

Evaluation Of The Efficiency Of Cheese Trade In Slovakia

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Abstract— The main purpose of this paper is to evaluate the efficiency of cheese trade in Slovak republic. In order to achieve the objective were used indices: RCA, RCA_1 , RCA_2 , TT and net export. The result confirms deteriorating situation in the trade with cheese.

Keywords: competitiveness, comparative advantage, net export, cheese, Slovak republic

I. INTRODUCTION

Agriculture is a sector of the economy, whose main task is to provide nutrition, and the main instrument is land. Despite the fact that agriculture fulfills this very important function, in this case must watch their competitiveness not only between regions within a country, but also among the countries themselves in foreign markets. Competitiveness is currently an important factor for identifying sector success to compete in the market. Competitiveness is still not clearly defined term. It is not purely economic concept, depends on the relations between the various entities and reflects the impact of all levels of the environment over the long term. As reported by Freebairn (1986), the competitiveness is the ability to provide goods and services at the place and time, so that customers had bought them at prices that are better than those than offer goods other potential suppliers.

Next we will discuss competitiveness of Slovak agriculture in selling cheese.

II. OBJECTIVES AND METHODS

This article is aimed at analyzing the effectiveness of trade in cheese using selected indicators. We want to determine the development of trade of cheese. We used next indicators:

RCA indicator of global comparative advantage:

$$RCA = \ln [(x:m) / (X:M)]$$

x –export of commodity

m –import of commodity

X –total agro-food export of country

M–total agro-food import of country

If the RCA is greater than 0, the country has a comparative advantage in commodity if it is less than 0, then it reaches comparative disadvantage and if the results are equal to 0, then we cannot talk about comparative advantage or disadvantage.

RCA_1 known as index of competitiveness growth:

$$RCA_1 = (X_{ij} : X_i) / (X_j : X)$$

X_{ij} = export country "i" in the commodity group "j"

X_i = total export of country

X_j = world export in the commodity group "j"

X = total world export.

If the RCA_1 index is greater than 1, the country has a comparative advantage in the analyzed commodity.

RCA_2 net trade performance:

$$RCA_2 = (X_{ij} - M_{ij}) / (X_{ij} + M_{ij})$$

X_{ij} = export of country "i" in the commodity group "j"

M_{ij} = import of country "i" in the commodity group "j"

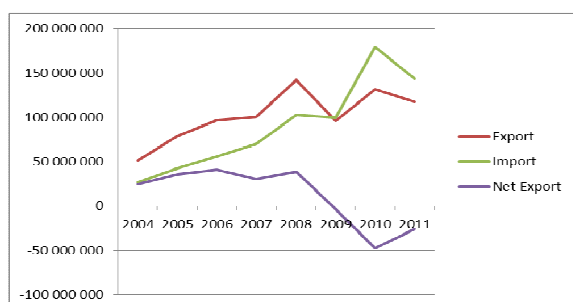
RCA_2 reaches values between -1 (when export does not exist) and +1 (when import does not exist). In case the results are negative, up to -1, the country has a comparative disadvantage. On the other hand, if the results are positive, up to +1, the country has a revealed comparative advantage.

In calculating net export were used data from database UN Comtrade. For calculating RCA, RCA_1 a RCA_2 was used statistical database organization FAO.

III. RESULTS AND DISCUSSION

Import of cheese exceeded the export in 2009 and in following years. Net export in this period shows a negative value and a fluctuating development. The highest import we achieved in 2010, 179 039 000 USD. The highest export was in 2008, 141 994 000 USD, till 2011 it fell to 117 777 000 USD. Net export has been declining markedly since 2008.

Figure 1
Net export



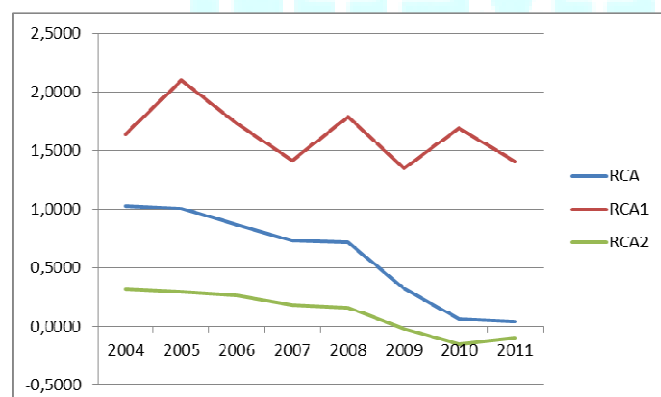
Development of RCA, RCA₁ and RCA₂ values of cheese in Slovakia

	2004	2005	2006	2007	2008	2009	2010	2011
RCA	1,03	1,01	0,86	0,73	0,72	0,33	0,06	0,04
RCA ₁	1,64	2,10	1,73	1,41	1,79	1,35	1,69	1,41
RCA ₂	0,32	0,29	0,27	0,18	0,16	-0,02	-0,15	-0,10

Source: self-processed based on data from UN Comtrade

We calculate a positive value for RCA. Slovakia has been competitive throughout the whole analyzed period. But RCA index has decreasing trend during the period 2004 – 2011. It started from 1,03 in 2004 and finished on 0,04 in 2011. Also RCA₁ reached positive value greater than 1, therefore based on this index, Slovakia has been competitive during the whole period. In term of net trade performance – RCA₂, Slovakia has been competitive in most of the years, except last three years in trade with cheese. It means that import of cheese was higher than export in period of last three years.

Figure 2
Development of RCA, RCA₁, RCA₂



Source: self-processed based on data from UN Comtrade

We can see from this figure that RCA and RCA₂ have decreasing trend from the beginning of period. RCA₁ has fluctuating trend whole period 2004-2011.

Comparison export and import prices of cheese in Slovakia and EU-15

Price	2004	2005	2006	2007	2008	2009	2010	2011
Export	3450,94	3654,33	4039,1	4534,11	5294,53	4477,16	5071,84	5102,43
Import	3285,01	2879,6	3887,99	4195,4	4574,11	3720,96	4897,23	4783,88
EÚ-15								
Export	3350,51	3546,43	3968,75	4423,89	5099,23	4367,53	4987,67	5209,56
Import	3276,88	3489,34	3685,52	4128,86	4890,39	4187,47	4789,21	5087,23

The average export prices of cheese, during the entire period, in Slovakia are higher than import prices. Export prices are higher than import ones also in EU-15. But export prices of cheese in Slovakia a higher than export prices in EU-15. This means that Slovakia has not cost advantage in the EU-15, therefore it is not cost competitive.

According the terms of trade index (TT), in average, dollar imports is covered by 1,11 dollar exports in Slovakia. The EU coverage is lower than in Slovakia. The dollar imports is covered, in average, by 1,04 dollar exports.

Term of trade of cheese

TT	2004	2005	2006	2007	2008	2009	2010	2011
SK	1,05	1,27	1,04	1,08	1,16	1,20	1,04	1,07
EÚ-15	1,02	1,02	1,08	1,07	1,04	1,04	1,04	1,02

Source: self-processed based on data from UN Comtrade

IV. CONCLUSION

Based on results we can conclude that Slovakia has a comparative advantage in commodity cheese. Also RCA₁ reached positive value greater than 1 which is index competitiveness growth. RCA₂ is negative in last three years. This means that import of cheese is higher than export in this period. Also competitiveness of trade with cheese has decreasing trend.

The results of RCA indices may vary in different years, because there are many factors, which influence trade (e.g. prices, demand, etc.). However, trade with cheese is going worst. Therefore, it is necessary to make measures to improve competitiveness of trade with cheese in Slovakia.

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