

The analysis of the export competitiveness of the agricultural production of the Slovak Republic in relation to third-country markets

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Abstract

Globalization of the economy has added many new challenges for agribusiness around the world. Agribusinesses need not only to compete in their domestic market, but also to compete in foreign markets and develop strategies to induce new customers in new markets to buy their products. The survival and success increasingly depends on competitiveness, thus the ability to compete, in these turbulent times. In our study, we focused on the analysis of the competitiveness of the agricultural production of Slovak Republic. We analyzed the competitiveness of agricultural sector for the period from 2007 to 2012.

Key words competitiveness, agricultural production, Slovak Republic, RCA 1 index

1. THEORETICAL FRAMEWORK

Globalization of the economy has added many new challenges for agribusiness around the world. Agribusinesses need not only to compete in their domestic market, but also to compete in foreign markets and develop strategies to induce new customers in new markets to buy their products. The issues of competitiveness and comparative advantage have become very important for agribusiness managers and government, too. These two issues have important implications for both, the society and its business organizations. At the organizational level, companies cannot sustain their survival and growth without producing and marketing competitive products and services. (Esterhuizen & Royeen, 2006).

The survival and success increasingly depends on competitiveness, thus the ability to compete, in these turbulent times. The term competitiveness has been defined by many researchers as a multidimensional and relative term. It comes from the Latin word "competer" which implies participation in the commercial rivalry on the market. The importance of the various criteria of competitiveness varies with time and context (Ambasatha & Momaya, 2004). Because this term has never been in the economic literature consistently defined, it has many different meanings. The competitiveness as such, can be understood to:

- macroeconomic and
- microeconomic level (Knoll, 2008).

Macroeconomic concept of competitiveness constitutes the ability of businesses in the whole economy to compete through the price or other characteristics of goods with companies based in other countries. Perhaps the biggest controversy in examining international competitiveness is whether it can be ever examined at the macro-level, respectively, whether such research has ever sense. The theory which is related to national competitiveness is the "bottleneck" and there are significant cognitive gaps (Baláz & Hamara, 2012). The opinion that the concept of competitiveness does not make sense in applying at the national level and therefore its practical use is not justified, is confirmed by a number of renowned economists.

In contrast to the macroeconomic view on the issue of competitiveness, microeconomic concept is focused on competition of the manufacturers on the market of the products and services. For the competitiveness measurement at the microeconomic level is needed to calculate indicators such as: given market price, the total cost in domestic prices, the marginal and average cost, the cost per unit of labor force, the market share and other (Knoll, 2008). The proponents of the microeconomic concept argue that those who compete among themselves are not countries but corporations and companies and therefore it is necessary to examine the competitiveness mainly at the company level or at the level of whole industrial sectors (Baláz & Hamara, 2012).

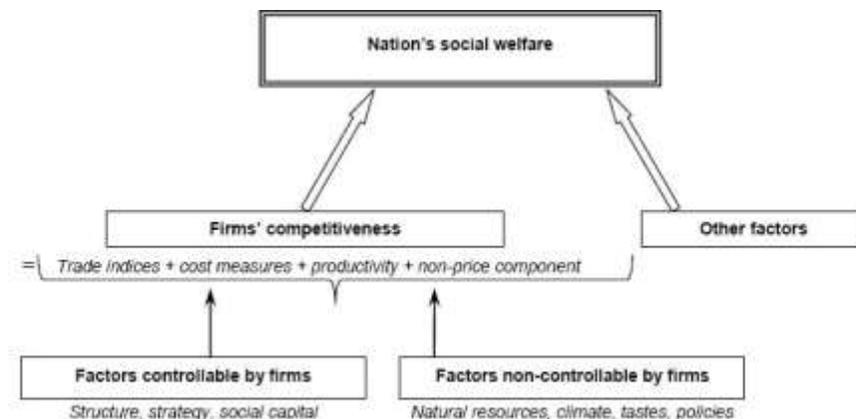
Competitiveness is the concept which is focused on the business ability, productivity, and performance of the firm, sector, or country in a comparative manner. International competitiveness (also global competitiveness) can be viewed along three key dimensions:

1. **Company competitiveness:** represents namely the ability to design, produce, and/or market products superior to those offered by competitors, considering the price and nonprice qualities;
2. **Sector competitiveness:** represents namely the extent to which a business sector offers potential for growth and attractive returns on investment;
3. **Country competitiveness:** represents namely the extent to which a national environment is conducive or detrimental to business (D'Cruz & Rugman, 1992; Mittal & Momaya & Sushil, 2013).

The country competitiveness is gaining importance across the world in the face of complex economic challenges. A relevant definition of country competitiveness created Momaya (2008), which is as follows: the capabilities of a country to nurture industries, segments or organizations, and firms that produce goods and services that meet the needs of domestic and international markets and generate relatively high factor employment and income levels, while citizens earn a standard of living that is both rising and sustainable over the long-run.

The overview of the measurement, determinants and effect of competitiveness is shown in figure 1. The competitiveness of a country is also affected by the production sector and its competitiveness. The competitiveness of enterprises is affected by the factors controlled by the firm such as: structure, strategy and social capital; and also the factors uncontrolled by the firm such as: natural resources, climate, tastes or policies.

Figure 1 Measurement, determinants and effect of competitiveness



Source: Latruffe (2010).

2. MATERIALS AND METHODS

The competitiveness can be evaluated at the different levels of the economy: at the level of the product, the enterprise, the industry and the country's economy. In our study, we focused on the analysis of the competitiveness of the agricultural production of the Slovak Republic. We analyzed the competitiveness of agricultural sector for the period from 2007 to 2012. We used the most recent available data published by the Statistical Office of the Slovak Republic.

Table 1 The value of exports in the period from 2007 to 2012 (mill.EUR)

EXPORT	2007	2008	2009	2010	2011	2012
SITC (0+1)	1766	1727	1615	1800	2327	2688
SITC (2+4)	1112	1366	1029	1402	1678	2026
TOTAL	47 350	49 522	39721	48272	56 783	62 144

Source: Statistical Office of Slovak Republic. Own processing.

Table 2 The value of imports in the period from 2007 to 2012 (mill.EUR)

IMPORT	2007	2008	2009	2010	2011	2012
SITC (0+1)	2453	2597	2511	2807	3247	3341
SITC (2+4)	1466	1667	1144	1927	2216	2425
TOTAL	48 075	50 280	38775	47494	55 768	58 588

Source: Statistical Office of Slovak Republic. Own processing.

In this paper we have used the following logical scientific methods: analysis, synthesis, graphical methods and the numerical calculations using RCA 1 index (Index of revealed comparative advantages). The index of revealed comparative advantages is an index used in international economics for

calculating the relative advantage or disadvantage of a certain country in a certain group of goods or services. It was based on the Ricardian concept of the comparative advantages.

$$RCA\ 1 = \ln \left[\left(\frac{x_{ij}}{m_{ij}} \right) : \left(\frac{X_j}{M_j} \right) \right]$$

when: x_{ij} – export of country j in the commodity group i ,
 m_{ij} – import of country j in the commodity group i ,
 X_j – total export of country j ,
 M_j – total import of country j .

If is the index:

- $RCA\ 1 > 0$, than the country has a comparative advantage;
- $RCA\ 1 < 0$, the country has a comparative disadvantage for the export of this commodity.
- If the result is equal 0, then there is no comparative advantage or disadvantage (Bielik & Rajčániová, 2004).

We used SITC classification, which is the most commonly used classification. Standard International Trade classification (SITC rev. 4) of the United Nations (UN) allows us to compare statistics of foreign trade on a worldwide basis. The agricultural production is included SITC 0 (Food and live animals), SITC 1 (Beverages and tobacco), SITC 2 (Crude materials, inedible, except fuels) and SITC 4 (Animal and vegetable oils, fats and waxes).

3. RESULTS AND DISCUSSION

Slovak economy is in the present the open economy with the small internal market. From this reason the economical efficiency and mostly efficiency of agricultural sector is sensitive on outside environment, it means on global trends in the world economy and development in the European economical space. With Slovak economical development since the year 1989, the relative significance of agricultural section in the Slovak economy has decreased (Bielik, & Gurčík & Horská, 2004).

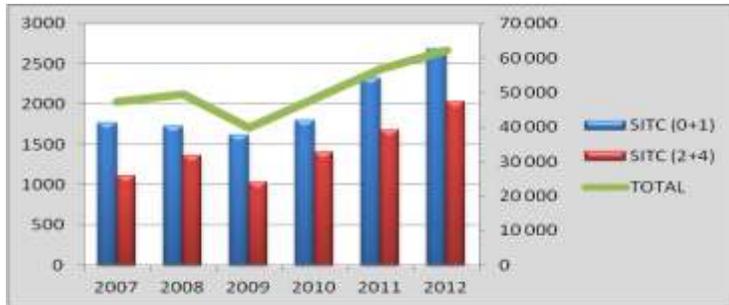
The state interest of the Slovak Republic is the development of productionally executive agriculture, ensuring nationwide, effective and efficient management of land resources of the country and the availability of food for the population. The agriculture uses and restores the natural resources and ecosystems (with forestry) operating actively in nature and environment as well as the economic and social conditions of rural life (Ekonomický ústav SAV, 2010).

The issue of competitiveness in Slovakia was opened during the transformation of the Slovak economy and preparation for EU accession. After Slovakia joined to the European Union have begun for us and for other new member states to run the benefits associated with the liberalization of the mutual trade exchange and the introduction of support systems provided by the Common Agricultural Policy (Bujňáková, 2010).

In the era of globalization of the world economy, it is necessary to evaluate competitiveness of agri-food products in the context of total world trade. On figure 2 are shown the value of exports of goods of the groups SITC (0+1) and SITC (2+4). There have been more exported the goods of SITC (0+1) groups. From 2007 to 2009 there was a decline in the volume of exports of that group. Since 2010, the export has the upward trend. If we look at commodity groups SITC 2 and SITC 4 we can see a similar

development. In the whole measuring period occurs to the growth in exports, with the exception of 2009, when the financial crisis was manifested. It affected the agricultural sector, too. In the measuring period was confirmed the growing trend of total exports of the Slovak Republic with the exception of 2009 year.

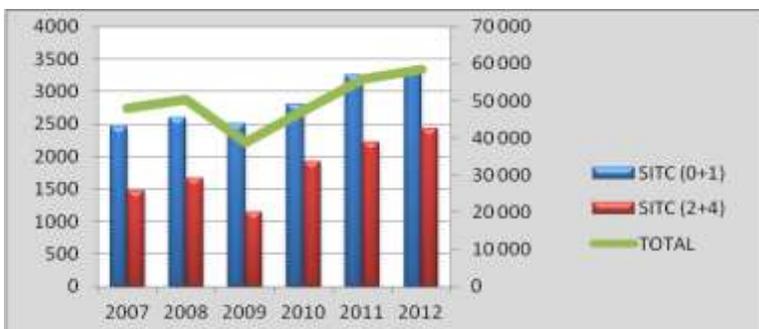
Figure 2 The development of export of the agricultural enterprises and total export (in million eur)



Source: Statistical Office of Slovak Republic. Own processing.

On figure 3 are shown the value of imports of goods of the groups SITC (0 + 1) and SITC (2 + 4). There have been more imported the goods of SITC (0 + 1) groups. From 2007 to 2012 there was a growth in the volume of imports of this group, with the exception of 2009, when there was a slight decline. We can confirm that the import had the upward trend in general. If we look at commodity groups SITC 2 and SITC 4 we can see a similar development. In the whole measuring period occurs to the growth in imports, with the exception of year 2009, when there was a large drop. In the measuring period was confirmed the growing trend of total imports of the Slovak Republic (with the exception of 2009), which copies the aforementioned commodity groups.

Figure 3 The development of import of the agricultural enterprises and total import (in million eur)



Source: Statistical Office of Slovak Republic. Own processing.

Table 3 and figure 4 show the results of the RCA index 1. The calculations indicated that all values of RCA 1 are < 0 this means that the country has a comparative disadvantage for the export of this commodity groups. In general, we can confirm the non-competitiveness of the agricultural sector of the Slovak Republic. The competitiveness of agriculture is influenced especially by factors associated with the innovation, financial resources, productivity, vertical coordination, marketing, and information techniques. In order to Slovakia could to successfully participate in the single market of the European

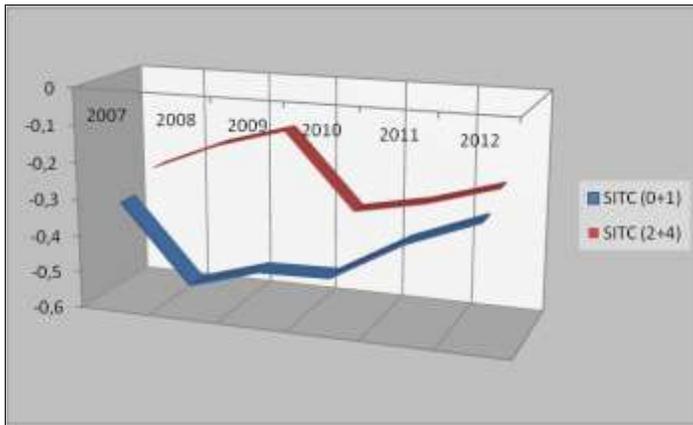
Union, it is necessary to enhance the efficiency and competitiveness of the agri-food sector especially by accelerating the restructuring of the agricultural sector and by use of these above-mentioned activities.

Table 3 The results of RCA 1 index for the period from 2007 to 2012

RCA 1	2007	2008	2009	2010	2011	2012
SITC (0+1)	-0,3133992	-0,5225991	-0,4654504	-0,4605779	-0,3511884	-0,2763971
SITC (2+4)	-0,2611819	-0,1839485	-0,1300477	-0,3343129	-0,2961379	-0,2386925

Source: Own calculations.

Figure 4 The results of RCA 1 index for the period from 2007 to 2012



Source: Own processing.

CONCLUSION

The agriculture and agribusiness globally are experiencing far-reaching changes. Agribusinesses need not only to compete in their domestic market, but also to compete in foreign markets and develop strategies to induce new customers in new markets to buy their products. The issues of competitiveness and comparative advantage have become very important for agribusiness managers and government, too. The competitiveness can be evaluated at the different levels of the economy: at the level of the product, the enterprise, the industry and the country's economy. In our study, we focused on the analysis of the competitiveness of the agricultural production of Slovak Republic. We used the numerical calculations using RCA 1 index (Index of revealed comparative advantages).

The index of revealed comparative advantages is an index used in international economics for calculating the relative advantage or disadvantage of a certain country in a certain group of goods or services. The calculations indicated that all values of $RCA 1 < 0$ this means that the country has a comparative disadvantage for the export of this commodity groups. In general, we can confirm the non-competitiveness of the agricultural sector of the Slovak Republic.

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