Andrea SUJOVÁ, Petra HLAVÁČKOVÁ, Katarína MARCINEKOVÁ

THE TRADE COMPETITIVENESS OF FURNITURE PRODUCTS

The production of wood-based furniture is the final stage in the wood processing chain. Foreign trade in furniture indicates the success of the sector and its competitiveness on international markets. The aim of this paper is to evaluate the trade competitiveness, and its trend, in the furniture manufacturing industry in both the Czech Republic and the Slovak Republic for a period of ten years, through the implementation of indicators based on industry foreign trade data and using mathematical and statistical methods. A system of indicators was set up and the hypothesis: "In the furniture industry the competitive potential is used insufficiently" was proposed. The results achieved confirmed the hypothesis, however, despite the furniture industry showing an active foreign trade balance, it contributed little to the country's trade balance surplus and low values of the indicators of Revealed Comparative Advantage (RCA) were achieved. Therefore, the industry gradually loses its competitive ability.

Keywords: Revealed comparative advantage, net export, foreign trade balance, competitiveness, furniture industry.

Introduction

Foreign trade affects the level of the gross domestic product of the country as well as the performance of industries and enterprises. The foreign trade balance is used as a starting point in clarifying competitive advantages especially at the industry and sector level within the economic structure of the country. Foreign trade relations indicate the ability of industry to succeed on international markets. This ability is called competitiveness. Many economists see competitiveness as something experienced only at company level and dismiss notions of national competitiveness. The definition of competitiveness by the

Andrea SUJOVÁ (*andrea.sujova@mendelu.cz*), Petra HLAVÁČKOVÁ (*petra.hlavackova@mendelu.cz*) Mendel University in Brno, Czech Republic; Katarína MARCINEKOVÁ (*xmarcinekovak@tuzvo.sk*) Technical University in Zvolen, Slovak Republic

OECD [2015] is: "Competitiveness is a measure of a country's advantage or disadvantage in selling its products in international markets." Some authors, such as Michael Porter, state that the only meaningful concept of competitiveness at national level is productivity [Porter, 1990]. However, other authors do not agree that trade competitiveness should be evaluated according to productivity. According to Krugman, trade competitiveness is our ability to produce goods and services meeting the test of international competition while citizens enjoy a standard of living that is rising [Krugman, 2001]. It can be agreed that the true definition of trade competitiveness is the ability of a region to export more in value added terms than it imports by including terms of trade, which reflect all government discounts and import barriers. [Atkinson, 2013]

The competitiveness of countries and industries on the world market forms the basis of a modern theory of international trade and economic growth. In comparison to classical and neoclassical economic theory of international trade, it highlights the innovation resources of trade and economic development. [Bobáková, Hečková, 2007]

The paper deals with an analysis of the trade competitiveness of the furniture manufacturing industry in both the Czech Republic and the Slovak Republic. The paper is focused on the furniture commodity group for several reasons. The furniture manufacturing industry provides economic, environmental and social contributions based on the utilisation of renewable resources. Wood-based products are recyclable, reusable in new products or as a source of energy. Production of wood-based furniture in the Czech and Slovak Republics has a long tradition owing to the sufficient supply of wood material. Therefore, sustainable growth can be seen in the sector and the Czech and Slovak economies are capable of affecting the European markets through the maximum utilisation of their own resources. A need to address the chosen issue is mainly due to the fact that the European Union (EU) has put special emphasis on economic development based on renewable resources. For this reason, the furniture manufacturing industry is a fast-growing industry supported by EU. One of the interests of the EU is to make this sector highly competitive on the global market.

The assessment of the trade competitiveness of furniture manufacturing was based on the findings of previous studies in which the authors of the paper [Sujová, 2011, 2013; Sujová, Rajnoha, 2012; Hlaváčková, Šafařík, 2014] and other professionals [Jelačić et al., 2012; Merková et al., 2012; Ratajczak, 2009; Ratajczak-Mrozek, Herbeć, 2014] deal with the qualitative analysis of competitive factors of sectors within the wood processing industry. Previous analyses led to the conclusion that the furniture manufacturing industry has a high export performance compared to other sectors of the industry. The furniture manufacturing industry is not dependent on imported wood material due to sufficient supplies of raw wood within each country. Strong interest has

been shown by international investors and high inflows of foreign direct investments. Furniture companies are the most modern and active in the area of innovation, and the current policies of national governments prefer the manufacture of furniture using domestic sources of raw wood material [Szostak, Ratajczak, 2009]. Therefore, price is the main competitive advantage of the industry.

Forasmuch as furniture represents the highest value-added production in a wood processing chain, it is desirable to have a high export performance and to generate the largest trade surplus within the sectors of the wood processing industry. The trade competitiveness of furniture manufacturing, which the paper deals with, is therefore very relevant and important. Despite these facts, insufficient attention has been paid to analysing the competitiveness of furniture manufacturing and no study in the subject has yet been published.

The aim of the paper is to evaluate the competitiveness of furniture products on the basis of an analysis of foreign trade, the development of the competitive position of the furniture manufacturing industry in the Czech Republic, as well as in the Slovak Republic, over a period of ten years, and to suggest possibilities to increase competitiveness within the EU.

Research methodology

The required material to solve the issue was obtained from secondary research based on an analysis of the available scientific literature dealing with the issues of the competitiveness of sectors and countries, and on the foreign trade statistics of the wood processing industry.

Current research on competitiveness is based on the use of statistical methods to assess the revealed and anticipated comparative and competitive advantages. In practice, several indicators were designed and used to identify and measure the comparative advantages and costs, which in a specific combination can characterize the competitiveness of the selected industrial sector, as well as the country [Han et al. 2009; Dieter, Englert, 2007]. These indicators can be divided into two basic groups: result-oriented and determinant-oriented indicators [Dieter, Englert, 2007].

Result-oriented indicators enable the ex-post detection of a competitive position. On the basis of the literature and methodologies of international organisations dealing with assessment of the comparative advantages at macroeconomic and sectoral level, a system of indicators evaluating the trade competitiveness of the sector and its commodities was adopted:

- Revealed Comparative Advantage (RCA) is the most used indicator and exists in several modifications:
  - The RCA indicator under the methodologies of the Austrian Institute for Economic Research - WIFO Vienna expresses competitiveness at national level [Aiginger, Landesman, 2002]. The Growth Competitiveness Index (RCA1) enables the discovery of the competitiveness of an industry on international and world markets.
  - The Trade Performance Index (RCA2) [Balassa, 1965] expresses the rate at which the industry contributes to an active trade balance formation.
- The Contribution to Trade Balance Index (CTB) [Melíšek, 2012] measures the contribution to the national trade balance made by the industry.
- The Michaely Index (MI) [Michaely, 1962] demonstrates a certain rate of national specialisation in the commodity group, or in the industry.
- The Grubel-Lloyd Index (GLI) measures intra-industry trade of an individual commodity.

The trade competitiveness of the furniture commodity group was analysed through the identification of the comparative advantages using the selected measurement methods at industry level. The aim was to validate the accuracy of the achieved results and the relevance of the characteristics.

The indicators known from the literature study were modified, and in order to provide an analysis of the competitiveness within sectors of the industry, their calculations were adjusted. The abbreviations used in the equations are as follows:

x_{ij} – export value of commodity group "i" within industry "i" in country "j"
m_{ij} – import value of commodity group "i" within industry "i" in country "j"
X_{ij} – export value of industry "i" in country "j"
M_{ij} – import value of industry "i" in country "j"
X_j – value of total exports from country "j"
M_j – value of total imports to country "j"
X_i – world exports or exports of integration group (EU) in commodity group "i"
X – total world exports or total EU exports

The **RCA Indicator** represents the comparative advantage or disadvantage of an export and its competitiveness. Its calculation was made at two levels, national (N-RCA) and sectoral (S-RCA):

$$\text{N-RCA} = \ln\left[(x_{ij} / m_{ij}) : (X_j / M_j)\right] \tag{1}$$

$$\text{S-RCA} = \ln\left[(x_{ij} / m_{ij}) : (X_{ij} / M_{ij})\right] \tag{2}$$

The RCA at national level (N-RCA) shows the competitiveness of the industry within the country, and the RCA at sectoral level (S-RCA) shows the competitiveness of a commodity group within the industry in the country.

The results of indicator RCA mean:

RCA < 0 indicates revealed comparative disadvantages in the industry or commodity group.

RCA > 0 indicates that there are revealed comparative advantages in the country for export commodities for that industry or commodity group.

RCA > 1 identifies the commodity and industry as internationally competitive.

The Growth Competitiveness Index (RCA1) is calculated as follows:

$$\text{RCA1} = \frac{x_{ij}}{X_j} / \frac{X_i}{X} \tag{3}$$

If the RCA1 > 1 there is a revealed comparative advantage of the industry on the global market. If the RCA1 <1 a commodity group has no competitive potential on a relevant market.

The Trade Performance Index (RCA2) evaluates the comparative advantage of industry or commodity exports and their competitiveness. The formula for calculating the RCA2 is:

$$\text{RCA2} = \frac{x_{ij} - m_{ij}}{x_{ij} + m_{ij}} \tag{4}$$

Interpretation of results by RCA2 is as follows:

RCA2 = -1 means that the export does not exist ($x_{ij} = 0$).

-1 < RCA2 < 0 indicates comparative disadvantage.

RCA2 = 0 means that exports = imports.

0 < RCA2 < 1 indicates revealed comparative advantage.

RCA2 = 1 means that import does not exist ($m_{ij} = 0$).

The Michaely index (MI) highlights the degree of specialisation, or the lack of specialisation in a commodity group. Calculation of the index has been a djusted at two levels, sectoral (S-MI) and national (N-MI):

$$\text{N-MI} = \frac{x_{ij}}{\sum_{i=1}^{n} X_j} - \frac{m_{ij}}{\sum_{i=1}^{n} M_j} \tag{5}$$

$$\text{S-MI} = \frac{x_{ij}}{\sum_{i=1}^{n} X_{ij}} - \frac{m_{ij}}{\sum_{i=1}^{n} M_{ij}} \tag{6}$$

The Michaely index at national level (N-MI) shows the country's specialisation in the industry, while the Michaely index at sectoral level (S-MI) shows the country's specialisation in the commodity group within the industry.

Values of the Michaely index refer to the following:

0 < MI < 1 points to a certain degree of specialisation by the country in the industry or commodity group.

-1 < MI < 0 indicates insufficient specialisation by the country in the industry or commodity group.

   The Contribution to Trade Balance Index (CTB) was adjusted in order to establish the competitiveness of sections within the wood processing industry. Its calculation was made on two levels, national and sectoral, by formulas:

$$\text{N-CTB} = \frac{x_{ij} - m_{ij}}{X_j + M_j} - \frac{X_j - M_j}{X_j + M_j} \times \frac{x_{ij} + m_{ij}}{X_j + M_j} \times 100 \tag{7}$$

$$\text{S-CTB} = \frac{x_{ij} - m_{ij}}{X_{ij} + M_{ij}} - \frac{X_{ij} - M_{ij}}{X_{ij} + M_{ij}} \times \frac{x_{ij} + m_{ij}}{X_{ij} + M_{ij}} \times 100 \tag{8}$$

   The CTB at national level (N-CTB) represents the contribution of the industry to the national trade balance, while the CTB at sectoral level represents the contribution of a commodity group to the trade balance of the industry.

   The left-hand part of the equation represents the real balance of trade in the industry or commodity group and its shares within the total foreign trade of the country or industry which is cross-sectoral trade. The right part of the equation measures the expected trade balance in the sector or commodity group and provides information that each commodity contributes to the overall trade balance according to their share of total trade. The difference between the actual and the expected trade balance measures the specific contribution to the total trade balance. The results of CTB mean:

CTB > 0 means that the actual surplus is higher than expected or the relative trade deficit is lower than expected, and the industry or the commodity group makes a positive contribution to the overall trade balance.

CTB < 0 means that the industry and the commodity group makes a negative contribution to the total trade balance because the actual results in comparison with the expected results are negative or lower than expected.

   The original **Grubel-Lloyd index (GLI)** measures export potential at the macroeconomic level. It was modified for the evaluation at industry level and its calculation indicates the level of commodity representation in the intrasectoral foreign trade of the country. The formula to calculate it is:

$$\text{GLI} = 1 - \frac{\dfrac{x_{ij}}{X_j} - \dfrac{m_{ij}}{M_j}}{\dfrac{x_{ij}}{X_j} + \dfrac{m_{ij}}{M_j}} \tag{9}$$

The values of GLI are in intervals from 0 to 1 (0 < GLI < 1). Value for comparison should be an average GLI value for all the industries in the country or the GLI value of the EU or global trade in the commodity group.

A new indicator: the Trade Coverage Index (TCI) was suggested in order to simplify the comparison of the results of the sector in different countries, as well as for the purpose of implementing benchmarking. The formula for its calculation is:

$$\text{TCI} = \ln\left[\frac{X_{ia}}{X_{ib}} / \frac{M_{ia}}{M_{ib}}\right] \tag{10}$$

where:
X_{ia} is exports of sector "*i*" and M_{ia} is imports of the sector "*i*" in country "*a*"
X_{ib} is exports of sector "*i*" and M_{ia} is imports of the sector "*i*" in country "*b*"
Results by TCI mean:
TCI > 0 indicates the higher competitiveness of the sector in country "a",
TCI < 0 indicates the higher competitiveness of the sector in country "b".

A calculation of individual indicators was carried out in the furniture manufacturing industry of the Czech Republic, the Slovak Republic and the EU 27. Within the classification of business activities in the EU (NACE) this industry belongs to class NACE II 31 (by 2008 NACE 36). Input data was obtained from the database of the Statistical Offices of the Czech and Slovak Republics [www.czso.cz; slovak.statistics.sk] and Eurostat [epp.eurostat.ec. europa.eu] containing the annual data for the foreign trade of the countries and the commodity structure divided according to a statistical classification of the products by activity (CPA) in million Euro during the period 2003–2012.

An application in MS Excel was created for appropriate applications of statistical methods and for calculating statistical variables. The trade competitiveness of the furniture manufacturing was analysed on several levels: on an international level – the EU, on a national level and the competitiveness of individual furniture commodities. The results obtained in the Czech and Slovak Republics were compared with the results in the EU as a whole. Moreover, a trend line analysis of competitiveness indicators was performed.

Dependences among the selected data were analysed using a statistical method of correlation analysis. Statistical correlation is a statistical technique which indicates if two variables are related. It is measured by a coefficient of correlation. The strength of the mutual dependence between the selected relations was found by calculating the coefficient of correlation (r). The formula for its calculation is:

$$Correl(X,Y) = r = \frac{\sum(x-\bar{x})(y-\bar{y})}{\sqrt{\sum(x-\bar{x})^2 \sum(y-\bar{y})^2}} \tag{11}$$

where: x – dependent variable (chosen indicator 1)
         y – independent variable (chosen indicator 2)

The numerical values of the coefficient of correlation are range from + 1.0 to -1.0. This gives an indication of the strength of the relationship. The closer the coefficients are to + 1.0 and -1.0, the greater the strength of the relationship between the variables.

Results and discussion

The assessment of the trade competitiveness of the furniture sector was based on the knowledge that the commodity groups with high added value are desirable for export and the formation of an active trade balance with a growing trend.

The position of the furniture manufacturing industry within the foreign trade of the country is characterized by the share of the sector in national foreign trade. Success on foreign markets is represented by the export performance of the industry (table 1). Table 1 shows that the furniture manufacturing industry produced a trade surplus. The values of net export in the Czech Republic (CR) were higher than in Slovakia with a slight increasing trend. On the contrary, the values of net exports in Slovakia decreased gradually and over ten years net exports fell to 25% of the initial amount. The furniture manufacturing industry represented an average share of 1.8% of the national exports in both countries. This share declined steadily to one-third in Slovakia and it halved in the Czech Republic compared with the beginning of the analysed period. The import of furniture was almost the same in both countries and it represented 1% of national imports. The furniture manufacturing industry represented more than 30% of sectoral foreign trade within the wood processing industry. The CR was particularly focused on the foreign trade in furniture manufacturing, especially in exports (39%). Regarding export performance, the results in each country were different. The Slovak furniture manufacturing industry showed a high export performance. Since 2009, the exported value of furniture was higher than production as well as the sales of own products and services. This indicates that in addition to manufactured furniture, part of the imported products were also exported. In the Czech Republic, the export performance of the furniture industry was much lower. It moved at a level below 60% of production and sales but its growing trend was positive.

Selected indicators of trade competitiveness at the sectoral level were inspired by the effort to determine whether the furniture manufacturing industry and its commodities succeeded on domestic and foreign markets. Evidence of success is a higher volume of products placed by the domestic industry on foreign markets than the volume of products placed by the same foreign sectors on the domestic market. The information was gained using the coefficient of RCA and its various modifications, coefficients CTB, GLI and the Michaely index. The achieved results of individual parameters are given in table 2.

Table 1. Status of furniture industry (FI) in national foreign trade

Indicator	Year									
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
FI SR:										
trade balance (mil. €)	678	370	300	58	111	260	290	270	206	174
share of exports of SR (%)	3.4	2.3	1.8	1.5	1.5	1.4	1.6	1.4	1.3	1.2
share of imports of SR (%)	1.1	1.2	1.0	1.3	1.3	0.9	0.9	0.9	1.0	1.0
share of exports of WPI (%)	44.6	35.1	30.4	28.1	30.3	30.3	31.5	33.9	34.9	36.2
share of imports of WPI (%)	28.5	30.1	27.7	36.8	36.5	29.7	29.6	30.3	34.3	35.7
share of exports in sales FI (%)	93.4	73.7	60.5	61.9	61.1	65.1	112.9	104.0	108.9	110.3
share of exports in production FI (%)	100.1	78.5	65.8	69.8	66.0	77.0	128.2	132.8	133.5	140.2
FI CR:										
trade balance (mil. €)	632	715	819	730	763	628	459	759	798	795
share of exports of CR (%)	2.6	2.3	2.4	2.0	1.8	1.7	1.7	1.6	1.6	1.5
share of imports of CR (%)	1.0	1.1	1.1	1.1	1.0	1.1	1.2	0.9	0.9	1.0
share of exports of WPI (%)	41.2	41.5	43.1	39.8	37.8	37.9	36.6	37.6	38.6	38.9
share of imports of WPI (%)	24.4	26.8	28.7	29.8	29.4	29.4	30.4	26.8	28.2	29.9
share of exports in sales FI (%)	38.3	23.8	48.4	47.5	48.0	50.5	54.7	53.1	60.1	
share of exports in production FI (%)	97.2	66.1	54.1	52.9	50.1	49.0	53.3	54.5	59.7	60.4

Source: Bureau of Statistics of the Czech Republic, the Slovak Republic and own calculations

Table 2. Indicators of comparative advantages of furniture industry (FI)

Indicator	Year									
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
FI SR:										
trade balance index	-0.5	-0.2	-0.8	0.9	1.3	0.1	-0.1	-0.2	-0.16	-0.5
T-RCA	1.089	0.676	0.634	0.133	0.162	0.440	0.531	0.450	0.291	0.178
O-RCA	0.447	0.154	0.094	-0.271	-0.184	0.022	0.064	0.111	0.018	0.014
RCA1				1.696	1.569	1.471	1.782	1.727		
RCA2	0.487	0.309	0.280	0.043	0.074	0.203	0.256	0.220	0.147	0.117
N-MI	0.022	0.011	0.009	0.002	0.002	0.005	0.007	0.005	0.003	0.002
O-MI	0.161	0.050	0.027	-0.088	-0.061	0.007	0.019	0.036	0.006	0.005
GLI	0.504	0.674	0.693	0.934	0.919	0.783	0.741	0.779	0.856	0.911
CTB	0.039	0.037	0.045	0.034	0.010	0.018	0.008	0.004	-0.002	-0.030
FI CR:										
trade balance index	0.13	0.15	-0.11	0.05	-0.18	-0.27	0.65	0.05	0.00	0.13
T-RCA	0.932	0.795	0.752	0.621	0.559	0.483	0.335	0.576	0.546	0.459
O-RCA	0.525	0.438	0.405	0.290	0.253	0.253	0.187	0.337	0.316	0.262
RCA1				2.198	1.908	1.820	1.889	1.974		
RCA2	0.414	0.371	0.368	0.309	0.289	0.250	0.201	0.303	0.298	0.275
N-MI	0.015	0.013	0.012	0.009	0.008	0.007	0.005	0.007	0.007	0.006
O-MI	0.168	0.147	0.144	0.100	0.085	0.085	0.062	0.108	0.105	0.090
GLI	0.565	0.622	0.641	0.699	0.728	0.763	0.834	0.720	0.734	0.775
CTB	0.051	0.019	-0.012	-0.010	-0.022	-0.016	-0.050	-0.027	-0.039	-0.062

Source: own calculation

The values of the indicators in table 2 show that the furniture sector had a comparative advantage within the industry of the country, as well as on international markets. Positive values of the RCA index mean the comparative advantage of the industry at national level. However, this advantage decreased gradually in both countries during the analysed period. In the Czech Republic, despite the growth of net exports, the RCA index dropped to less than a half of the value at the beginning of the period. The sectoral RCA indicator assessing the comparative advantage at the level of the wood processing industry confirmed the same results. A higher and more stable comparative advantage in furniture manufacturing was revealed in the Czech Republic. Positive values of the net Trade Performance Index (RCA2) showed that the furniture industry contributed to the positive trade balance of the sector but its level had gradually fallen. The indicator RCA2 relates to the Contribution to Trade Balance Index(CTB) indicating the contribution of the sector to the formation of an active national trade balance. The negative CTB values achieved in the Czech furniture manufacturing industry since 2005 show that the contribution of the sector to the overall trade balance was negative and there was no real surplus. This means that the relative trade deficit was smaller than expected. The Slovak furniture manufacturing industry created a positive contribution to the active national trade balance until 2011. Positive Michaely index values confirmed the competitiveness of the furniture manufacturing industry but their low level showed the very poor specialization of the countries and the wood processing sector in furniture commodities. On the other hand, the Grubel-Lloyd index (GLI) values showed a high degree of representation of the commodities of intrasectoral character in foreign trade and an increase in the share of the furniture industry. The GLI values of the furniture industry were higher in comparison to the average values of the processing industry in the Slovak Republic (0.835), the Czech Republic (0.868) and the EU-27 (0.776). This means that the furniture sector on the whole contributed to the competitiveness of the economy.

Further analysis dealt with the dependency between the selected indicators using statistical correlation and regression methods. The aim was to find out the factors affecting the comparative advantages of the furniture industry. The dependences determined, based on the correlation coefficients, are shown in table 3. The results of the correlation analysis show that the comparative advantages of the furniture manufacturing sector were strongly influenced by the following factors:
– the specialization of the country in the commodities of the sector,
– a high rate of intrasectoral foreign trade by the country,
– the export performance of the sector at national level,
– the share of the sector in national exports, mainly making a positive contribution to an active national trade balance.

Table 3. Correlation coefficients

Correlation	Y		
X	RCA	RCA2	CTB
MI	0.9428	0.9319	0.9572
GLI	0.9998	0.9666	0.8132
foreign trade balance	0.9576	0.9263	0.765
share of national exports	0.8598	0.8362	0.9501

Source: own calculation

A new indicator, the Trade Coverage Index (TCI), was proposed to compare the competitiveness of the sector in several countries. The results of the calculated indicator, TCI, comparing the Slovak and Czech furniture manufacturing industry are shown in table 4.

Table 4. Trade Coverage Index in furniture industry of SR and CR

Years	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TCI SR/CR	0.182	-0.140	-0.197	-0.553	-0.446	-0.099	0.117	-0.178	-0.317	-0.329

Source: own calculation

The values of the Trade Coverage Index observed for the furniture industry in Slovakia and the Czech Republic showed that the Czech Republic achieved higher sector competitiveness was in (not including the years 2003 and 2009) and this advantage increased gradually. The high TCI values (over 0.3) indicated a significant difference between the export performance of the sector in Slovakia and the Czech Republic.

The comparative advantages of the furniture industry of the Czech and Slovak Republics at EU level were evaluated by comparing the average values of the indicators with the furniture industry in the EU as a whole. The results are shown in table 5.

Table 5. Average values of indicators

indicator:	T-RCA	RCA1	RCA2	GLI	CTB	MI
FI SR	0.458	1.649	0.214	0.779	0.016	0.007
FI CR	0.606	1.958	0.308	0.708	-0.017	0.009
FI EU 27	-0.024	1.001	-0.078	1.012	0.060	0.000

Source: own calculation

The comparison showed that apart from indicators CTB and GLI, the Czech and the Slovak furniture manufacturing industries showed much higher comparative advantages than the furniture industry of the EU.

Conclusions

The quantitative analysis of the foreign trade and comparative advantages of the furniture manufacturing industry in the Czech Republic and Slovakia showed that the industry was competitive at national and international levels, as well as at EU level. This resulted from the industry´s ability to generate a trade balance surplus. However, its real contribution to the formation of an active national trade balance was negative. Previous qualitative studies confirmed that the competitive position of the furniture manufacturing industry was favourable on the international market and thus increased its performance and contribution to the sustainable growth of the national economy. According to the quantitative analysis presented, the comparative advantages of the industry increased through the growth in positive values of net exports. However, the furniture manufacturing industry lost this potential because of several factors: lower prices, a decrease in the quantity of exported commodities or an increase in imports of furniture commodities. Confirmation of the lost comparative advantages of the furniture industry in the analysed countries can be seen in the low values of the RCA indicators and their decreasing trend, the low values of the Michaely index and the negative values of the CTB index. The analysis performed confirmed the very low specialization of the countries in the foreign trade of furniture commodities and the inability of the industry to contribute to an active national trade balance, resulting in a decrease in the existing comparative advantages of the industry on international markets. The development trend in the Slovak Republic was negative due to a fall in net exports, the country's low specialization in furniture commodities and the negative contribution of the industry to the formation of an active national trade balance. In the Czech Republic, the furniture net exports increased but despite this the trade in furniture did not contribute to a positive foreign trade balance. The lowering RCA indicators in the furniture industry should be analysed in a wider context taking into account changes in the orientation of the country to other more advanced sectors. The competitiveness of the countries under analysis is still lower in branches demanding high professional skills, and research and development, in comparison to traditional sectors including furniture manufacturing. A slight improvement can only be seen in the automobile industry.

The results of the analysis performed confirmed the hypothesis: "In the furniture industry the competitive potential is used insufficiently". For this

reason, the subject of further scientific study will be a proposal concerning how to optimize the structure of foreign trade in the furniture manufacturing industry to increase sector competitiveness. Moreover, the success of the furniture manufacturing industry depends on the active creation of new comparative advantages.

References

Aiginger, K., Landesmann, M. [2002]: Competitive Economic Performance: The European View. WIFO Working Papers 179/2002. Austrian Institute of Economic Research, Wienna

Atkinson, R. D. [2013]: What Really Is Competitiveness? The Globalist, www.theglobalist.com/really-competitiveness. [accessed: 2015, May, 08]

Balassa, B. [1965]: Trade Liberalisation and Revealed Comparative Advantage. Manchester School of Economics and Social Studies, Manchester

Bobáková, V., Hečková, J. [2007]: Analýza konkurencieschopnosti slovenského spracovateľského priemyslu. Politická ekonómie IV [4]: 490–507

Czech Statistical Office, www.czso.cz. [accessed: 2014, March, 14]

Dieter, M. Englert, H. [2007]: Competitiveness in the global forest industry sector: an empirical study with special emphasis on Germany. SpringerLink. 126 [3]: 401–412

EUROSTAT, epp.eurostat.ec.europa.eu [accessed: 2014, March, 10].

Han, X., Wen, Y., Kant, S. [2009]: The global competitiveness of the Chinese wooden furniture industry. Forest Policy and Economics 11 [8]: 561–569

Hlaváčková, P., Šafařík, D. [2014]: Problémy českých dřevozpracujících podniků a indikátory konkurenceschopnosti. Manažment podnikov 4 [1]: 3–8

Jelačić, D., Moro, M., Drábek, J., Sujová, A. [2012]: Motivation factors in wood processing plants. Wood Research 57 [2]: 317–330

Krugman, P. [2001]: Competitiveness: A Dangerous Obsession. Foreign Affairs 73 [2]: 28–44

Melíšek, I. [2012]: Meranie a hodnotenie makroekonomických výsledkov zahraničného obchodu. Ekonomické rozhľady 41 [4]: 439–451

Merková, M., Rajnoha, R., Novák, P. [2012]: Quantitative and qualitative diagnostic methods for measuring the effects of foreign direct investment in terms of the wood-processing industry in the Slovak Republic. Drewno 55 [187]: 65–88

Michaely, M. [1962]: Concentration in International Trade, Contributions to Economic Analysis. North-Holland Publishing Company, Amsterdam.

OECD, Glossary of Statistical Terms, https://stats.oecd.org/glossary/detail.asp?ID=399. [accessed: 2015, May, 08].

Porter, M. [1990]: The Competitive Advantage of Nations. Free Press, New York.

Ratajczak, E. [2009]: Foresight in the wood science and industry – research development scenarios in Poland till 2020. Drewno 52 [182]: 143–136

Ratajczak-Mrozek, M., Herbeć, M. [2014]: Network structures in the furniture industry – the industrial network approach. Drewno 57 [191]: 27–44. DOI: 10.12841/wood.1644-3985.058.02

Statistical Office of the Slovak Republic, slovak.statistics.sk. [accessed: 2014, March, 20].

Sujová, A. [2011]: Process restructuralization and its importance by increasing a competitiveness of an enterprise. Acta Univ. Agric. Silvic. Mendelianae Brunensis, 59 [2]: 319–324

Sujová, A., Rajnoha, R. [2012]: Evaluation of competitive factors in Slovak wood processing enterprises as the base for business performance management. Proc. International Scientific Conference Wood and Furniture Industry in times of change – new trends and challenges, June 2012. Trnava, p. 1–6

Sujová, A. [2013]: Business Process Performance Management – A Modern Approach to Corporate Business Management. Proc. International Conference Liberec Economic Forum. September 2013. Liberec, p. 542–550

Szostak, A., Ratajczak, E. [2009]: Results of the innovation activity of the wood sector. Drewno, 52 [182]: 123–130