analysis lead us to conclude that there is a correlation between comparative advantage and intra-

industry specialization in foreign trade. The analysis results of the intra-industry exchange of products at the level of textile and apparel product groups show there are simultaneous export and import processes and openness of this industry towards foreign trade. Within the industry there is export and import of various products which are differentiated and are not complete substitutes.

The analysis of intra-industry exchange (GL) in 2009 at the level of product groups reveals the following:

- Intra-industry exchange is in the following product groups (with both export and import): tulle, lace, embroidery, bands etc.; tanned and processed furs; wool and other fibers of animal origin; clothing accessories made of textile; clothes, finished products made of textile; women's coats, gowns and the alike; men's coats and jackets; men's coats, woven; women's coats, woven; floor coverings and footwear.

- Inter-industry exchange is in the following product groups (with export or import): artificial and synthetic fibers; cotton; synthetic fibers for knitting; cotton fabrics; plant fibers (except cotton and jute); woven, knitted materials; second-hand clothes; yarn made of textile fibers; fabrics made of synthetic and artificial materials; jute and other jute-like fibers; leather; products made of natural and artificial leather; special yarn and fabrics; clothes and clothing accessories.

- There is simultaneous inter-industry and intra-industry exchange in the product group: textile products, woven.

The analysis of foreign trade concerning textile and apparel products on the product group level, using the Grubel-Lloyd index, shows that out of a total number of 27 product groups, 12 of them are of intra-industry nature, whereas 14 are of inter-industry nature. A high value of Grubel-Lloyd's index (0.98 and 0.99) points to the fact that approximately the same levels of export and import are present.

In the analysis of textile and apparel industry we observe horizontal and vertical specializations, as well as the structure of international exchange. We analyze the production of textile and apparel at the same time:

- Horizontal specialization in 2009 is evident in the following product groups: woven and knitted materials; yarn made of textile fibers; textile products-knitted/woven; clothing accessories made of textile; men's coats, woven and women's coats-woven.

- Vertical specialization in 2009 is evident in the following product groups: artificial and synthetic fibers; cotton; synthetic fibers for knitting/weaving; cotton fabrics; plant fibers (except cotton and jute); used/second-hand clothes; fabrics made of synthetic and artificial materials; jute and other jute-like fibers; leather; leather products-natural and artificial leather; special yarn and fabrics; clothes and clothing accessories; tulle, lace, embroidery, bands etc.; tanned and processed furs; wool and other animal fibers; clothes; finished products made of textilel; women's coats and gowns; men's coats and jackets; floor coverings and footwear.

In textile production there is evident horizontal and vertical specialization, with the presence of export of products with small and high added value. In apparel export there is evident vertical specialization, which points to the conclusion that there is evident export of products with relatively high added value.

Conclusions and recommendations. The analysis results show that Serbian textile and apparel industry in the analyzed period have only partially managed to get integrated into the international markets. In the export of textile and apparel products, 5

product groups account for two thirds of the total industrial export. Weak diversification of exporting product range results in a small number of Serbian textile and apparel products at the international market.

The analysis identified the presence of positive and satisfactory comparative advantage of a small number of product groups within the scope of textile and apparel industry. In foreign trade, the following product groups are accountable for surplus and positive comparative advantage (RCA): footwear; clothes; women's coats; clothing accessories made of textile fibers and tanned and processed furs. The decrease in revealed comparative advantage (RCA) of the textile and apparel industry is the consequence of unfavorable export structure, slow structural adjustments and industrial restructuring.

The analysis of comparative advantage (LFI) points to the increase of comparative advantage in the following product groups: clothes; clothing accessories made of textile fibers and footwear, which have shown positive comparative advantage using the Balassa method as well.

The results of the specialization analysis in international trade point to the existence of correlation between comparative advantage and intra-industry specialization in foreign trade. We can conclude that the decrease of comparative advantage of basic production in textile and apparel industry is accompanied with intra-industry nature of exchange, which is the result of increased openness of economy, liberalization of markets for textile and apparel products and increase of import.

The structure of international trade analyzed from the perspective of horizontal and vertical specialization shows that there is horizontal and vertical specialization in textile productions, with the presence of export and small and high added value. In apparel export there is vertical specialization, which points to the conclusion that there is evident export of products with relatively high added value.

The results showing the decrease of comparative advantage point to the fact that Serbia lags behind developed countries in investments, product assortment development, and research of international markets. Outdated production equipment, despite the existence of some modern factories, point to the unequal distribution of technology and equipment. Investments are certainly the main production limiting factor, coupled with low usage of capacities due to the lack of quality raw materials. Besides, the basis of competitiveness should be the quality of products and a recognizable brand. A powerful international brand significantly contributes to higher customer retention and loyalty. It is a well-known fact that it is, on average, five times more expensive to win a new customer than to keep the existing one. Brand-loyal customers respond more favorably to fluctuations in product price, they are prone to cross-selling, and contribute to a favorable word-of-mouth communication. Finally, all that was previously mentioned points to the fact that producers with a powerful brand generate higher profits and exhibit a lower degree of vulnerability to market crises. Global brands have good chances to profit from licensing and franchising. Those are only some of the advantages that Serbian companies could have from developing global brands.

Suggestions for the improvement of Serbian textile and apparel industry at the international market would be the following: to use the existing and new knowledge, implement innovations, develop new product assortments, improve management and

marketing in business operations and use the comparative advantage of certain segments of textile and apparel industry in order to become competitive at the international market. If we want to improve our competitiveness and increase export, we need investments into modern equipment and technology, as well as intensive marketing and branding. By increasing revenues from export, we will generate substantial financial resources needed for the import of new technology and equipment, which will be crucial for our economic development in the coming years.

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Стаття надійшла до редакції 20.11.2011.