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IMPACT OF THE EUROPEAN UNION REGULATION ON THE SUGAR SECTOR IN POLAND

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Abstract

The main objective of the paper was an assessment of the influence of the EU sugar market reform on the condition of Polish sugar sector. The research was based on statistical data concerning sugar market in respect of output, trade and financial performance. The legal framework concerning the sugar sector regulations were also considered in the analysis.

Period from 2006 to 2010 is a time of implementation of sugar reform in the EU. Its main target was to cut production of sugar and market opening for world's poorest countries. In the article there has been presented consequences of new regulations for Polish sugar beet planters, sugar industry, as well as exporters and importers of this product. Poland as third sugar producer in the EU (in connection with implementation of the reform) has incurred high social / public and financial costs. It is particularly noticeable in smaller fields' surfaces, decreasing of profitability for farmers and closures of many sugar factories. Sugar producers cannot meet the demand fully as a result of restricting the production limit. Shortages are filled in with import, what is bad for Polish trade balance.

The CAP reform had both a negative and a positive impact on Polish sugar sector. The positive impact was observed through modernisation and concentration of the sector and improved efficiency while the negative outcomes concerned market regulations, in particular insufficient production quota, which caused a reduction in the capacity of the sector and a deterioration of competitiveness on foreign markets.

Keywords: *sugar, sugar market, CAP reform, market regulation*

Introduction

Polish accession to the European Union coincided with the reform of the existing EU regulations in the sugar market. Transformation of the common agricultural policy had a decisive influence on the economic and financial condition of the sector, what is more it significantly changed the market conditions. The need for reform, implemented by the European Commission in 2006, resulted from a number of causes: the willingness to improve the competitiveness of the sector, efforts to stabilise the market and the need to ensure favourable conditions for operation to all participants. The introduction of the reform was also influenced by unfavourable approach of the World Trade Organisation (WTO), which contested the compatibility of the EU's system of export subsidies in sugar industry with the rules of international trade¹.

The main changes in market regulations concerned the reduction of production limit, reduction of the minimum sugar beet price and the reference price of sugar, reducing sugar

¹ Subsidised export caused lowering of global sugar prices, which in turn negatively affected the situation of developing countries.

export without subsidies and the introduction of direct payments to growers and financial assistance aimed at the restructuring of the sugar industry. As a result, there have been significant changes in the yield of sugar beet cultivation, production and financial situation of the sugar industry and its effectiveness, as well as in the trade balance.

Materials and methods

The study made use of the literature on the subject, the secondary data of the Institute of Agricultural and Food Economics, data of the Central Statistical Office and the data of the Association of Sugar Producers in Poland. Statistical data used for the analysis cover the 2003-2011 period and concern the sugar industry in the scope of production, financial and commercial results and taking into account market framework conditions. The collected data were analysed with the use of the descriptive method and time series analysis. The results are presented in tabular form and depicted by graphs.

Results and discussion

Supply and profitability of growing sugar beet cultivation

Immediately prior to accession to the European Union, Polish growers received an average of Polish Zloty (PLN) 124.40 for a ton of sugar beet. In the first two years after the integration the sugar beet prices increased significantly to PLN 187/ton in 2004 and PLN 175.30/ton in 2005, i.e. respectively by 51% and 41%. In the subsequent years, according to the new regulations of the CAP, the beet procurement prices in Poland declined steadily to PLN 104/ton in 2008. Compensation in the form of the so-called sugar payments covered only 60% of losses (decrease in purchase price) associated with the reduction in prices of sugar beet in 2006 and 2007, and about 64% in subsequent marketing years.

Reduction in prices led to a decline in the profitability of sugar beet production. In 2004-2007, the rate of profitability of sugar beet production was approximately 40%, thus it was nearly 13 percentage points lower than in 2003. In 2008, due to a significant reduction in crop the profitability of growing sugar beet fell below 13%. The depreciation of the zloty against the euro and the economic recovery in the global market meant that in 2009-2011 the average price of sugar beet in purchase rose to PLN 123/t. However, it was still lower than the prices quoted immediately after accession.

Table 1. Sugar beet production in Poland.

Specification	2003	2005	2008	2011
Cultivated area (thousand ha)	286	262	187	190
Yield (q/ha)	410	416	465	611
Number of growers (thousands)	85	71	41	36
Beet harvest (thousands of tons)	11,739	11,912	8,715	11,605

Source: Authors' own compilation based on the data of the Central Statistical Office, International Confederation of European Beet Growers and Institute of Agricultural and Food Economics.

The decline in profitability and the progressive concentration of the sugar industry made the Polish growers less and less interested in growing sugar beet. This resulted in a systematic reduction in the number of growers, which in 2011 amounted to 36 thousand and was less than half compared to the average in 2003-2004. Resignation from the production of sugar beet was reflected in the reduction of crop acreage. In addition, the decline in the sown area was affected by the progressive reduction of sugar production quotas. In 2003, sugar beets were grown on nearly 300 thousand ha, while until 2011 the area of cultivation

decreased by more than 1/3 to 190 thousand ha. At the same time, the average plantation area increased from 3.85 ha in 2003-2004 to 5.30 ha in 2011, i.e. by more than 37%.

The decline in sugar beet cultivation area was accompanied by a significant increase in performance. The yield level increased from 428 q/ha in 2004 to 611 q/ha in 2011 (Table 1.). Such a large increase in yield was due to favourable weather conditions and the ongoing restructuring of plantation areas. At present, sugar beets are grown by relatively large farms in the regions with the best soils. The quality of raw material measured by sugar content also improved (from 12% in 2004 to 16.2% in 2011), which had a positive impact on the technical and economic viability of sugar production [Chudoba, 2004].

The increase in the price competitiveness of the sector was one of the main objectives of the reform of the sugar market regulation. The intervention price for white sugar, amounting to EUR 631.9/ton, was replaced by a reference price, whose value from 2009/10 season amounts to EUR 404.4/ton, thus it is lower by 36%. Since 2004, the selling prices of sugar in Poland are characterised by high volatility. In the period before the reform, i.e. until 2006, there was a sharp increase in prices (on average 11% per year), and after that their levels decreased slightly.

The systematic reduction in supply and an increase in raw material prices on the world market meant that the price of the EU sugar instead of the announced decline showed a strong upward trend. Since mid-2010 there was another rise in prices noted in Poland. The increased demand for sugar from the consumers (purchase of sugar stocks) and an increase in export demand for food (including that containing sugar) constituted additional factors stimulating the growth of prices. In 2011, the average selling price in the domestic market was PLN 2.96/kg, which was by 37% higher than last year. The retail prices also showed high growth rate. Their average level increased by nearly half from PLN 2.75 to 4.07/kg [The sugar market, 2011]. Thus, it was nearly 50% higher than the level recorded immediately after accession.

Changes in foreign trade

Poland for many years was a net exporter of sugar. Since the introduction of the market system to the economy the negative balance was experienced only in 1995 which was due to unfavourable weather conditions and the excess of demand over supply. Both before accession, and in the first years of membership, the domestic demand for sugar remained relatively stable at around 1,600-1,630 thousand tons. Sugar production amounting to an average of 1,900 thousand tons was higher than consumption, and the surplus was intended for export. In 2003-2006 Polish foreign trade in sugar was characterised by a high positive balance. During this period, the average level of exports was 566 thousand tons, the import, which is only a supplement of the supply did not exceed 75 thousand tons, and a positive balance ranged from 350-630 thousand tons.

Export has a significant impact on the economic and financial health of the sector. The IAFE-NRI research shows that from the accession to the EU until 2006 the exports accounted for 15-21% of the sales revenue. Simultaneously the import penetration rate remained at a low level of 2-4%. After the reform, the share of exports in sales value decreased to 13%, while the value of imports increased to over 20%, which contributed to the weakening of the domestic industry's competitiveness on external markets [Szczepaniak, 2011]

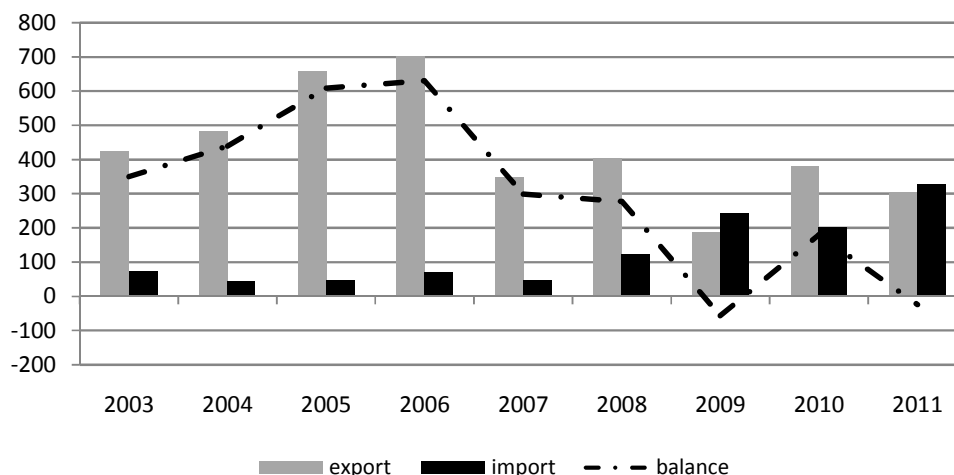


Figure 1. Foreign trade in sugar (thousand tons).

Source: The IAFE-NRI calculations based on data from the Analytical Centre of Customs Administration.

With the entry into force of the new market regulations, Polish sugar producers, despite the fact that they have a high potential for production, were forced to reduce supply to the amount of the allocated production quota. The surplus must be exported outside the EU, or used for non-food purposes in other sectors of the economy. The production quota negotiated by Poland was reduced from 1,630 to 1,405 thousand tons in 2009/2010 (and subsequent seasons), i.e. to a level about 13% lower than the average national consumption. This translated into a dependence of national supply on imported raw materials. As a result, in 2007-2011 period exports of sugar dropped from 700 to 304 thousand tons, with an increase in imports from 70 to 328 thousand tons. In 2009, for the first time Poland has become a net importer of sugar, when the negative balance amounted to 56 thousand tons (Figure 1.). Unfavourable balance of trade was also recorded in 2011, but compared to 2009 it was reduced by nearly a half. In the light of the applicable legal regulations, regardless of the level of production, Poland is forced to import an average of 200-250 thousand tons of sugar per year.

Economic and financial situation of Polish sugar industry

In the European Union sugar production is dependent on the limits per individual Member States. Immediately prior to joining the EU, Poland had two sugar production quotas: A (destined for the domestic market) amounting to 1,520 thousand tons and B (for export with subsidies) amounting to 102.2 thousand tons. In the first year of integration we had a limit (total of A and B quotas) totalling 1,671 thousand tons, while in 2005 it was reduced to 1,582 thousand tons. Under the reform of the sugar market the A and B quotas have been replaced by a single quota, whose principal value was 1,498 thousand tons. In the following season, after further reduction of the basic quota and the purchase of additional quota (in the amount of 100.6 thousand tons) Polish producers could market 1,533 thousand tons of sugar. As a result of increasing financial incentives by the European Commission, which aim at giving up production quotas, the limit of sugar production in Poland was reduced to 1,405.6 thousand tons in the campaign of 2008/2009, thus it was 16% lower than the one obtained in the accession negotiations and on average 200 thousand tons less than the national requirements. The same production quota is also in force in the subsequent economic years.

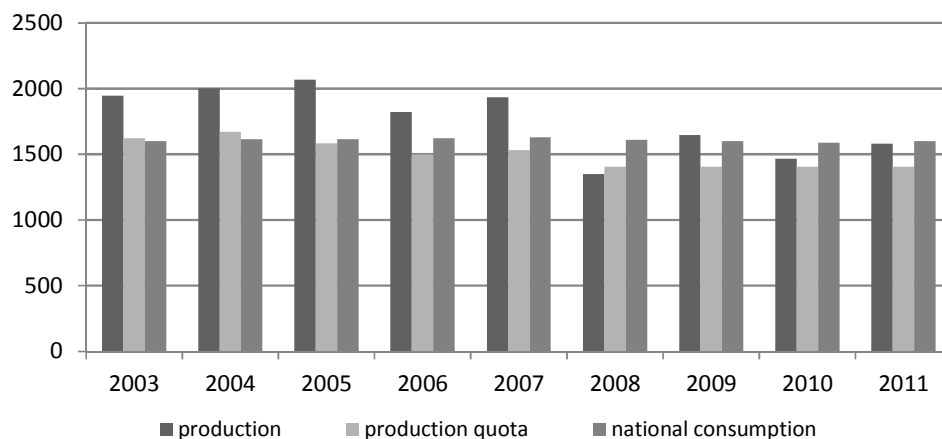


Figure 2. Sugar production in Poland (thousand tons).

Source: [The sugar market 2004 and subsequent].

In fact, in the analysed period, the actual sugar production in Poland was higher than the allocated limits. In 2003-2005 (i.e. immediately before the reform) the average sugar production amounted to 2005 thousand tons. Following the reforms of the market in 2006-2011, production decreased by approximately 16% in relation to the average of the previous seasons. Particularly strong decline in production was recorded in 2008, when it fell to 1,350 thousand tons to a level that was significantly lower than the quota as well as domestic consumption. This was caused by the reduction of cultivated area, as well as reduction in crops. In 2009-2011, due to the favourable economic situation, production was again higher than the allocated limit and slightly higher than the national demand (Figure 2.). According to forecasts, in the current season production will be reduced to 1,580 thousand tons.

Reduction of production was conducive to accelerating the concentration of the sugar industry and the elimination of less profitable plants. During this period, the number of active sugar factories decreased by nearly 70% from 57 in 2003 to 18 in 2011. Liquidation of factories was accompanied with a substantial decline in employment, which decreased from 15 to 3.5 thousand people, with more than double increase in labour productivity. The average level of sugar production per sugar factories also increased - from 34 to 104 thousand tons. The increase in the scale of processing is certainly a welcome phenomenon, which has a positive impact on improving the efficiency of processing [Szajner, 2006]. In the course of the reform there was further concentration of the ownership structure in the sugar industry. As a result of privatization there are now four sugar companies in the domestic market, three of which are owned by foreign capital.

The sugar industry in Poland is characterised by a large variability in financial performance over the years. This is the result of significant fluctuations in supply that affect the level of sugar prices, as well as changes resulting from the reform of the EU regulatory system of the market. In 2003-2011 the sugar industry recorded negative financial results on three occasions. Negative values were also recorded in gross and net profitability rates of the sector and the rate of return on equity (ROE). In 2008, net income in current prices amounted to PLN 4,127 million and was about 5% lower than in 2003 and about 35% lower than in 2004-2005.

Table 2. Selected economic and financial indicators of the sugar sector.

Specification	2003	2005	2008	2011
Net income in current prices (PLN million)	4,344.4	5,296.7	4,127.2	4,586.8
Measures of profitability, expressed as a % of net revenues				
Profit (loss) gross	-11.2	0.38	-6.99	23.4
Profit (loss) net	-11.39	0.33	-7.52	19.4
Liquidity	1.07	1.42	2.6	3.01

Source: The IAFE-NRI calculations based on CSO data.

As of 2009, the economic and financial situation of the Polish sugar industry has improved significantly. This is due to the improvement in market conditions, a significant increase in sugar prices in the domestic and external markets, as well as the positive consequences of restructuring (cost reduction). These factors partly offset the negative effects of the reform. As a result, financial results currently achieved by the domestic sugar industry are significantly higher than the average values of the financial indicators in the food industry. In 2011, net profit of the sugar industry achieved a record level of PLN 1.3 billion, compared to 765 in 2009. Sugar production was very highly profitable. Net profit margin increased from 16.4 to nearly 20%, while gross margin increased from 18.8% to 24% (Table 2.). In comparison, the average value of these margins in the food industry as a whole was respectively 3.4% and 4.2%. Also the liquidity of the industry and the value of the ROE equity ratio improved. Financial results show clear evidence of a large increase in the technical efficiency of production in the sector, which is reflected in reduced costs and increased productivity of production factors [Szajner, 2011]

Conclusions

The year 2010 witnessed the end of the most important part of the EU regulatory reform in the sugar market that has had both positive and negative consequences for the Polish sugar industry. Positive aspects include speeding up the process of restructuring and modernisation of the sugar industry, improvement of the technological competitiveness of the industry, greater concentration of production and improvement of processing efficiency. Positive changes also affected the increase in the quality and efficiency of the resource base. In addition, reduction of production costs (especially energy costs) provides a good basis for building sustainable competitive advantages relative to the Community market, as well as global market.

The main negative effect of changes in regulations on the EU sugar market was a significant reduction in sugar and sugar beet production, which was accompanied by the decrease in profitability due to price declines. Reduction in production quotas resulted in reduction of the production potential and strengthening the competitiveness of the sector within the oligopoly. The possibilities for entering new entities to the industry were limited, and the market was clearly depending on supplies from imports and substitute products. These factors contributed to the deterioration in the sector's competitiveness in the international arena.

Reduction of production capacity and production quotas led to adverse changes in foreign trade in sugar. The profitability of exports clearly decreased, and the forced increase in import led to a conversion of the sector into net importer. Reducing the number of sugar factories translated into a significant decline in employment, which was only partially offset by restructuring charges. Retail prices of sugar have not been reduced, although it was one of the most important arguments for changing market regulations. Stabilisation of the market has

not been achieved due to the lower sugar supply in relation to consumption. The current system results in stiffness of the production potential and also affects the development of the market and further increase in efficiency of both producers and growers.

References

- Chudoba L., 2004. *Wpływ systemu regulacji rynku cukru na przemysł cukrowniczy w Polsce i 15 krajach UE*, The impact of the sugar market regulation on the sugar industry in Poland and EU-15, Press Reports Expertise, No. 500, IAFE, Warsaw.
- Mucha M., 2010. *Stan i perspektywy branży cukrowniczej w Polsce. Podsumowanie reformy regulacji rynku cukru w Unii Europejskiej w latach 2006/2007-2009/2010, State and prospects of the sugar industry in Poland. Summary of sugar market reform in the European Union in the years 2006/2007-2009/2010*, [in:] Sugar Industry Magazine No. 3, SIGMA-NOT, Warsaw, page 64-67.
- Rynek cukru. Stan i perspektywy 25-39. The sugar market. Statuse and prospects 25-39. [IAFE-NRI, AMA, MARD, Warsaw.
- Szajner P., 2006. *Raport o stanie i perspektywach rozwoju branży cukrowniczej w Polsce*, Report on the state and prospects of development of the sugar industry in Poland [in:] The report on the state and prospects of food industry, Food Economics Council at the Ministry of Agriculture and Rural Development, Warsaw.
- Szajner P., 2009. *Ocena wpływu reformy systemu regulacji rynku cukru w Unii Europejskiej na polski przemysł cukrowniczy, Assessment of the sugar market reform in the European Union on the Polish sugar industry*[in:] , Problems of world agriculture, vol. 8 (XXIII), SGGW, Warsaw, page 182-191.
- Szajner P., 2011. *Rynek cukru i artykułów cukrowniczych w Polsce, The sugar and sugar products market in Poland* [in:] Food Industry Magazine, No. 6, SIGMA-NOT, Warsaw, page 14-16.
- Szczepaniak I., 2011. *Monitoring i ocena konkurencyjności polskich producentów żywności [1]*, Monitoring and evaluation of the competitiveness of Polish food producers, collective work, Multiannual Programme 2011-2014 No 25, IAFE-NRI, Warsaw.
- Urban R., 2008. *Wpływ integracji z UE na polską gospodarkę żywnościową*, The impact of EU integration on Polish food economy, collective work, Multiannual Programme 2005-2009 No 90, IAFE-NRI, Warsaw.