THE ROMANIAN EXTERNAL TRADE IN SUGAR AND CONFECTIONERY PRODUCTS

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Abstract

Trade flows in agricultural products are subject to continuous dynamic. Importers will buy from the markets where products arrive at the best price for the market of destination, and exporters will focus on the markets where the product price is more advantageous. Romania is a net importer of sugar, and the deficit has increased more than three times, in terms of value, between 2002 and 2004. This paper analyzes the evolution of trade flows with sugar and sugar products of Romania, and test their degree of correlation with domestic production, the average wage and exchange rate: Lei/$.

Key words: evolution, Romania, sugar, trade, trends

INTRODUCTION

The growing demand, the changing consumer preferences, the expansion of multinational network of retail and food service, have led to the remodeling the international markets, including that of sugar.

Radical changes in sugar beet occurred in Romania after 1958, when it was decided that the entire required of sugar should be produced by our crops. In 1965 the area sown with sugar beet increased from 190 000 hectares to 234 400 hectares in 1977, and the average yield per hectare increased from 14 t in 1938 to 28 tonnes in 1972 and 29.4 in 1976. Currently, of the 33 factories that existed for more than 21 years, works only 4, two who process sugar beet - Bod and Ludus, and two who process sugar beet processing raw sugar - Roman and Oradea [2].

The creation of the Romanian varieties of sugar beet was a significant achievement of agricultural science, as these varieties were adapted to the climate and soil of our country and were more productive.

In 2002, the area planted with sugar beet was 39 thousand hectares and, as can be seen from the chart and tables below, it increased slightly until 2003 and then suffered a decline of more than 50%. Various oscillations underwent in subsequent years, reaching to the smallest area planted with sugar beet 17,656 hectares in 2011. (Table 1, Table 2, Fig. 1)

In 2009, 21,300 hectares were cultivated with sugar beet and a total production of 816,810 tonnes was obtained. In 2010, production was 792 000 tonnes in a cultivated area of 24,000 hectares [3].

Direct consumption of sugar in Romania is about 320,000 tonnes per year. Adding the industry, consumption reaches about 500,000 tonnes. By comparison, Poland consumes 1.4 million tonnes, Hungary and Czech Republic 350,000 tonnes and 150,000 tonnes Slovakia.

Before 1989, Romania annually produced approximately 550,000 tonnes of white sugar from sugar beet, covering its consumption needs and refines approximately 150-200 tonnes of imported raw sugar for export. On 1 January 2007, Romania joined the European
Union. For the sugar sector, Romania received a national quota of 109,000 tonnes of white sugar from beet and a traditional refining of 329,000 tonnes of white sugar from imported raw cane sugar, i.e. a total of 438,000 tonnes, which led to a decrease in the domestic production of sugar. As can be seen, sugar production fell to 93,922 tonnes sugar in 2011, a large part of household consumption being covered by imported products [1].

Table 1. Evolution of surface, production of sugar beet and sugar, 2002-2006

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<tbody>
<tr>
<td>Surface (thousands ha)</td>
<td>41.6</td>
<td>45.2</td>
<td>20.8</td>
<td>25.2</td>
<td>39.8</td>
<td>25.0</td>
<td>19.8</td>
<td>21.3</td>
<td>24.4</td>
<td>17.65</td>
</tr>
<tr>
<td>Total production of sugar beet (thousands t)</td>
<td>954.63</td>
<td>265.47</td>
<td>672.72</td>
<td>729.66</td>
<td>1152.2</td>
<td>748.84</td>
<td>706.66</td>
<td>816.81</td>
<td>792.54</td>
<td>608.58</td>
</tr>
<tr>
<td>Total production of sugar (thousands t)</td>
<td>102.34</td>
<td>94.47</td>
<td>87.79</td>
<td>91.63</td>
<td>149.56</td>
<td>92.11</td>
<td>97.73</td>
<td>121.71</td>
<td>105.53</td>
<td>93.92</td>
</tr>
</tbody>
</table>

Source: MADR

Fig. 1. Evolution of sugar sector, 2001-2011

Table 2. Extraction yield, 2002-2011

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</thead>
<tbody>
<tr>
<td>Yield</td>
<td>10.92</td>
<td>11.25</td>
<td>10.7</td>
<td>12.27</td>
<td>13.05</td>
<td>12.55</td>
<td>12.98</td>
<td>13.83</td>
<td>13.83</td>
<td>14.9</td>
<td>15.43</td>
</tr>
</tbody>
</table>

Source: MADR

Extraction yield is the amount of crystallized white sugar which is processed in the factory from 100 kg sugar beet roots. Analyzing the situation of the extraction yield of sugar beet from 2002 to 2011, we see that in 2002 the extraction yield was very low, only 10.92%, which means a sugar low technological value. But, since 2003 we can see an improvement with small oscillations, reaching values between media technology from 2004 to 2009 and the very best technology values since 2010; in 2011 the yield reached a value of 15.43%. The need to cover sugar consumption has intensified the trade with this product, and that the quota system has reduced surfaces, namely the production of sugar. [3]

MATERIAL AND METHOD

In order to analyze the evolution of the Romanian foreign trade sugar for the period
2002-2011, we used a number of indicators. The data provided by MADR were processed and interpreted.

RESULTS AND DISCUSSIONS

The statistical results presented by MADR shows that over the last 10 years (2002-2011) the balance (exports - imports) of the foreign trade sugar decreased considerably, as can be seen in the graph below:

![Trade Sugar Balance 2002-2011](image)

From 2002 until 2006, the balance decreased steadily, in 2007 it reached a value of $-202.62 million, comparative with $-217.55 million in 2006, then it decreased further.

In 2011, the deficit on sugar chain was the largest with a balance of $-308.06 million, due to imports of $177.21 million.

Concerning product categories, in 2011 we exported the most sugar cane and sucrose for a total of $423,951,730.

Although imports have increased considerably in recent years, it can be seen that exports have also increased.

Regarding the worldwide balance of trade in sugar from 2002 to 2011, and also at the European Union level, we find that, after the accession, the amount of sugar imported from the Union had a significant increase from the pre-accession. In addition, as seen in the graph in Fig. 2, trade balance for the sugar product is increasingly deficient, as compared with 2002 (Fig. 3).

The quota system is a setter for the sugar market. Sugar quota is the amount of sugar, isoglucose or inulin syrup produced under quota in a marketing year and awards to a sugar factory.

According to the European Commission, the elimination of quotas in 2016 will increase by 1.9% in the beet production and an 8.2% decrease in the price of sugar by 2020. An impact assessment carried out by the EC expects EU sugar exports to increase by 6.9% and imports to decrease by 4.7% in 2020, but the bloc will continue to be a net importer. [2] Import price was calculated by dividing the revenue from imports in quantity imported, the price of export income from exports relative to the amount exported. As seen from the chart below, the price of sugar, both import and export, increased from 2002 to 2011, reaching values of about four times higher.

![Evolution of Import and Export Prices 2002-2011](image)
In 1989, raising production quotas imposed limited EU industry recovers not native (Fig. 4).

Table 3. Evolution of deficit relative to the base year, 2002

<table>
<thead>
<tr>
<th>Year</th>
<th>Total groups deficit</th>
<th>Sugar deficit</th>
<th>%</th>
<th>Evolution of the deficit reported at 2002 for total trade</th>
<th>Evolution of the deficit reported at 2002 for total sugar</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>-739.185.1</td>
<td>-97.138.1</td>
<td>13.14</td>
<td>100.0</td>
<td>100</td>
</tr>
<tr>
<td>2003</td>
<td>-1.169.688.7</td>
<td>-130.302.2</td>
<td>11.14</td>
<td>158.24</td>
<td>134.1</td>
</tr>
<tr>
<td>2004</td>
<td>-1.311.642.2</td>
<td>-129.362.4</td>
<td>9.86</td>
<td>177.44</td>
<td>133.2</td>
</tr>
<tr>
<td>2005</td>
<td>-1.680.442.5</td>
<td>-156.583.8</td>
<td>9.32</td>
<td>227.34</td>
<td>161.2</td>
</tr>
<tr>
<td>2006</td>
<td>-1.961.385.4</td>
<td>-217.550.3</td>
<td>11.09</td>
<td>265.34</td>
<td>224.0</td>
</tr>
<tr>
<td>2007</td>
<td>-2.957.438.9</td>
<td>-202.615.6</td>
<td>6.85</td>
<td>400.09</td>
<td>208.6</td>
</tr>
<tr>
<td>2008</td>
<td>-3.036.225.4</td>
<td>-307.627.6</td>
<td>10.13</td>
<td>410.75</td>
<td>316.7</td>
</tr>
<tr>
<td>2009</td>
<td>-2.272.699.5</td>
<td>-288.138.7</td>
<td>12.68</td>
<td>307.46</td>
<td>296.6</td>
</tr>
<tr>
<td>2010</td>
<td>-980.960.5</td>
<td>-218.783.9</td>
<td>22.30</td>
<td>132.71</td>
<td>225.2</td>
</tr>
<tr>
<td>2011</td>
<td>-572.831.6</td>
<td>-308.062.7</td>
<td>53.78</td>
<td>77.50</td>
<td>317.1</td>
</tr>
</tbody>
</table>

Source: MADR

Using a fixed-base indicator, the table above shows that, in terms of total evolution balance from 2002, this percentage increased with 58, 77, 127, 165, 300 and 310% from 2003 to 2008, then it declined slightly in 2009, reaching a rate of plus 207% compared to 2002; in 2011, it reached 23%, compared to the base year. If we still consider the shortages of sugar and confectionery group, this percentage increased compared with 2002, reaching a peak in 2011, with an added value of 217%. This means that, in 2011, we imported most of our sugar in order to cover domestic consumption (Table 3).

One can notice that, after we joined the EU community, the dependence on imports towards UE increased significantly. If, in 2002, we could discuss about a dependence of 9.77% in 2007, the year of accession of Romania, 49.97% of the revenues imports returned to the EU. In 2011, dependence increased to 39.90% more than 10 percent after one-year membership (Fig. 5).

We also can see the dependence on exports to the Union. In 2002, 21.36% of export revenues came from products destined for the European Union.

As seen before, the value of import revenue was significantly higher than export earnings. The graph below shows the coverage of imports by exports (Fig. 7).

In 2002, the exports covered only 4.77% of the amounts spent on import of sugar. The year 2003 experienced the lowest percentage of the period, only 2.48%. Since 2003, the coverage started to become more significant, with some fluctuations, reaching 36.52% in 2011. Although the imported value increased significantly, we also exported more, compared to 2002.
The graph with the deficit developments of sugar and sugar confectionery, and each class of this subsidiary between 2002 and 2011, can be seen below. As noted, the deficit revenue of sugar and sugar confectionery group became significant from 2002 to 2011. If, in 2002, we could talk about a deficit of $97,138,000 in 2011, it reached a deficit of $308,063,000, i.e. a difference three times higher than the year we started analyzing the subsidiary (Fig. 8).

Within this product channels, the most important category of exports is sugar cane or sugar beet. A difference can be observed as big as the largest group in part between 2002 and 2011. If, in 2002, the deficit was $89,436 million in 2011 to triple again occurs, leading to a value of $253,362 million of our country's budget deficit and sugar confectionery. Concerning the sugar confectionery containing no cocoa or other sugar, including fructose, lactose, glucose, isoglucose, we observe the same significant change in the deficit between the analyses. Instead, the subgroup of molasses obtained from the extraction or refining of sugar, dealt with in 2006 and 2011, recorded a surplus of the product. The amount of revenue was $183,000 in 2006 and $488,000 in 2011.

CONCLUSIONS

The sugar sector is found in a continued reform and needs to become efficient and more flexible, closer to the customer and market.

The accession of Romania to the EU has led to the introduction of quota sugar, and the reduction of acreage in sugar beet production, respectively, with consequent domestic sugar processing factory closures and increasing imports.

The year 2011 was the poorest marketing year for the sugar chain and recorded the largest imports for the period studied. In 2011, the last year studied, exports also increased. That could be explained by either the improvement of sugar quality, owing to a better extraction yield for 2010, or by the possibility of purchasing sugar at relatively lower prices and resold it at higher prices.

Our accession to the European Union has led to an increased dependence on imports and exports of sugar product. We have almost become dependent on a percentage close to 100%.

ACKNOWLEDGEMENTS

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REFERENCES

[3] MADR