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RETROSPECTIVE ANALYSIS AND DEVELOPMENT DIRECTIONS OF SUGAR INDUSTRY IN POLAND IN 1989-2018

Introduction

The debate on the direction of development of the Polish sugar beet production and processing industry has been under way since the beginning of the transformation period in Poland. Thus a question should be asked about the economically justified direction of the development of this strategic sector.

The aim of the article is to investigate the sector and to present an economically justified direction of its development in Poland.

The author investigates the correctness of the hypothesis that measures taken by authorities since 1989 were not economically justified as the problems of the sector have not been solved. The aim of the article is to show with the help of collected information that further reforms of the sugar market are necessary.

The article applied such research methods as document analysis, analysis of the literature on the subject and the elements of descriptive statistics.

The statistical data in the article come from the Ministry of Agriculture and Rural Development of the Republic of Poland (hereinafter MRiRW), the Central Statistical Office (GUS) and the Sugar Producer Association (hereinafter referred to as ZPC in Poland) quoted after Marcin Mucha.

Sugar beet production and processing is widely described in the literature on the subject and media[1]. The research on the economic development of sugar industry in Poland is carried out, inter alia, by the European Commission (hereinafter EC) [2], MRiRW through specialized agencies[3], ZPC in Poland[4], the National Union of Sugar Beet Growers (KZPBC)[5] and the

[1] Telefilm, Canada and Regers Group, *Sugar couted,* [in:] www.youtube.com (accessed: 9.09.2018.).
[2] KE, *Sugar,* [in:] www.ec.europa.eu, (accessed: 14.01.2019).
[3] Biuro Analiz i Strategii Krajowego Ośrodka Wsparcia Rolnictwa (Analysis and Strategy Office of the National Center for Agricultural Support) , *Rynek cukru*, [in:] www.kowr.gov.pl (accessed:dzień 4.01.2019).
[4] Biuro Analiz i Strategii Krajowego Ośrodka Wsparcia Rolnictwa, *Rynek cukru*, [in:] www.kowr.gov.pl (accessed: 4.01.2019).
[5] KZPBC, *Poradnik plantatora,* [in:] www.kzpbc.com.pl (accessed: 14.01.2019).

authors of numerous scientific publications on economic and natural issues[6]. The Polish Parliament (Sejm) played an important role in shaping the sugar industry and influenced through its resolutions the economic policy of the Polish Government[7].

A value added of the article is the research on the transformation process of the sugar beet production and processing sector in Poland in 1989 – 2018 and a suggestion of a further reform of sugar industry in Poland.

1. Periodization of economic policies in Poland after 1989 with regard to the development of sugar industry

The analysis of the development direction of the Polish sugar industry requires a periodization of the sector transformation into three stages.

Stage I – deregulation of sugar industry and market protectionism in 1989-1993.
In stage I, the deregulation of sugar market consisted in departing from centrally managed to free market economy. Simultaneously to the deregulation, a protectionist policy was conducted. In order to protect domestic producers against foreign competition, decision makers delayed the ratification of the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO)[8]. The creation of the Central European Free Trade Area (CEFTA) in 1992 did not improve the situation of the sugar sector.

Stage II – regulation of sugar beet production and open market from 1994 to 1 October, 2107. The change of the trend in economic policy started with the implementation of Grzegorz Kołodko's *Strategia dla Polski* in 1993[9]. An important element of the new strategy of the sugar market development was the ratification of WTO agreement on 1 January 1995 and the change in the monetary policy – the departure form a fixed exchange rate[10]. Another step that was taken within the new sugar sector policy was the establishment of sole shareholder companies of the State Treasury and the introduction of a sugar quota system (the adjustment to EU standards).

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[6] *Gazeta cukrownicza*, [in:] www.zpc.pl (accessed: 17.01.2019).
[7] Uchwała Sejmu z dnia 22 grudnia 1999 r. w sprawie sytuacji w polskim cukrownictwie i prywatyzacji przemysłu cukrowniczego (Resolution of the Sejm of 22December 1999 on the situation in Polish sugar industry and privatization of the sugar industry), [in:] www.isap.gov.pl, (accessed: 4.01.2019).
[8] M. Proczek, *Od Układu Ogólnego w Sprawie Taryf Celnych i Handlu do Światowej Organizacji Handlu,* [in:] E. Latoszek, M. Proczek, *Organizacji międzynarodowe we współczesnym świecie*, Elpisa, Warszawa 2006, pp. 159-178.
[9] G. Kołodko, *Strategia dla Polski*, Wyd. Poltext, Warszawa 1993, pp. 64-67.
[10] J. Momot, *Przewidywany wpływ wprowadzenia waluty euro na obrót polskimi produktami rolno spożywczym*i, [in:] T. Corejovej (ed.), *Rozwój Euroregionu Beskidy X*, publishe by ZU, Żylina 2016, pp. 126-136.

The launch of a controversial process of sugar factories privatization was a crucial instrument in shaping the sugar sector by the Government.

ES membership negotiations were an important determinant of the development of the Polish economic policy with regard to sugar production and processing. The process involved an additional regulation of the sugar market. Poland demanded the following sugar quota: A – 165 thousand tons of sugar; B – 216 thousand tons, while EC opted for A- 159 and B – 74.5 thousand tons of sugar[11]. The finally negotiated quotas were 158 and 92 thousand tons, for A and B, respectively[12]. Starting from 1 May 2004, the sugar sector in Poland is regulated by CE and the Polish Government within the Common Agricultural Policy. In 2006, EU started the transformation process of the sector. The aim was to comply with the provisions of the Uruguay Round of GATT and WTO agreements [13] (the reduction in sugar production in EU[14]). The measures taken in 2006 resulted in the abolition of the quota system and of the minimum price on 30 September 2017. The cost of the reform of the sugar market amounted to Euro 5.4 billion[15]. In 2016, the concept of contractual advantage entered the legal system and it can be used by the state to control the contracts between growers and sugar factories.

Stage III – deregulation of the sugar beet production and the regulated market, the consolidation of state food companies. The consolidation of the state food companies based on sugar factories plays an important role in the Strategy of Responsible Development of 14 February 2017. Its objective is to create one entity that is responsible for the development of food trade on the basis of sugar plants that belong to the Treasury[16]. The Strategy of Responsible Development is implemented within the *Plan dla Wsi* (Plan for villages) program of 2018.[17]

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[11] Departament Strategii PKO BP, *Polskie rolnictwo – na jakich warunkach do UE, accessed:* 4.04.2002 , quoted after E. Latoszek, *Integracja europejska Mechanizmy i wyzwania*, published by Książka i Wiedza, Warszawa 2006, p. 244.

[12] Agencja Restrukturyzacji i Modernizacji Rolnictwa, *Polskie rolnictwo w Unii Europejskiej Biuletyn informacyjny*, 2003 No 1-2, p. 7, quoted after E. Latoszek, *Integracja Europejska Mechanizmy i Wyzwania*, published by Książka i Wiedza, Warszawa 2006, pp. 243-250.

[13] M. Mucha, op. cit., s. 106-110.

[14] Council Regulation (EC) No 318/2006 of 20 February on the common organization of the markets in the sugar sector (Journal of Laws 2006, L. 58, [in:] www.isap.gow.pl (accessed: 3.01.2019).

[15] M. Gawarszczak, *Zniesienie kwot cukrowych*, [in:] *Gazeta cukrownicza*, December 2017, [in:] www.zpc.pl (accessed: 17.01.2019), 5.

[16] P. Maciejewicz, *Rząd chce połączyć państwowe spółki spożywcze,* [in:] www.wyborcza.biz (accessed: 2.01.2019).

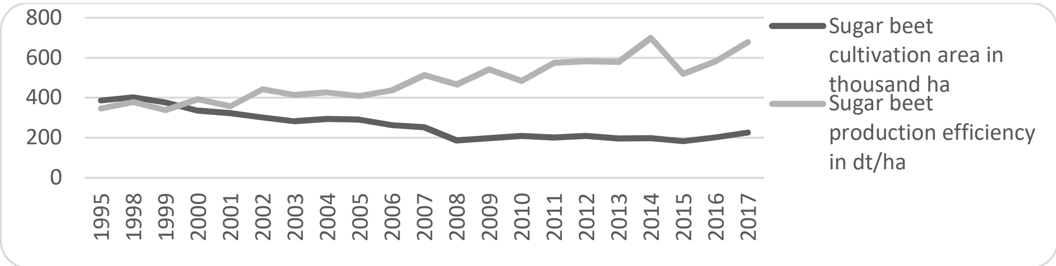
[17] Ministry of Agriculture and Rural Development, *Plan dla wsi,* [in:] www.gov.pl (accessed: 4.01.2019).

2. Transformation of sugar industry in Poland since 1989

Before the transformation started, the State Treasury owned: sugar factories (raw material processing operations), state agricultural farms (PGR) (raw material suppliers) and foreign trade centers (sugar exporters). The enterprises formed one of the world's biggest state-owned sugar producing company.

In 1989 there were 78 state-owned sugar factories all around the country. The raw material was supplied by 385 thousand planters (PGRs and private growers) that grew sugar beet in farms of the average area of 1.15 hectares and the average sugar beet yield amounted to 37.8 tons per ha[18]. On 19 October 1991, the state-owned farms were closed down, which resulted in the decrease in the sugar beet production (see graph 1) [19]. In the period in question, the area of sugar beet cultivation dropped from 343 thousand. ha to 288 thousand ha[20].

Graph 1. Sugar beet cultivation area in thousands of ha and production capacity of sugar beets in dt/ha in the years 1995-2017



Source: Author's research based on: GUS, *Roczniki statystyczne rolnictwa,* 2000-2018, GUS, Warszawa, [in:] www.stat.gov.pl i MRiRW *Rynek cukru,* [in:] www.archiwum.minrol.gov.pl (accessed: 2.09.2018 r.).

At the beginning of the transformation period, foreign trade centers were replaced by private companies. The most well-known is Bartimpex which operated with the recommendation of the Russian Federation and in 1991-2001 exported half a billion dollar worth of food products – *the crude gas for food program*[21].

The privatization of Polish sugar factories started in 1994 when the decision was made that growers and sugar factories staff were eligible to buy the shares and the trade of the securities should be limited. Sole shareholder companies of the State Treasury (sugar

[18] M. Mucha, op. cit., p. 108.
[19] Ustawa z dnia 19 października 1991 r. o gospodarowaniu nieruchomościami rolnymi Skarbu Państwa (Act of 19 October 1991 on the management of agricultural property owned by the Treasury) (Journal of Laws 1991, No107, item 464, [in:] www.isap.gov.pl (na dzień 9.09.2018 r.).
[20] M. Mucha, op. cit., p. 108.,
[21] Bartimpex, *Współpraca z Rosją*, [in:] www.bartimpex.com (accessed: 1.10.2018).

companies were established[22] for which a search for strategic investors started on 3 November 1999[23]. In 1999-2017, 60 sugar factories were closed down; 7 out of 18 factories in operation belong to the Treasury, employees and growers. The owners of the remaining ones are: Suedzuker (5 sugar factories), Pfaifer and Lange (4), Nordzucker (2). The shares of particular factories that belong to capital groups are or were owned by the growers and the staff. According to the data presented by ZPC in Poland, both the Treasury and foreign corporations gradually closed down factories that were unprofitable in their opinion[24].

Media regularly publish the growers' appeals for the right to buy the shares of sugar factories. However, the fact is neglected that the planters do not trade the shares between one another but they sell them to foreign owners of the companies[25]. The shares of sugar factories have never been available on the Warsaw Stock Exchange (GPW). The exclusion of the shares of sugar factories from trading is typical for Poland as, for example, it can be done on the stock exchange in Frankfurt; one can buy there the shares of Suedzuker, the owner of the Polish sugar factories (the share value went down by 29,37% between 5.12.2017 and 5.12.2018)[26] and trade contracts for sugar.

The state-owned agricultural farms, which had been operating till 1991 and among other activities, dealt with the production of sugar beet, were closed down and the property was on sale by the Agricultural Property Agency of the Treasury. This process is continued by its legal successors. At present, individual farmers are the growers of sugar beet in Poland and the majority of planters are the members of KZPBC.

The owners of sugar plants that operate in Poland form the ZPC association which was founded in 1999. Its mission is to represent all sugar plants in the negotiations with the Poland's government and EC, to organize information campaigns on sugar issues (e.g. Chłopiec do bicia) and to order scientific research[27].

The cooperation between the growers and sugar factories is based on a sugar beet contracting system pursuant to the Civil Code of 1989 and numerous acts and regulations [28].

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[22] Ustawa o przekształceniach własnościowych w przemyśle cukrowniczym, (Act on ownership transformations in the sugar industry) Journal of Laws 1994, No 98, item 473 [in:] www.isap.gov.pl (accessed: 3.01.2019).
[23] Rozporządzenie Rady Ministrów zmieniającego rozporządzenie w sprawie określenia zasad i harmonogramu programu prywatyzacji Spółek Cukrowych (Council of Ministers regulation of 3 November 1999, [in:] www.isap.gov.pl (accessed: 3.01.2019).
[24] M. Mucha, op. cit., pp.108-113.
[25] Ł. Pałka, *Niezbyt słodka oferta: Cukrownia skupuje swoje akcje od plantatorów*, [in:] www.bankier.pl (accessed: 2.01.2019).
[26] www.investing.com, *Suedzuker* (accessed: 5.12.2018).
[27] ZPC w Polsce, *Kampania medialna „Chłopiec do bicia"*, [in:] www. cukier.org.pl (accessed: 6.01.2019).
[28] www.isap.gov.pl, *Cukrownictwo,* [in:] www.isap.gov.pl (accessed: 25.01.2019).

In 2016 the concept of contractual advantage was introduced into the Polish legal system and it referred to the abuse of dominant position of the supplier over the recipient[29]. The body that is responsible for market control in Poland is the Office of Competition and Consumer Protection (UOKiK) [30]. In 2018, UOKiK started proceedings against the German corporation Suedzuker suspecting that it takes advantage of its monopolist position against the growers[31]. According to Michał Gwarszczak, Polish planters compete with German ones through labor costs [32]. The point of view of the growers is different: sugar factories value the labor of a Polish planter lower than that of a German planter. On 11.02.2019, the retail price of 1 kg of sugar in the German Federal Republic was 0.59 Euro [33] (0,59 Euro x 4,32 PLN[34] = 2,54 PLN) while in Poland it started from 2.25 PLN[35].

The introduction of a new trade model should be a significant element of the economic policy towards sugar. For example, sugar beet planters should sign forward contracts with sugar processing plants or even sugar recipients through virtual market. This would weaken the position of sugar factories against the growers who would be able to sell on their own the processed sugar beet in the form of sugar. The work on the development of the platform should be conducted with the cooperation of the of the GPW, ZPBC and ZPC in Poland. New growers who do not own shares of sugar factories might also be interested in this project.

3. Quota system and sugar prices in Poland

The development of sugar market can be divided into a quota and quota-free period. A quota-free period functioned in 1989-1993, then it was introduced again on 1 October 2017 and it has been functioning till now, while a quota system was in Poland in 1994-2017 (in EU it started in 1968). Apart from the quota system, other instruments such as duties and contingencies are implemented to regulate the trade. However, due to trade liberalization, their role within WTO has been constantly decreasing[36].

In 1994-2017, the regulation process of sugar prices and supply started. A quota system was developed and the production of sugar was divided into quotas A, B and C. Quota A

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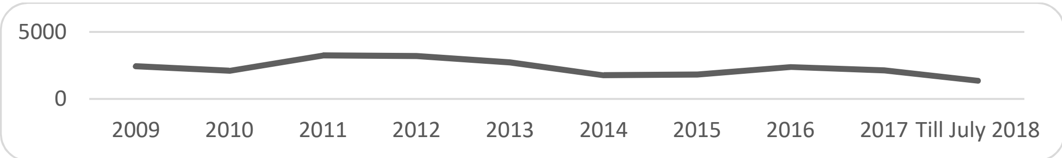
[29] www.isap.gov.pl, *Cukrownictwo,* [in:] www.isap.gov.pl (accessed: 25.01.2019).
[30] Ibidem.
[31] Ł. Pawłowski, *UOKiK sprawdza Sudzucker Polska i sytuacje na rynku owoców miękkich,* [in:] www.bankier.pl (accessed: 6.12.2018).
[32] M. Gwarszczak, op. cit., s. 6.
[33] www.discounter-preisvergleich.de, *Zucker* (accessed: 11. 02. 2019).
[34] www.nbp.pl, *Statystyka i sprawozdawczość* (accessed: 11. 02. 2019).
[35] www.ceneo.pl, *Cukier* (accessed: 11. 02. 2019).
[36] M. Gwarszczak, op. cit., pp. 5-8.

referred to the sugar that was necessary to meet the demand of a local market, while quotas B and C concerned exports. Quota B referred to subsidized exports, while quota C involved unsubsidized exports and sugar for other than food purposes.

The price of sugar given in the MRiRW reports was the weighted average – considering the volume – of the prices of sugar sold/purchased that were given in invoices excluding VAT, discounts and transportation costs[37]. As regards quota B, the price of sugar was established in compliance with the regulations of the Council of Ministers and the subsidy could not exceed the difference between the minimum price in Poland and the sugar price on the London Stock Exchange[38]. After the introduction of the quota system in 1994, the area of sugar beet cultivation decreased and in the production year 1995/1996 Poland had a negative balance of foreign trade in sugar (see Graph 6). When analyzing Graph 3, it can be noted that the curves of sugar production and demand intersect in the equilibrium point in production years 2009/2010 and 2010/2011. The pricess of sugar in 2009, 2010 and 2011 were 2443, 2101 and 3429 PLN, respectively (see Graph 2). The discrepancies that result from time series make it impossible to conduct a correlation analysis. Due to significant differences in the prices of sugar in the intersection points of sugar demand and supply, it can be concluded that the determination of an equilibrium price is impossible.

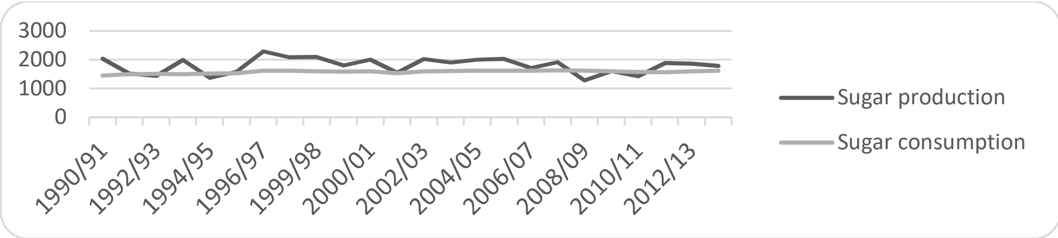
Graph 2. Prices of 1 ton of sugar in Poland in 2009-2018 (in PLN)



Source: Author's research based on MRiRW data, *Rynek cukru,* [in:] www.archiwum.minrol.gov.pl (accessed: 2.09.2018)

[37] Biuro Analiz i Strategii (Analysis and Strategy Office), op. cit., p. 5.
[38] Ordinance of the Council of Ministers of 25 March 1997 on determining the amount of fees for subsidies for sugar export and the rules for the use of subsidies for sugar exported under the B quota in 1997 [in:] www.isap.gov.pl (accessed: 3.01.2019).

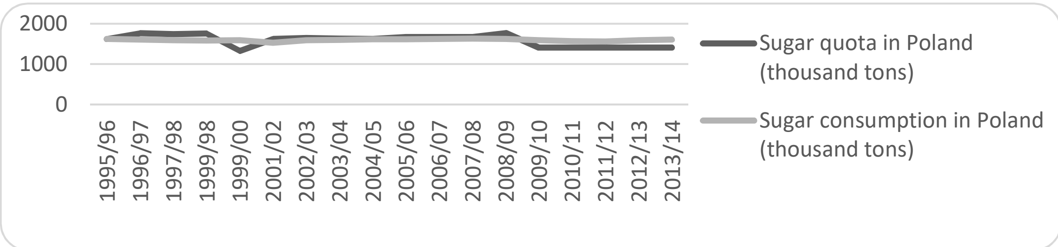
Graph 3. Sugar production and consumption in Poland in production years 1990/1991 – 2013/2014 (in thousand tons)



Source: Author's research based on ZPC data, quoted after M. Mucha, *Reformy rynku cukru w okresie ćwierćwiecza polskiej transformacji,* [in:] *Roczniki Naukowe Ekonomii Rolnictwa i Rozwoju Obszarów wiejskich*, published by Komitet Ekonomii Rolnictwa i Rozwoju Obszarów Wiejskich PAN i Wydział Nauk Ekonomicznych SGGW, Warszawa 2015, Vol. 10, No 1, 2015, p. 108.

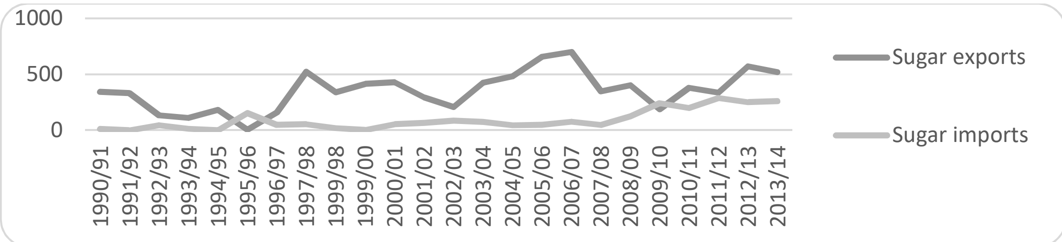
Sugar quota that was below the consumption level had a significant impact on the price increase (see Graphs 5 and 8).

Graph 5. Sugar production quotas and consumption in Poland in production years 1995/1996 – 2013/2014 (in thousand tons)



Source: Author's research based on ZPC data, quoted after M. Mucha, *Reformy rynku cukru w okresie ćwierćwiecza polskiej transformacji,* [in:] *Roczniki Naukowe Ekonomii Rolnictwa i Rozwoju Obszarów wiejskich*, Vol. 10, No 1, published by Komitet Ekonomii Rolnictwa i Rozwoju Obszarów Wiejskich PAN i Wydział Nauk Ekonomicznych SGGW, Warszawa, 2015, p. 108.

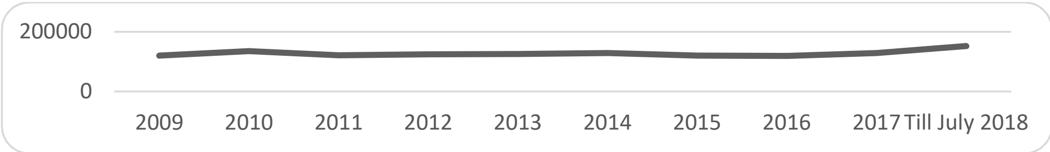
Graph 6. Foreign trade balance in sugar in Poland in production years 190/1991 – 2013/2014 (in thousand tons)



Source: Author's research based on ZPC data, quoted after M. Mucha, *Reformy rynku cukru w okresie ćwierćwiecza polskiej transformacji,* [in:] *Roczniki Naukowe Ekonomii Rolnictwa i Rozwoju Obszarów wiejskich*, Vol. 10, No 1, published by Komitet Ekonomii Rolnictwa i Rozwoju Obszarów Wiejskich PAN i Wydział Nauk Ekonomicznych SGGW, Warszawa 2015, p. 108.

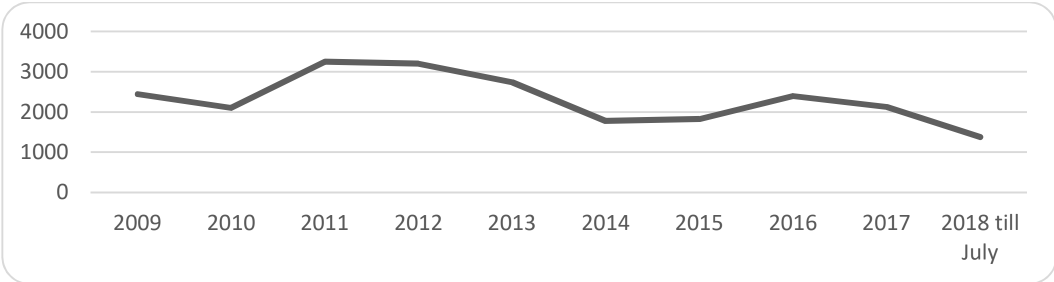
In stage three of the transformation which started on 1 October 2017 one can see a dramatic increase in the supply of sugar beet in Poland as well as a decrease in the prices of sugar and an increase in the demand for sugar[39] (see Graphs 7 and 8). In 2018, sugar beet was processed in 18 factories and the cultivation area was 235 thousand hectares[40]. An increase in the cultivation area and the yield from hectare were also noted (see Graph 1)

Graph 7. Sugar sales by sugar factories in 2009-2018 (in tons)



Source: Author's research based on MRiRW data, *Rynek cukru,* [in:] www.archiwum.minrol.gov.pl (accessed: 2.09.2018).

Graph 8. Prices of 1 ton of sugar in Poland in 2009-2018 (in PLN)



Source: Author's research based on MRiRW data, *Rynek cukru,* [in:] www.archiwum.minrol.gov.pl (accessed: 2.09.2018).

The implementation of a new method of sugar valuation in EU should be taken into consideration so that excessive imports within WTO is avoided. The sugar that is sold in EU should have appropriate certificates regarding : food quality (e.g. HCCP), environmental impact (e.g. ISO 14001) and a fair remuneration of plantation workers which should be at a minimum level defined in the regulations of EU member-states (there is a need for the development of such a certificate)

Conclusions

The development of the Polish sugar industry in 1989-2018 was influenced by the level of the internationalization of the Polish sugar trade and economic policies. The transformation of the sugar sector in Poland can be divided into three stages that differ from one another mainly in the degree of the participation in the agreements that liberalize international trade and in the

[39] Biuro Analiz i Strategii (Analysis and Strategy Office) , op. cit., pp. 2-3.
[40]Ibidem, p. 5.

regulation methods of the sugar market. During stage I (1989-1993) of the transformation, the deregulation of the sugar market was conducted and the policy of economic protectionism was introduced (slowing down the accession process to GATT) which resulted in the inhibition of the development of the sector in Poland. In stage II of the transformation (1994-2017), the convergence started of the Polish and EU sugar policies. Quota systems were introduced and one of the results was that in production years 1995/1996, 2009/2010, 2010/2011, Poland from an importer transformed into an exporter of sugar. As a developing country Poland became a WTO member on 1 January 1995 and on 1 May 2004 (the accession to EU) Poland accepted the commitments of highly developed countries. Poland's membership in EU and the acceptance of EU commitments that were associated with the agreements within WHO resulted in the weakening of the exports potential of the Polish sugar factories. The sale of some of the Polish sugar factories to foreign capital with the exclusion of the Stock Exchange in Warsaw resulted in a weaker negotiating position of Polish growers and made the trading of sugar factories shares less transparent. In 2016, the concept of contractual advantage was introduced to the contractual system. This will probably strengthen the position of sugar beet growers against sugar factories and make it possible to achieve a state of market equilibrium. Stage III was started by the abolition of the sugar quota system on 1 October 2107, which caused a significant increase in the production of sugar in Poland and its exports. Having analyzed the transformation process, it seems reasonable to conclude that stage IV should be started with regard to the sugar industry in Poland. The stage should be referred to as the deregulation of sugar beet production and the marketization of trading in sugar and sugar factory shares. The stage should include the following elements: a virtual system of trading in sugar, listing the shares of sugar factories on the Warsaw Stock exchange, developing an antidumping system on the sugar market and maintaining a deregulation system of sugar beet production.

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Abstract

The economic development of sugar industry in Poland depends on the policies of the Polish government and EC. The aim of the article is to present the transformation of the industry in Poland since 1989 and to suggest an economically justified direction of its development in Poland.

The article consists of three parts. Part 1 includes a periodization of the sugar industry development in Poland during the transformation and its division into III stages. Stage 1: deregulation of sugar industry and market protectionism in 1989-1993; stage II: regulation of sugar beet production and open market from 1994 to 1 October, 2107; stage III: deregulation of sugar beet production and the regulated market, the consolidation of state-owned food companies, which started symbolically on 1st October 2017 – the abolition of sugar quota). Part 2 of the article presents the transformation of the ownership structure in the Polish sugar

industry. Part 3 is devoted to the quota-free system (1989-1994 and from 1st October 2017 to date) and the quota system (1994 – 1st October 2017) in Poland and their impact on trading in sugar.

After the study of documents and scientific papers and following a statistical analysis, it can be concluded that an excessive state intervention in the sugar industry influences negatively the development of the sector and the lack of the intervention leads to the fact that Polish growers are paid by sugar factories lower prices for sugar beet than it is the case, for example, in Germany, while the retail prices for 1 kilogram are comparable. Steps should be taken to start stage IV that could be referred to as the deregulation of sugar beet production and the marketization of trading in sugar and sugar factory shares. The stage should consist of such elements as virtual systems of trading in sugar and sugar beet and the introduction of Krajowa Spółka Cukrowa (National Sugar Company) to the Warsaw Stock exchange. This will improve the transparency of the sector and will facilitate its management in line with the market and rather than political trends.